

# The Macroeconomic Effects of Fiscal Policy

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## Declaration

“I, *James Samuel Cloyne* confirm that the work presented in this thesis “*The Macroeconomic Effects of Fiscal Policy*” is entirely my own, except for Chapter 3 which is part of joint work with Karel Mertens and Morten O. Ravn. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.”

James Cloyne

Certified by Professor Wendy Carlin (Supervisor)

## Abstract

This thesis analyses the macroeconomic effects of changes in fiscal policy. Chapter 1 provides an overview.

Chapter 2 estimates the macroeconomic effects of tax changes in the United Kingdom. Identification is achieved by constructing an extensive new ‘narrative’ dataset of ‘exogenous’ tax changes in the post-war U.K. economy. Using this dataset I find that a 1 per cent cut in taxes increases GDP by 0.6 per cent on impact and by 2.5 per cent over three years. These findings are remarkably similar to narrative-based estimates for the United States. Furthermore, ‘exogenous’ tax changes are shown to have contributed to major episodes in the U.K. post-war business cycle. The long appendix contains the detailed historical narrative and dataset.

Chapter 3 estimates the endogenous feedback from output, debt and government spending to fiscal instruments in the United States. The central innovation is to make direct use of narrative-measured tax shocks in a DSGE model estimated using Bayesian methods. I therefore assume the tax shocks are observable, rather than latent variables. I show that the feedback from debt to the fiscal instruments is weaker than previously estimated and that the capital tax multiplier is higher. Moreover, the data are more consistent with a model with endogenous feedback than one with an exogenous fiscal policy specification.

Chapter 4 examines the transmission mechanism of government spending shocks by constructing and estimating a DSGE model for the United States. I show that the endogenous response of different taxes and the strength of wealth effect on labour supply play a powerful role. Given that there is little prior information on the strength of these mechanisms, I estimate the key parameters in the model. I show that this estimated model can match the empirical responses of key variables that are a challenge for many models of this type.

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I am greatly indebted to my supervisors, Wendy Carlin, Morten Ravn and Liam Graham for all their generous advice, support and encouragement. It was a great privilege to have had access to such brilliant minds and wonderful supervision. This thesis, as well as my own knowledge and understanding, are undoubtedly richer as a result.

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The compiling of the long appendix on the history of U.K. tax policy, which accompanies Chapter 2, was an extensive task. On starting the project, I was lucky enough to have the advice and knowledge of Carl Emmerson at the Institute for Fiscal Studies whose detailed understanding of U.K. fiscal policy proved an invaluable aid. During the data collection I was greatly helped by librarians at the London School of Economics who pointed me in the direction of electronic archives, which greatly sped up the process (relatively!), and the librarians at Her Majesty's Treasury.

Chapter 3 of this thesis is part of joint work I have been undertaking with Morten Ravn and Karel Mertens. I am therefore greatly indebted to my co-authors for all our on-going discussions as well as their ideas and suggestions during the project. Needless to say, any errors or omissions in the thesis chapter itself are my own.

I would also like to thank my former colleagues at the Cabinet Office and 10 Downing Street, particularly my former managers Julian McCrae, Axel Heitmueller and Hugh Harris, for giving me the opportunity to apply my research to policy and juggling my academic schedule. It was a unique and unusual experience to be at the heart of government while also working on my PhD. I joined the Cabinet Office as a macroeconomist in the immediate aftermath of the U.K.'s fiscal stimulus and at a time when deficit reduction was rapidly becoming the number one macroeconomic policy question. My part-time work in the policy world complemented well the research I was undertaking. I had very useful discussions with colleagues and access to information which proved particularly valuable while working on Chapter 2. I hope the research presented in this thesis reflects my general policy interests and the questions that stimulated me while working in government.

Finally, I must thank my family and friends — in particular my partner Laurel and my parents John and Elizabeth — for their unflinching support through the good times and the bad. They put up with the erratic working hours, the disappearing-off to my computer at obscure times and my mind often being elsewhere. They reassured in times of doubt and provided an invaluable rock throughout.

Without the support of my supervisors, colleagues, friends and family I have little doubt this thesis would have been immeasurably harder to write and it is for this reason that it must be dedicated to them.

JAMES S. CLOYNE  
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*“The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.”*

J.M. KEYNES

*The General Theory of Employment Interest and Money, 1935, Preface.*

*“The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back. I am sure that the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas.”*

J.M. KEYNES

*The General Theory of Employment Interest and Money, 1935, Chapter 24.*

*“It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.”*

SHERLOCK HOLMES

*The Adventures of Sherlock Holmes: A Scandal in Bohemia, 1891.*

# Chapter 1

## Introduction

The macroeconomic effects of changes in fiscal policy became of central importance to economic policy-making across the world during the writing of this thesis. Previously, research on the impact of discretionary fiscal policy was overshadowed by the large literature on the effects of monetary policy. Recently, however, fierce arguments have developed, both in the political world and among academic economists, about the effectiveness of a fiscal stimulus and, eventually, about the consequences of fiscal consolidation. As a result, there has been a hive of active research on fiscal policy and this thesis fits closely within the current literature.

This thesis contributes new evidence to our understanding of the macroeconomic effects of changes in taxation and government spending. The following three chapters shed light on the empirical effects of changes in fiscal policy, as well as the deeper transmission mechanisms involved. In short, Chapter 2 provides new evidence on the effect of, what I will call, ‘exogenous’ tax changes in the United Kingdom; Chapter 3 then estimates the importance of the ‘endogenous’ feedback to the fiscal policy instruments from macroeconomic variables such as output and debt; and, Chapter 4 specifically investigates the transmission mechanism of government spending shocks, also highlighting the mix of tax policies that finance these.

### **1.1 Identifying the effects of exogenous discretionary tax changes**

Chapter 2 provides new estimates of the effect of tax changes in the United Kingdom and, in doing so, directly contributes to the international evidence on the impact of tax changes on the macroeconomy. Although a fundamental issue in macroeconomics, there is a surprising lack of consensus in the existing literature. Furthermore, many estimates are for the United States, with considerable evidence-gaps for other countries. For example, despite the importance of this issue for the current policy of fiscal consolidation, evidence for the United Kingdom is sparse.

Disagreement in the empirical literature reflects the difficulty in identifying tax policy changes uncorrelated with, and uncontaminated by, other fluctuations. The econometrician does not, usually, possess data on the tax policy changes directly. Rather, most empirical work has used aggregate ex post measures of taxes such as total tax revenues. Movements in tax revenues, however, reflect a number of factors: the automatic response to fluctuations in, for example, GDP; discretionary policy changes responding to macroeconomic conditions; and, genuinely exogenous (or structural) discretionary policy changes. Identifying the macroeconomic effects of tax changes is therefore a challenge; changes in taxes are likely to contemporaneously affect GDP but commonly observed tax variables are also contemporaneously driven by GDP.

As I discuss in Chapter 3, approaches which use tax revenues essentially assume that the underlying fiscal shocks are latent variables. Identification of the effects of discretionary fiscal policy therefore proceeds by imposing identifying assumptions. One popular route, following Blanchard and Perotti (2002), is to use a Structural Vector Autoregression (SVAR) and I discuss this approach in more detail in Chapter 2. Another possibility is to estimate a structural model such as a Dynamic Stochastic General Equilibrium (DSGE) model. Recent examples of this literature are discussed at length in Chapter 3.

A different approach uses the narrative record to construct a direct measure of the policy shocks that are uncorrelated with current or projected economic fluctuations. So-called narrative approaches have been used to identify government spending shocks ((Ramey and Shapiro (1998); Ramey (2011))), monetary policy shocks (Romer and Romer (1989, 2004)) and, most relevantly, exogenous tax changes in the United States by Romer and Romer (2010).

The disparity of results in the existing literature is significant. Results from SVARs often vary across countries. For example, one of the few studies to consider the U.K., Perotti (2005), reports small negative effects of a tax cut on GDP. For the U.S., the effect of a tax shock on GDP is typically positive and around 1 per cent. However, the Romer and Romer (2010) narrative-based results are much larger for the United States. Romer and Romer find a large and persistent effect of tax changes on GDP, reaching nearly 3 per cent over three years. The literature therefore presents at least two puzzles. First, do the effects of tax changes vary across countries — in particular does a tax cut in the U.K. really lead to a decline in GDP? Second, is the effect as large in the U.S. as estimated by Romer and Romer? Without further narrative studies, and new data, this is very difficult to establish.

In Chapter 2 I argue that the U.K. is an ideal country for new analysis. In Appendix A.1 I construct, from scratch, a new narrative dataset for the United Kingdom. I hope that this unique new dataset in itself provides a fascinating resource for economists and historians alike.

Chapter 2 then uses my new dataset to consistently estimate the macroeconomic effects of exogenous tax changes in the United Kingdom. I find that a 1 percentage point

cut in taxes as a proportion of GDP causes a 0.6 per cent increase in GDP on impact, rising to 2.5 per cent over nearly three years. In providing new narrative-based estimates, this paper also makes a direct contribution to the international evidence; my results are remarkably similar to the Romer and Romer (2010) results for the United States. I also show that the identified exogenous tax changes made an important contribution to the U.K. post-war business cycle.

## 1.2 The impact and determinants of endogenous tax changes

Chapter 3 combines the narrative approach of directly measuring discretionary policy changes with a structural DSGE approach to identify the endogenous feedback from output, debt and government spending to the fiscal instruments. Chapter 2 focused on the ‘exogenous’ changes in policy. Equally important are the consequences of ‘endogenous’ movements in the fiscal policy instruments — those taken in response to macroeconomic conditions.

Narrative datasets (both mine in Appendix A.1 and Romer and Romer (2009b)) contain information on the ‘exogenous’ and ‘endogenous’ policy decisions. However, for the reasons discussed above, estimating the importance of the endogenous policy actions presents a considerable identification challenge. Using the endogenous tax changes, isolated in the narrative datasets, in the theory-free approach taken in Chapter 2 would be very difficult.

The innovation in Chapter 3 is to incorporate narrative measures of the legislated discretionary policy decisions into a DSGE model, as a way of identifying and estimating the importance of the endogenous components using Bayesian methods. As mentioned above, previous approaches have had to assume that the tax shocks were latent variables, with the tax data based on National Accounts measures of revenues. Chapter 3 can therefore be seen as the bringing together of the structural DSGE approach and the narrative approach outlined in Chapter 2.

The model includes sticky prices and the non-fiscal elements resemble New Keynesian models such as that of Smets and Wouters (2003). The model is also based on recent work by Mertens and Ravn (2011b) and, to focus specifically on the endogenous policy reactions, a rich fiscal policy description is employed following Traum and Yang (2009), Zubairy (2010) and Leeper et al. (2010). To make the estimates as comparable as possible with the existing literature, I focus on the United States. I therefore use the Romer–Romer narrative dataset in my estimation.

I show that the feedback from debt to the fiscal policy instruments is weaker when estimated using the narrative tax measures. As the effects of fiscal policy shocks depend on the current and future feedback to the fiscal instruments, I also consider the fiscal multipliers implied by my new estimates. I find that the tax multipliers are higher than estimated elsewhere in the corresponding literature; that the capital tax multiplier is

significantly higher than would be obtained without incorporating the Romer–Romer shocks in the estimation; and, that the estimated model implies that exogenous tax changes have a peak effect between estimates found by Romer and Romer (2010) and in the SVAR literature. Finally, I show that the data prefer — in the sense that they are more consistent with — a model with endogenous fiscal policy reactions over one with an exogenous fiscal policy specification and monetary policy that violates the Taylor principle (as would be required to ensure (locally) determinate debt dynamics).

### 1.3 The macroeconomic effect of government spending shocks

While Chapter 3 focuses on the integration of narrative measures of tax changes into a DSGE model, the estimated model also sheds light on the effect on government spending shocks. However, the likelihood-based Bayesian approach taken in Chapter 3 places considerable structure on the data. These full-information methods treat the model as an accurate representation of the true data generating process; as Canova (2007) explains “the structure is correct, only the parameters are unknown”.

However, a debate has emerged as to whether DSGE models can adequately account for the empirical effects of structural shocks to government expenditure found *elsewhere* in the empirical literature. Particular attention has been paid to whether DSGE models can account for SVAR evidence that private consumption and real wages tend to rise following a structural shock to government spending; see, for example, Monacelli and Perotti (2009), Ravn et al. (2007) or Linnemann (2006).<sup>1</sup> Whereas full-information structural methods place a lot of faith in the ‘truth’ of the model, Vector Autoregressions take the opposite view, placing as few restrictions as possible on the data. Of course, to give an economic interpretation some structural assumptions are still required, as they are in Structural VARs.

In Chapter 4 I again construct and estimate a DSGE model for the United States. However, rather than assuming the model is a full description of the data generating process, I focus on the model’s ability to account for a particular aspect of the data: namely the effect of government spending shocks. I employ a minimum distance approach, matching the impulse response functions from the model to those obtained from a SVAR, identified using the method of Blanchard and Perotti (2002). Results from the estimated model can then be compared with the SVAR evidence to evaluate the model’s performance.

The focus of Chapter 4 is on the importance of the endogenous response of tax rates to government spending shocks and the strength of the so-called ‘wealth effect’ on labour supply — both of which crucially affect the predictions of standard macroeconomic models.

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<sup>1</sup>It should be noted that narrative identification approaches tend to find a fall in consumption. See Perotti (2007) for a review of this evidence and a reconciliation with the SVAR results.



Many standard models of fiscal policy rely on lump sum taxes to finance an expenditure shock. This assumption is far from innocuous as lump sum tax finance implies a ‘wealth’ effect as (expected) income falls. Consumption falls but, assuming leisure and consumption are normal goods, labour supply and consequently output rise. This allows the neoclassical model to match empirical evidence that output increases following a government spending shock.

I argue that the mix of tax instruments matters greatly and construct a New Keynesian model with distortionary labour and capital taxes. Higher distortionary tax finance implies (often negative) substitution effects which can offset any positive wealth effect on labour supply. However, both the use of different fiscal instruments and how strongly households actually respond to the fall in their lifetime wealth should be a matter for the data, not prior assumption. I therefore estimate the parameters governing the key transmission mechanisms. This includes the coefficients in the tax policy rules, the strength of the wealth effect on labour supply and parameters governing the more standard features such as sticky prices, variable capital utilisation and habits.

I show that the estimated model can match the positive empirical response of key variables including output, consumption and the real wage — a challenge for many New Keynesian models. I find that the estimated importance of the wealth effect is small; that sticky prices, variable capital utilisation, investment adjustment costs and habits all play an important role; and that whilst tax rates rise following the shock, their small magnitude crucially reduces the distortions involved.

In the course of this thesis I present new empirical evidence on the effects of changes in fiscal policy at the macroeconomic level and examine the economic mechanisms at work. This thesis suggests that discretionary changes in taxes and spending do have important effects and complex transmission mechanisms. Given recent events, the debate about fiscal policy is as alive today as at any time in the history of macroeconomics. I hope this thesis shines new light in areas previously dark and contributes to furthering our understanding of what has become, once again, one of the central questions in macroeconomic policy.

## Chapter 2

# What are the effects of tax changes in the United Kingdom?

*“Maintenance of the existing order and existing rates produces no information, whereas more information can be obtained by making changes. In this respect the U.S...is at a disadvantage by comparison with the U.K. A good illustration of this is afforded by the excitement generated amongst American economists in the 1960s by the investment tax credit and the attempts to assess its effects. A British economist would have shrugged this off as a mere trifle compared to the changes he had witnessed over the years.”*

Mervyn King, *Public Policy and the Corporation*, 1977

### 2.1 Introduction

Despite its importance for current macroeconomic policymaking, evidence of the macroeconomic effects of tax changes in the United Kingdom is sparse. Furthermore, there remains a distinct lack of consensus in the international evidence. Do tax cuts stimulate the economy? Will tax increases harm economic recovery? Answering these questions remains a contentious issue and one that is particularly pertinent at a time of intense disagreement about the macroeconomic consequences of a fiscal consolidation.

In this chapter I help to fill the evidence gap, making three important contributions. First, I provide new, robust estimates for the macroeconomic effects of tax changes in the United Kingdom by constructing a new narrative dataset. I find that a 1 percentage point cut in taxes as a proportion of GDP causes a 0.6 per cent stimulus to GDP on impact, rising to 2.5 per cent over nearly three years. Second, I make a direct contribution to the international evidence; my results are remarkably similar to the Romer and Romer (2010) narrative-based estimates for the United States. Third, this work (and the long

appendix, Appendix A.1) provides detailed new data for analysing the effects of U.K. tax policy and its history.

Microeconomic work has already used historical tax reforms in the U.K. for estimating changes in behaviour. For example, Blundell et al. (1998) use the 1980s tax reforms to estimate labour supply elasticities. Cummins et al. (1996) use the 1991 corporation tax cuts to examine the responsiveness of business investment using firm level data.<sup>1</sup>

However, few studies have examined the *macroeconomic* effects of tax changes in the United Kingdom. This gap is reflected in the U.K. Office for Budget Responsibility's report from June 2010. The tax multipliers used by the OBR are derived, in part, from an IMF survey paper from 2009. Of the nineteen studies reviewed by the IMF only two specifically examine the U.K. The OBR's other multiplier assumptions come from common large-scale macro-econometric forecasting models which often crucially depend on modelling assumptions.<sup>2</sup>

The academic literature has focused on the United States and cross-country panel datasets. However, even for the U.S. there is no consensus. This reflects the difficulty of identifying tax policy shocks uncorrelated with, and uncontaminated by, other fluctuations. The basic problem is one of simultaneity. Changes in taxes are likely to contemporaneously affect GDP but commonly used tax variables such as tax revenues are also contemporaneously driven by GDP.

The recent literature has tackled the resulting identification problem in two ways. The first approach, initiated by Blanchard and Perotti (2002), seeks to identify the shocks to revenues that are contemporaneously uncorrelated with other fluctuations, from a structural vector autoregression (SVAR).<sup>3</sup> This is achieved by assuming that policymakers do not respond to shocks within the quarter. External information on the elasticity of revenue to output is then used to create cyclically adjusted revenues. For the U.S., the effect of a tax shock on GDP is typically around 1 per cent.<sup>4</sup> However, results vary across countries. For example, one of the few studies to consider the U.K., Perotti (2005), reports small negative effects of a tax cut on GDP.

The second method uses the narrative record to construct a direct measure of the policy shocks that are uncorrelated with current or projected economic fluctuations. So-called narrative approaches have been used to identify government spending shocks

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<sup>1</sup>Other examples are Blow and Preston (2002) who use the post-1979 tax reform period to estimate the extent of responsiveness in taxable earned income to rates of taxation and various papers which study the employment effect of the introduction of the Working Families' Tax Credit, such as Gregg and Harkness (2003) and Blundell et al. (2005).

<sup>2</sup>Indeed, Blanchard and Perotti (2002) argue "the evidence from large-scale econometric models has been largely dismissed on the grounds that, because of their Keynesian structure, these models assume rather than document a positive effect of fiscal expansions on output".

<sup>3</sup>See, for example, Perotti (2005, 2007), for a survey.

<sup>4</sup>Blanchard and Perotti (2002) conclude that the effects for the U.S. are small, often close to 1. Perotti (2005) finds a maximum effect on GDP for the U.S. of around 0.6 per cent.

((Ramey and Shapiro (1998); Ramey (2011)), monetary policy shocks (Romer and Romer (1989, 2004)) and, most relevantly, tax shocks in the U.S. by Romer and Romer (2010). Romer and Romer find a large and persistent effect of tax changes on GDP, reaching nearly 3 per cent over three years.

Identification in the SVAR approach crucially depends on the assumptions. Furthermore, the results can be quite sensitive to the elasticity used. This issue is a particular problem for the U.K. results in Perotti (2005). The narrative method offers a more direct approach and, in evaluating the state of current knowledge, Beetsma (2008) argues “the contribution that likely yields the most reliable results up to now is Romer and Romer”.

However, the existing literature presents at least two puzzles. First, do the effect of tax changes vary across countries — in particular does a tax cut in the U.K. really lead to a decline in GDP? Second, is the effect as large in the U.S. as estimated by Romer and Romer? Without further narrative studies this is very difficult to establish.

In this chapter I provide new estimates for the U.K. by pursuing a narrative-based approach. However, in doing so, I directly contribute to the international evidence. A number of factors make the U.K. an ideal country for a new study. Firstly, the U.K. has a long history of using tax policy and there were many policy changes. Secondly, the U.K. Budget process is ideal for the construction of a new narrative dataset. Tax policy is highly centralised<sup>5</sup> and, since the Budget is a major annual event, tax changes are largely saved for this announcement with implementation taking place throughout the year. Furthermore, unlike in the United States, these announcements almost always become law. In addition, detailed revenue forecasts are provided for all the Budget measures and there is extensive political debate and discussion about the motivation for each change.

I therefore construct, from scratch, a new narrative dataset for the U.K. The narrative account itself can be found in the long appendix, Appendix A.1. Having assembled data from official Budget sources on all the discretionary policy changes between 1945–2009, I employ the Romer–Romer (RR) identification strategy. I use the justifications given in the narrative record to isolate tax policy changes which were not responding to, or influenced by, current or projected economic fluctuations. I follow RR in calling these ‘exogenous’ tax policy changes (as opposed to ‘endogenous’).

In categorising each of the 2,500 discretionary policy changes I keep as close as possible to the stated motivation. This generates slightly different subcategories from those in RR. The ‘exogenous’ category contains actions to improve long-run economic performance, ideological changes related to party political or social causes, rulings from external bodies such as courts, and fiscal consolidation measures based on long-run considerations. The endogenous changes are actions to manage demand, to stimulate production, to offset a debt crisis and those to fund spending decisions.

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<sup>5</sup>Adam et al. (2010) note that only 5 per cent of revenue is raised locally.

Having constructed an ‘exogenous’ tax series, I then use it to consistently estimate the macro-economic effects of tax shocks in the United Kingdom. Given the construction of the series, a relatively simple regression should, in principle, achieve this.

The rest of the chapter is structured as follows. Section 2.2 describes the identification strategy and my new U.K. quarterly dataset, its construction and properties. I also show that the constructed series is unforecastable on the basis of past macroeconomic data. Appendix A.1 contains more details and the narrative itself. Section 2.3 presents the baseline results using the new tax shocks. Section 2.4 runs a variety of robustness checks. Section 2.5 shows that both long-run economic and ideologically motivated tax cuts have similar stimulus effects. Finally, Section 2.6 examines the contribution of the tax shocks to the U.K. business cycle. I show they contributed to several major episodes in the post-war period. Section 2.7 concludes that the macroeconomic effects of tax shocks are powerful, persistent and significant in the U.K.

## 2.2 The new U.K. post-war tax dataset

### 2.2.1 Identification

One of the key problems in identifying the macroeconomic effects of tax changes is simultaneity. Discretionary changes in taxes are likely to affect GDP contemporaneously, but aggregate fluctuations will also contemporaneously affect commonly used tax measures (such as tax revenues). Suppose output growth,  $\Delta y_t$  (where  $y_t$  is the log of real GDP), is related to changes in taxes as follows:

$$\Delta y_t = \alpha_0 + \psi \Delta \tau_t + u_t \quad (2.1)$$

where  $\alpha_0$  is a constant and  $\tau_t$  is a chosen measure of tax changes. Any measure  $\tau_t$  which is a function of factors also contemporaneously affecting output, cannot be used to consistently identify the effects of tax changes. If  $\tau_t = \tau(u_t)$  then the chosen tax measure would be contemporaneously correlated with the error term, violating the standard requirement for consistent estimation of the coefficients.

As a specific example, and to illustrate the popular Blanchard and Perotti (2002) identification approach, consider the following simple model. Suppose taxes are measured by (log of real) tax revenues,  $s_t$ . Also assume that the change in tax revenues is affected by movements in aggregate output and another shock,  $\xi_t$ :

$$\Delta y_t = \alpha_0 + \psi \Delta s_t + u_t \quad (2.2)$$

$$\Delta s_t = \eta \Delta y_t + \xi_t \quad (2.3)$$

where  $\eta$  is taken to be the elasticity of output with respect to revenues.

The Blanchard and Perotti (2002) approach seeks to identify  $\xi_t$  as the ‘structural’ shocks to revenues: those uncorrelated with other contemporaneous economic shocks. The method assumes policymakers are not informed about, or are unable to respond to, shocks within the same quarter. The method then uses external information to calibrate the elasticity  $\eta$ . A series for  $\xi$  can then be constructed. Under these assumptions the  $\xi$  series is interpreted as the discretionary policy decisions uncorrelated with other fluctuations.

There are at least three problems with this method. First, if the timing assumptions do not hold, then  $\eta$  does not simply reflect the *automatic* response of revenues to output.  $\eta$  would also be capturing any legislated changes in policy which are contemporaneously correlated with output. Second, we need to be confident that the specification (2.3) adequately captures the cyclical influences on revenues. Of course, we could add extra variables such as inflation or the interest rate to the right hand side but, as many factors are likely to affect revenues, it is unclear what a comprehensive list would be. Errors in the specification would lead to  $\xi$  incorrectly capturing the structural, policy-induced, shocks to revenues. Third, legislated tax shocks are not simply shocks to revenues; they alter rates and liabilities, which themselves are likely to affect the elasticity  $\eta$ .

Ideally we would like a direct measure of the policy innovations uncorrelated with other current or prospective shocks. Suppose we could construct such a series and that its past and present values were uncorrelated with other contemporaneous shocks. This is sometimes referred to as weak exogeneity or simply exogeneity.<sup>6</sup> Under this condition,<sup>7</sup> with an infinite sample and by appealing to the Wold decomposition theorem, we can estimate a simple infinite distributed lag model

$$\Delta y_t = \mu + \sum_{j=0}^{\infty} \gamma_j d_{t-j} + \nu_t, \quad (2.4)$$

and consistently estimate the dynamic effects of the tax shock on output (the  $\gamma$  coefficients).  $d_t$  is the constructed ‘exogenous’ tax series. Note that the key identifying assumption is  $E(\nu_t | d_t, d_{t-1}, \dots) = 0$ .

In this chapter I adopt a narrative approach to identify such a series and, following Romer–Romer (RR), I call these ‘exogenous’ discretionary tax changes. Data on all discretionary policy decisions are collected from narrative sources (such as U.K. Budget documents). I then employ the RR strategy of classifying tax changes by motivation. This allows me to identify those decisions that were taken for reasons uncorrelated with current or prospective economic conditions. Actions which do not satisfy this criteria are referred to as ‘endogenous’.

To make the discussion more concrete assume the discretionary policy decisions are

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<sup>6</sup>In contrast to strict exogeneity which requires that the whole tax series  $t = 0, \dots, T$  is uncorrelated with  $u_t$ .

<sup>7</sup>And the other standard conditions ensuring the consistency of OLS.

observable from narrative sources and call these  $p_t$ .  $p_t$  is likely to be made up of an exogenous component  $x_t$  (in the sense discussed above) and policy changes that react to economic fluctuations — for example output, inflation, unemployment, fiscal deficits and so on,  $f(y_t, \pi_t, u_t, b_t)$ . Hence  $p_t = x_t + f(y_t, \pi_t, u_t, b_t)$ . Simply using  $p_t$  as a measure of  $d_t$  will lead to inconsistent estimates of the  $\gamma$  coefficients in equation (2.4) as  $f(\cdot)$  is correlated with  $\nu$ . However, assuming that we can construct an exogenous series from the narrative record,  $x_t$  (and its lags) should be uncorrelated with the error terms, allowing for consistent estimation of the effects of tax policy shocks.

It can also be seen from equation (2.4) that several common tax measures cannot be used in place of  $d_t$ . Using total revenues violates  $E(\nu_t | d_t, d_{t-1}, \dots) = 0$  as current shocks to output also affect revenues (equation (2.3)). The same is likely to be true of tax rates and the full discretionary policy change series  $p_t$ . As policy variables sometimes respond contemporaneously to other economic shocks, these are also correlated with  $\nu_t$ . The narrative approach is so useful precisely because it isolates the policy changes for which the identifying assumptions hold.

## 2.2.2 Constructing the exogenous series

### Data Sources

The centrepiece of the British tax process is the annual Budget. This is a traditional and grand occasion which attracts extraordinary media coverage in spite of its technical nature. Part of the attraction is the rhetoric and theatre of the Budget speech as well as the anticipation of surprises Chancellors invariably try to pull out of their hat. However, the Budget is more than pomp and circumstance; it is also the annual presentation of the Government's economic policy. The policy changes are — with the exception of emergency measures and recently a second Budget-type event in the autumn (the Pre-Budget Report) — stored up for this performance. This process and the other features mentioned in the introduction make the U.K. ideal for a narrative study of tax changes.

To construct an 'exogenous' series, the starting point is to identify and collect revenue forecasts for all the discretionary policy changes. The source for the revenue estimates is the Financial Statement and Budget Report<sup>8</sup> (FSBR), commonly known as the Red Book, which is published alongside the Budget speech. For actions between Budgets (not already covered in the FSBR) I use estimates given by the Chancellor of the Exchequer to Parliament. The source for this is the official parliamentary record, Hansard.

Other sources are used to ensure that I have accounted for all the interim tax changes. Firstly, the Chancellor's Budget speech often mentions measures already taken. But secondly, I use the economic history literature; several major contributions contain chronolo-

<sup>8</sup>Before 1969 this was simply called the Financial Statement and in the early years a separate Economic Survey was published.

gies which were of significant help.<sup>9</sup> Together all these sources identify nearly 2,500 non-negligible<sup>10</sup> tax changes.

Changes in Social Security contributions (National Insurance) are considered when they are part of the Budget process. In the earlier part of the sample, changes to National Insurance contributions were announced separately and closely followed changes in welfare transfers; this reflected the original ‘Contributory Principle’ behind National Insurance. I am therefore confident that these extra-Budgetary changes were spending-driven and therefore not ‘exogenous’ (see discussion below). In later years National Insurance became more like a tax (both in structure and use) and was brought into the Budget process. When included in the Budget process I make use of these changes. This is discussed in more detail in Appendix A.1.

The next step is to split the series by motivation. For each change I primarily use the Chancellor’s Budget speech and, since 1997, the Economic and Fiscal Strategy Report (EFSR) (which was specifically designed to explain and justify actions). Other documents also proved useful: the FSBR itself, the Economic Surveys in the early years, relevant White Papers (statements of government policy), technical notes and additional debates and speeches recorded in Hansard. The history literature was important in framing the context and highlighting additional events of relevance. However, as in RR, the policymakers’ explanation is generally taken at face value. The intention is not to provide an exhaustive review of different commentators’ perspectives but rather to provide a narrative of the stated justifications for action (and a sense of how policymakers saw their actions at the time).

Implementation dates are usually given in the FSBR or the speech. For changes where this is not the case I also make use of the Finance Act itself (the legislation enacting the Budget measures) or relevant Statutory Instruments (secondary legislation) and technical notes. More detail on the legislative arrangements in the U.K. are described in Appendix A.1.

### **Classifying the motivation**

Following RR, I distinguish between endogenous and exogenous tax policy changes. Recall that an ‘exogenous’ policy decision is one that was taken for reasons uncorrelated with current or prospective economic conditions. This is the most important distinction given that the objective is precisely to isolate these changes.

As mentioned, I have attempted to keep as close as possible to the spirit of the motivation. I split endogenous changes broadly into four categories: those to regulate demand (demand management), those to boost production (supply stimuli), those to deal

<sup>9</sup>Useful texts included Dow (1964), Cairncross (1992), Britton (1991) and Woodward (2004).

<sup>10</sup>The definition of a negligible action is made by Her Majesty’s Treasury (HM Treasury) and no public figure is then given for these policy changes. In 2009 for example, this was a change amounting to less than 0.0002 per cent of GDP.



with a deficit crisis (deficit reduction) and those that financed spending decisions.

A demand management change attempts to adjust aggregate demand (or specific components) following contemporaneous or projected fluctuations in the economy. There are many examples from 1945 to 1979.<sup>11</sup> A classic example is a stimulus to aggregate demand to offset a negative shock to output. However, there are many cases where the policymaker was responding to curb inflation or rectify a balance of payments crisis. The crucial element is whether demand regulation via a tax change was the key mechanism to offset another shock.

Where a supply-side reform attempts to offset an immediate shock I classify this as a supply stimulus. A good example is the 1985 cuts to National Insurance contributions. As a consequence of the early 1980s recession, unemployment had been rising sharply to 1985 and this motivated policy action. The approach was, however, justified in terms of making it less costly to hire workers and policymakers specifically rejected a stimulus to demand.

I classify a policy as a deficit reduction action if it was specifically triggered by concern over current movements in the deficit (for example concerns about the government's credit rating) or a clear consequence of another shock. For example, the Government in 1993 argued the deficit was a direct consequence of the recession and was rising too fast: immediate action was required and taxes were increased. RR do not have this category but there is clear evidence in the U.K. narrative of policy contemporaneously responding to deficit changes.

Spending-driven changes explicitly finance a spending action. I only assign this category where there is a clear link between a tax change and a spending decision. A good example of a spending-driven change was the 2002 increase in National Insurance contributions to fund expansion of the National Health Service.

The exogenous actions are split into four categories: measures taken to boost long-run economic performance, those motivated by ideological or political reasons, those enforced by external bodies and, less obviously, those to deal with an inherited deficit or for future deficit consolidation.

Although long-run economic actions are not designed to offset a current shock, these need not only be taken in times of calm. The 1979 Conservative Government made a number of supply-side reforms as part of their long-term economic strategy even during a recession. Such measures were not designed to offset the current recession. In cases where a supply-side action is intended to offset a shock, supply stimulus would be a more appropriate categorisation.

Ideological changes are those taken for political and philosophical reasons, not explicitly to influence economic performance. The Conservative Government's married couples' allowance (and the 1997 Labour Government's removal of it) is a clear example of this.

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<sup>11</sup>Dow (1964) argues "there is probably no country in the world that has made a fuller use than the United Kingdom of budgetary policy as a means of stabilising the economy".

External changes are those imposed on policymakers by rulings from external bodies. Examples of external decisions are court judgements and the enforcement of European directives.

The previous three categories are more obviously exogenous: policy changes do not react to shocks. Policy actions in the fourth exogenous category, deficit consolidation, are likely to reflect past shocks (for example the effect of a previous recession). RR define a deficit-driven policy change as either dealing with an inherited deficit for long-run reasons (for example, a belief that it will support long-run growth) or a planned future consolidation to offset a current fiscal action. However, there are no examples in the U.K. where an incoming government decided to deal with a deficit independent of the current macroeconomic situation. There was always a sense of crisis and this led me to introduce the new endogenous deficit reduction category.

There are, however, some cases where deficit consolidations were planned for future years. This was a way of anchoring credibility while spreading the consolidation over time. For example, the fiscal stimulus designed to offset the 2008–09 recession was accompanied by planned tax rises several years later. In the sense discussed in Section 2.2.1 these are still exogenous, being correlated only with past shocks. One still might worry that all deficit consolidations are in some sense endogenous. Indeed the RR deficit category has attracted some criticism on these grounds. To guard against this possibility, in Section 2.5 I re-estimate the baseline model excluding the deficit consolidation category; I report that the results are largely unaffected.

It is useful to note the similarity with the RR categories. Their ‘countercyclical’ category closely relates to demand management and supply stimuli. ‘Spending-driven’ is the same category. The new endogenous category is ‘deficit reduction’ as there is sufficient evidence of contemporaneous influences on deficit actions. For the exogenous changes, long-run, ideological and external can be matched to RR’s ‘long-run’ category and ‘deficit consolidation’ is similar although more restrictive.

### **Specific issues in applying the categorisation**

Budgets tended to have an overall motivation as well as providing specific justification for each measure. In Appendix A.1 I individually classify all the discretionary policy changes and provide evidence for the categorisation. I carefully weigh up both the overall and specific comments to disentangle the primary motivation.

There is an important grey area that requires discussion. In a few cases the overall motivation appears in direct conflict with the specific objective for individual measures. Consider a simple example. In 1968 all but two changes were stated to limit demand (tax increases) but the other changes are designed to help the elderly (a tax cut) and this is clearly marked as delivering on a long-run social objective. In one sense the latter is exogenous but, if the Chancellor had a target for lowering demand in mind,

then this cut had to be offset elsewhere. Furthermore, the measures often have different implementation dates and do not offset each other in the aggregate. Two actions may therefore be correlated if a seemingly exogenous action precipitates a larger endogenous one. It is usually very unclear the extent to which the Chancellor intended for some measures to offset others. In these more complicated cases I provide an alternative classification taking the whole Budget package together. In the 1968 example I classify all measures, including an ideological tax cut, as demand management. The ‘alternative’ series is then used as a robustness check below, with the results largely unaffected.

Another related but simpler issue is the treatment of packages of measures or actions designed to offset other actions. For example, between 1979 and 1997 there were considerable alterations in the balance of taxation from income tax to Value Added Tax (V.A.T.). It was argued that the V.A.T. rise was funding an income tax cut and the income tax cut was designed to stimulate long-term growth. Rather than categorise the income tax cut as ‘long-run’ and the V.A.T. rise as, for example, ‘deficit reduction’, it seems wise to categorise the package as ‘long-run’, even if a V.A.T. rise on its own might harm the economy.

### **Transforming the narrative into a quarterly dataset**

The objective is to construct a quarterly time series from 1945 to 2009.<sup>12</sup> The resulting series will be the change in projected revenue (which most closely reflect changes in on-going liabilities) normalised by GDP and expressed as a percentage. In this sense the resulting series can be seen as changes in an average tax rate.<sup>13</sup>

I make use of revenue forecasts from the Budget documents but my focus is on the change in tax liabilities. In general, measures that simply alter the timing of existing taxes are excluded. Good examples of this are the introduction of quarterly payments of tax for small employers or where a reduction in Advance Corporation Tax was to be “balanced by an increase in the subsequent liability to mainstream corporation tax”.<sup>14</sup> However, for some taxes, exclusion seems less appropriate. In the 2000s there were several examples of attempts to raise fuel duty but then, following volatility in the oil market or protests, this was deferred. In several cases the postponement was explicitly designed to support consumers’ expenditure — a form of stimulus — and it seems prudent to leave these changes in the series. Appendix A.1 discusses these cases in more detail.

In keeping with this focus on liabilities I make use of the ‘full year’ revenue estimate. This was the on-going annualised revenue effect (rather than any temporary revenue

<sup>12</sup>The final Budget I consider is April 2009. The December 2009 Pre-Budget Report (PBR) contained measures to be implemented in the 2010 Finance Bill but, with a General Election scheduled for the first half of 2010, it was unclear at the time of analysis which measures would actually become law. I do, however, use macroeconomic data up to and including 2009Q4; being in December, PBR measures would have been dated in 2010Q1 at the earliest — see below.

<sup>13</sup>As in both Romer and Romer (2010) and Mertens and Ravn (2010).

<sup>14</sup>FSBR 1988, page 47.

effect in the short run due to the timing of revenues reaching the Exchequer). I assign this figure to the implementation date, following Romer and Romer. I deal with possible anticipation effects below. In more recent years, estimates were given for several years ahead rather than as a ‘full year’ figure. However, the figures for the later years’ forecast are usually very similar. It is clear what reflects the ‘full year’ estimate and where figures did not correspond to a ‘full year’ concept this is explained in the Budget documents. I therefore generally use the latest year of data, although carefully watch for changes in revenue which do not appear to follow the ‘full year’ concept. Each case is considered individually in Appendix A.1.

Having assigned a motivation to a revenue change, I aggregate the tax series based on motivation and implementation date. This requires assigning the calendar dates to quarters. I follow RR by assuming that changes implemented in the second half of a calendar quarter have their economic effect in the next quarter. For example, a change implemented on 25<sup>th</sup> March is assigned to quarter two and not quarter one. In terms of announcement dates the appropriate dating method is the actual quarter of announcement.

The resulting aggregate series represents the forecast ‘full year’ change in revenues in each quarter, by motive. I follow RR and scale this by the annualised level of nominal GDP in each quarter. This is appropriate as the revenue figures are also annualised (hence quarterly revenue divided by quarterly GDP would generate the same ratio). UK GDP is not available quarterly prior to 1955 and so the consistent part of the sample must begin in 1955Q1. However, annual GDP is available from 1948 to 1955 and for these years I use the annual nominal GDP figure for the four quarters within that year.

There are a number of more specific technical issues and assumptions but for brevity I direct the reader to Appendix A.1 for the detailed discussion. I simply flag the most important cases below.

The first is how to treat temporary changes. For a temporary change the appropriate revenue estimate is not the ‘full year’ cost but rather the value which most closely reflects the total yield or cost of the action. This is usually clear and I assign this figure to the implementation date, reversing it on the end date.

Secondly, there are a minority of changes which have retroactive elements (about 120 of the 2500). I follow RR in dealing with this issue. A tax change with a retroactive implementation date has two components, the future effect on revenues going forward (the non-retroactive element) and the outstanding liabilities for the period before the announcement. As in RR, the baseline dataset simply excludes the retroactive elements and I assign the ‘full year’ revenue estimate to the announcement date.<sup>15</sup> As a robustness

<sup>15</sup>There are several reasons for this. First, many changes are passed by Budget Resolution and are implemented on Budget day anyway (see Appendix A.3). Second, few taxes are altered in the debate and so this announcement is often presented as the implementation (unless a later date is given). When an implementation date is in the past, the day the change becomes known seems the most appropriate ‘implementation’ for the non-retroactive element. See Appendix A.1 for how this compares with RR.

check I derive a series which assigns the accumulated retroactive liabilities as a levy to the same date, removing this the following quarter.

Finally, a few policy actions are not included. These include personal income tax credits (the Treasury and the Institute for Fiscal Studies regard these as spending; they have to be claimed and are closer to a definition of welfare transfers) and statutory or pre-expected indexation of duties, allowances and thresholds (for example uprating of the personal allowance each year with inflation or simple inflation increases in excise duties). Inflation increases in certain taxes are recorded by the Treasury as zero-revenue changes against the indexed base and also contain no new discretionary policy information so are excluded.<sup>16</sup> For more detail and justification again see Appendix A.1.

### 2.2.3 Properties of the new tax dataset

This section considers some of the features of the new dataset. Figure (2.1) illustrates the ‘exogenous’ policy changes which will be used in the later analysis. The series has a mean of -0.06 per cent of GDP, which is the same order of magnitude and sign as the RR series. There is also a fair amount of variation in figure (2.1) and the standard deviation is 0.25. The large positive and negative spikes in the middle of the series come from staggered timing in a move from direct to indirect taxes.<sup>17</sup> As a robustness check I correct for this later.

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<sup>16</sup>Romer and Romer do the same, arguing that these types of changes are basically an automatic uprating, containing no new policy information.

<sup>17</sup>V.A.T was increased in 1979Q3, income tax allowances were cut for the whole year 1979-80 and so the implementation date is taken as the announcement, but the accompanying income tax rate changes were not implemented until 1979Q4.

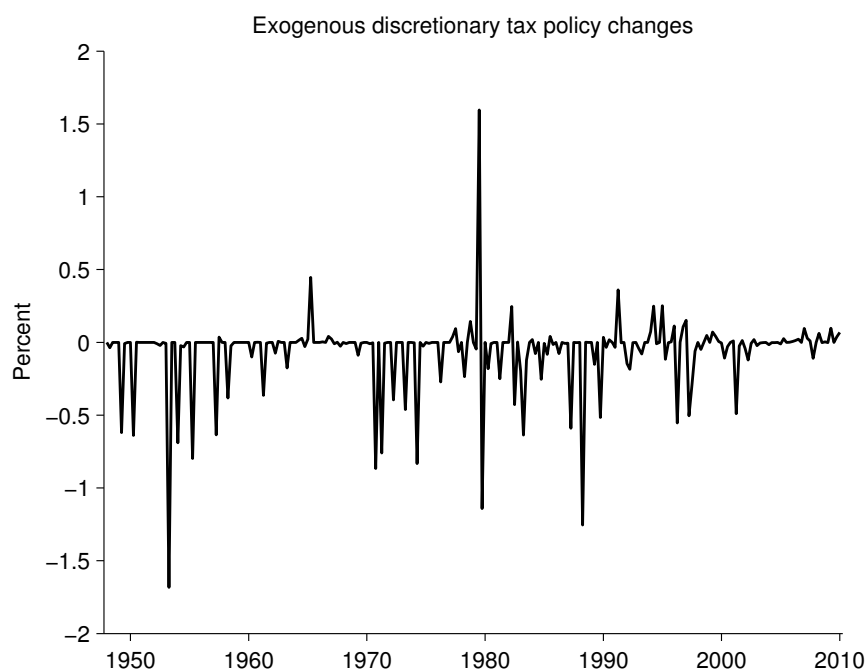


Figure 2.1: *Exogenous tax changes*

The full discretionary policy series (including exogenous and endogenous changes), shown in figure (2.2), is more volatile, largely reflecting the countercyclical actions (many of which were to deal with inflation). The mean is closer to zero at  $-0.014$  but is more volatile with a standard deviation of  $0.48$ .

Figure (2.3) shows the different subcomponents of the exogenous category (except the external category as these changes are small). The larger changes clearly arise from the long-run economic actions. We can also see some key periods of supply-side reform. The most sizable attempts to use tax policy for stimulating long-term economic performance were in the early 1950s (the Butler supply-side reform and mid 1950's boom), the early 1970s ("less but better government"<sup>18</sup> and the Heath-Barber boom), throughout the 1980s (the Thatcher/Howe/Lawson supply-side reforms) and the 1996/97 Clarke income tax cuts.

<sup>18</sup>Cairncross (1992), page 189.

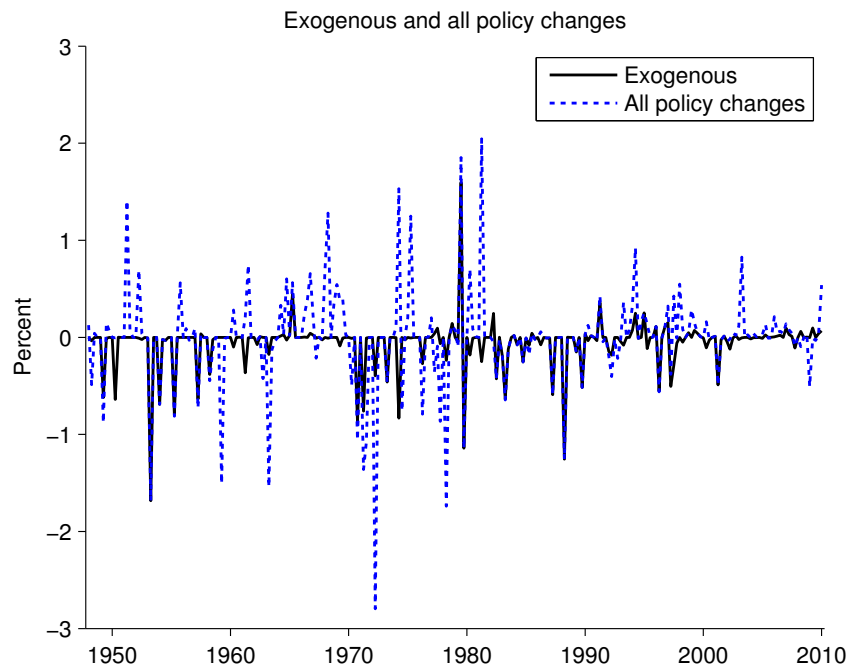


Figure 2.2: *Exogenous policy changes and all policy changes*

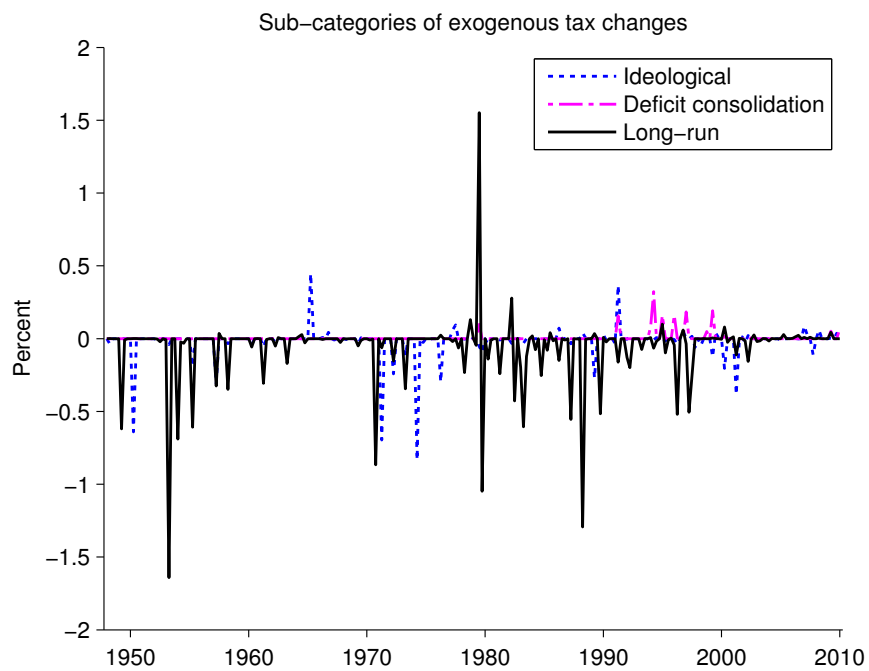


Figure 2.3: *Long-run economic, ideological and deficit consolidation exogenous policy changes*

There were some sizable ideologically motivated policy changes, although not on the scale or frequency as the 1980s reforms aimed at long-run economic performance.

There were also notable deficit consolidation measures throughout the 1990s following the recession.

It is also interesting to briefly look at the components of the endogenous series. These are illustrated in figure (2.4). There were few countercyclical tax policy actions (demand management or supply stimuli) after 1980 until 2008. The height of demand management policy was therefore between 1945 and 1979. This compares with a greater emphasis on the use of monetary policy for stabilisation after 1979. Sizable deficit reduction actions can also be seen, for example Geoffrey Howe’s famously strict 1981 Budget. Measures to help fund increased expenditure on public services in the early 2000s are also visible.

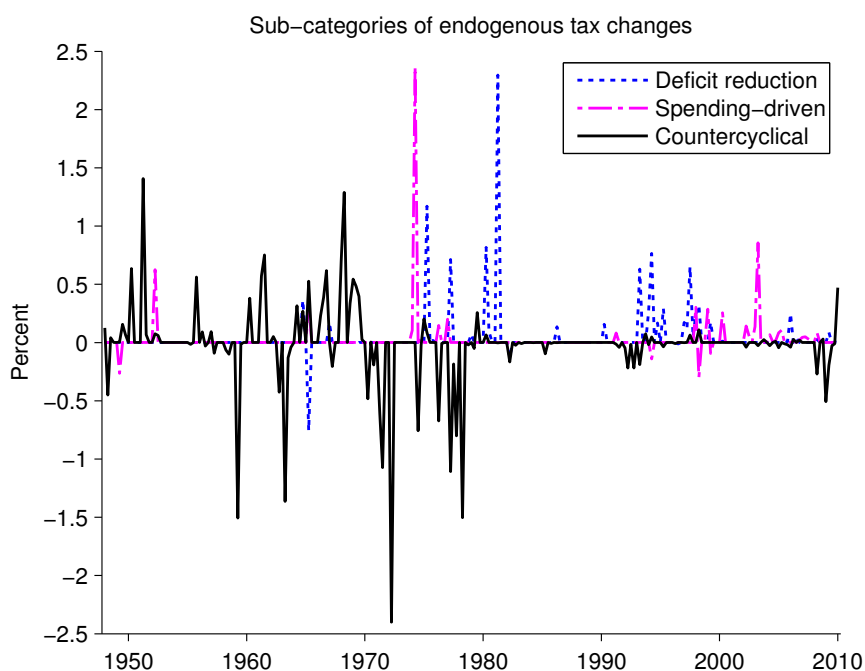


Figure 2.4: *Counterfactual, spending-driven, deficit reduction endogenous policy changes*

#### 2.2.4 Testing the predictability of the ‘exogenous’ tax changes

The ‘exogeneity’ of the constructed tax series is the key identifying assumption. While we cannot test whether our ‘exogenous’ series is contemporaneously uncorrelated with other macroeconomic data,<sup>19</sup> it is still instructive to consider whether the new series is unforecastable on the basis of past information.

Following Romer and Romer, I first perform a simple Granger Causality test using output<sup>20</sup> and the exogenous tax series. The results are presented in table 2.1.<sup>21</sup> Table

<sup>19</sup>Recall that the tax variable itself may simultaneously determine the independent variable, for example output.

<sup>20</sup>The series in this section are de-trended using the Baxter-King filter. However the results in table 2.1 are similar for growth rates and linear de-trending. In both cases using the exogenous series generated high p-values, using the countercyclical series generated low p-values.

<sup>21</sup>A high p-value for the Granger Causality test implies that we cannot reject the null hypothesis that



2.1 shows that at all three lag lengths it was not possible to reject the hypothesis that GDP does not Granger Cause the tax series. The p-value was high, over 0.9, with 4, 8 and 12 lags. As a comparison, I check whether the endogenous countercyclical series can be forecast on the basis of output. The null hypothesis was clearly rejected with p-values well below 0.01 for all three lag lengths.

Table 2.1: Granger Causality and Ordered Probit Results

Series	Test statistic	P-value
<b>Exogenous series</b>		
Granger Causality: 4 lags	0.24	0.91
Granger Causality: 8 lags	0.35	0.94
Granger Causality: 12 lags	0.42	0.95
Ordered Probit	10.06	0.61
<b>Countercyclical series</b>		
Granger Causality: 4 lags	5	0.001
Granger Causality: 8 lags	3.2	0.002
Granger Causality: 12 lags	3.7	0.0001
Ordered Probit	27.50	0.007

Secondly, and perhaps more importantly, I check whether the decision to act itself can be forecast from past information. This method is suggested by Mertens and Ravn (2010). It requires re-aggregating the tax series using the announcement date rather than the implementation date and performing an Ordered Probit regression. The underlying latent process is the tax series itself, call this  $\tau_t$ . Now define a ‘policy action’ indicator variable  $\omega_t$  where:

$$\omega_t = \begin{cases} -1 & \text{if } \tau_t < 0 \\ 0 & \text{if } \tau_t = 0 \\ 1 & \text{if } \tau_t > 0 \end{cases}$$

The Ordered Probit model is then estimated as usual by Maximum Likelihood. As in Mertens and Ravn (2010), the independent variables are taken to be (lags 1 to 4 of) output, consumption and investment. This method addresses whether the decision itself is forecastable from past macroeconomic data. Of course, this does not consider the size of the announcement but should give a sense of whether the policy decision was a product of economic conditions. In this sense it is a more meaningful test.

I test the null hypothesis that all the coefficients in the regression are zero. For the output does not Granger Cause the tax shocks. A high p-value for the Ordered Probit implies we cannot reject the null hypothesis that all the coefficients on the various forecasting variables are zero.

exogenous series, the p-value of the Likelihood ratio statistic was 0.61, implying that (at standard significance levels) we cannot reject the hypothesis that the variables in the regression contain no information for forecasting the exogenous series. By contrast the p-value for the countercyclical series was 0.007, clearly allowing us to reject the hypothesis that output, consumption and investment contain no information on which to forecast the countercyclical endogenous tax series.

These two tests suggest that the exogenous series is unforecastable on the basis of past information and add weight to our claim that the constructed tax series is indeed exogenous.

### 2.3 The macroeconomic effects of tax shocks: baseline specification

Having given weight to our claim that the newly constructed series is exogenous we are now ready to make use of these data for analysis. As discussed in Section 2.2, with an infinite sample the estimation of equation (2.4) should yield consistent estimates of the effects of an exogenous tax shock. However, in truncating the number of lags and with the smaller samples in time series analysis, it has become standard practice to use vector autoregressions, although I compare these baseline results with equation (2.4) later.

The effects of a tax shock are estimated from the following vector autoregression (VAR):

$$\mathbf{X}_t = A_0 + A_1 t + B(L)\mathbf{X}_{t-1} + C(L)d_t + \varepsilon_t \quad (2.5)$$

where  $B$  and  $C$  are lag polynomials with  $P$  and  $(Q + 1)$  lags respectively. The narrative shocks  $d_t$  are included as an exogenous variable following the preceding discussion. This specification follows Mertens and Ravn (2010) and the inclusion of narrative shocks as an exogenous variable is in keeping with the narrative approach to government spending shocks, for example in Burnside et al. (2004). There is a trade-off between a long lag structure reflecting equation (2.4) and protecting degrees of freedom in a smaller sample. RR use 12 lags of  $d_t$  (and the contemporaneous value) and I follow this convention, in other words  $Q = 12$ . I take  $P = 4$  which is common, although I experiment both with longer and shorter lag structures for  $B(L)$  and the results are robust. Later I also show that the results are robust to estimating the model with the  $\mathbf{X}$  vector in first differences.

As mentioned earlier, quarterly National Accounts data are not available for the United Kingdom before 1955Q1. I therefore take the sample to be 1955Q1 to 2009Q4. The baseline specification includes the log of real per capita GDP ( $y_t$ ), consumption ( $c_t$ ) and investment ( $i_t$ ). Thus:

$$\mathbf{X}_t = [y_t \ c_t \ i_t]'$$

Other variables of interest are then added as in Burnside et al. (2004) to preserve degrees of freedom. The other variables of interest will be: imports, exports, government consumption, government total managed expenditure, total revenues (all log of real per capita) as well as inflation, the nominal interest rate, real wages and hours worked per person. Precise description of the data is given in Appendix A.2.

The figures below report the baseline results for output, consumption and investment for  $Q = 12$ ,  $P = 4$ , together with standard 68 per cent non-parametric, non-centred bootstrapped confidence intervals using 10,000 replications.<sup>22</sup>

### 2.3.1 Baseline results for output and its components

Figure (2.5)<sup>23</sup> illustrates the central result of this chapter. A one percentage point cut in taxes as a percentage of GDP generates a large and persistent stimulus to output. A percentage point cut in the tax variable causes a boost of 0.6 per cent ( $p = 0.02$ ) in output on impact. This effect then rises to nearly 2.5 per cent ( $p = 0.001$ ) after about 3 years before receding.<sup>24</sup>

I now compare this result with the RR United States dataset. Figure (2.6) performs estimation of equation (2.5) using the Romer–Romer data.<sup>25</sup> The results in figures (2.5) and (2.6) are strikingly similar and reflect the actual findings in Romer and Romer (2010) — where the empirical specification is different — and Mertens and Ravn (2010) for an unanticipated tax cut. The close similarity with the United States is quite remarkable; all the more so given the very different tax history, policy framework and sources (and that the U.K. data are the result of aggregating nearly 2,500 classified changes).

---

<sup>22</sup>The method was as follows: (i) randomly draw residuals from the fitted residuals  $\hat{\varepsilon}_t$  and use (2.5) to simulate an artificial time series  $\tilde{X}_t$  (ii) perform estimation of (2.5) using the simulated data (iii) construct impulse response functions for this simulated dataset and save the output (iv) repeat 10,000 times to construct an empirical distribution of impulse response functions (v) take the 16th and 84th percentile as the empirical confidence intervals.

<sup>23</sup>The Matlab software written to perform all the estimation and generate the graphical outputs is available from the author on request.

<sup>24</sup>As the figures are based on a simulation which sets  $d_t = -1$  in  $t = 1$  and 0 for all other time periods, we could equally have displayed a tax rise ( $d_1 = 1$ ) with a large and persistent negative output effect.

<sup>25</sup>Available from their website.

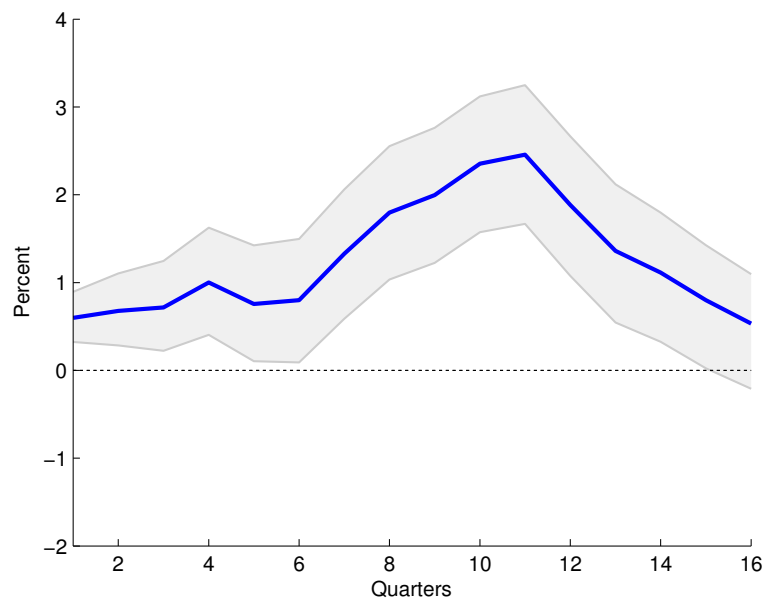


Figure 2.5: *Response of GDP to 1 per cent of GDP cut in taxes*

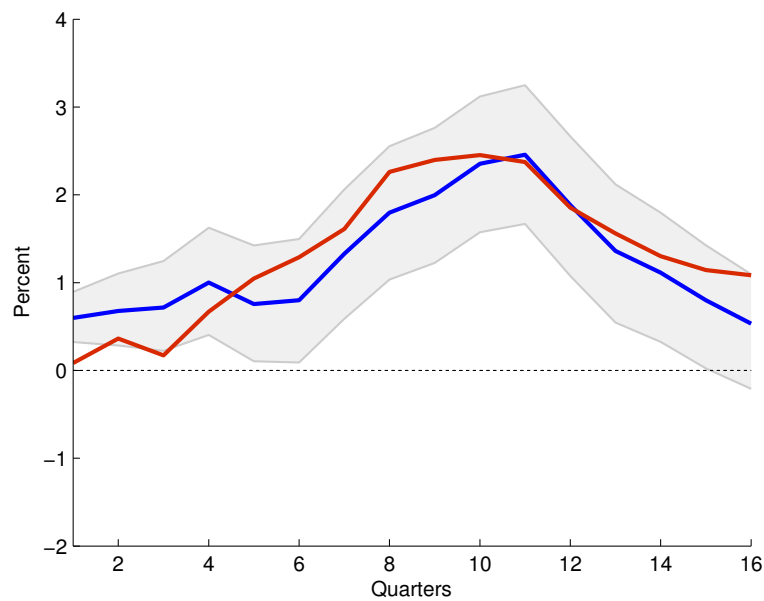


Figure 2.6: *Response of GDP in the baseline (blue), compared with the Romer–Romer result for the United States (red)*

I consider the effect of the 1 percentage point tax cut on the other variables in the baseline VAR. Figure (2.7) illustrates the effect on household consumption and investment. For consumption the impact effect is larger at 1.3 per cent ( $p \approx 0$ ) and has a maximum impact of 2.9 per cent ( $p = 0.004$ ). This suggests that tax shocks have a slightly greater effect on household consumption than on GDP, although the shape and

order of magnitude are very similar. It is also interesting to note that the consumption response is smoother. The investment response is large and positive, again remarkably similar to the results for the United States. The impact effect is 1.2 per cent ( $p = 0.07$ ) and rises to 4.5 per cent ( $p = 0.02$ ).

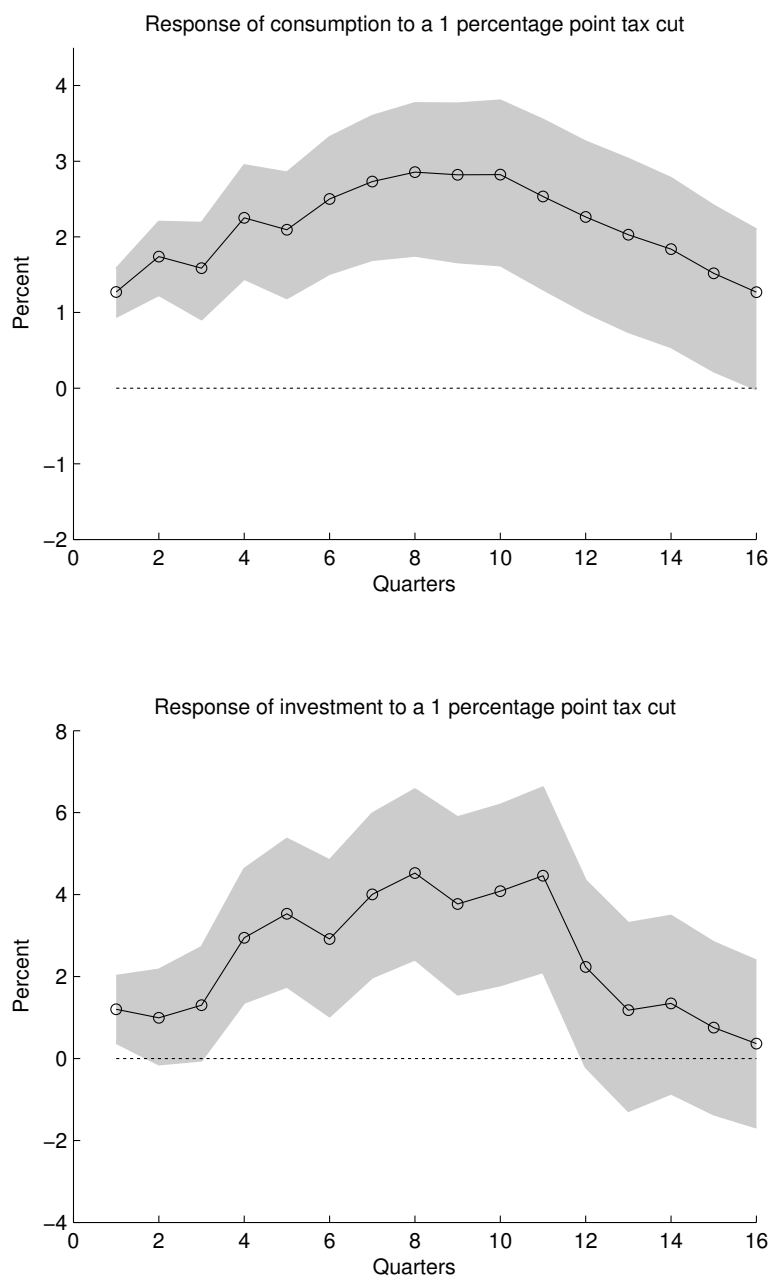


Figure 2.7: *Response of consumption and investment to 1 per cent of GDP cut in taxes*

Figure (2.8) illustrates the effect of the tax cut on imports and exports. One would expect a more immediate effect on imports than exports: the tax cut directly reduces the demand for imports by affecting domestic demand. The effect on exports may well be

driven more — at least in the short run — by the state of foreign demand (although this obviously depends on what happens to the real exchange rate). Figure (2.8) reflects this intuition. Imports increase significantly following the tax cut while the export response is largely insignificant. It is interesting to note the similar shape of the investment and the imports responses — suggesting that the volatility of investment is driven by volatility of imported capital goods.

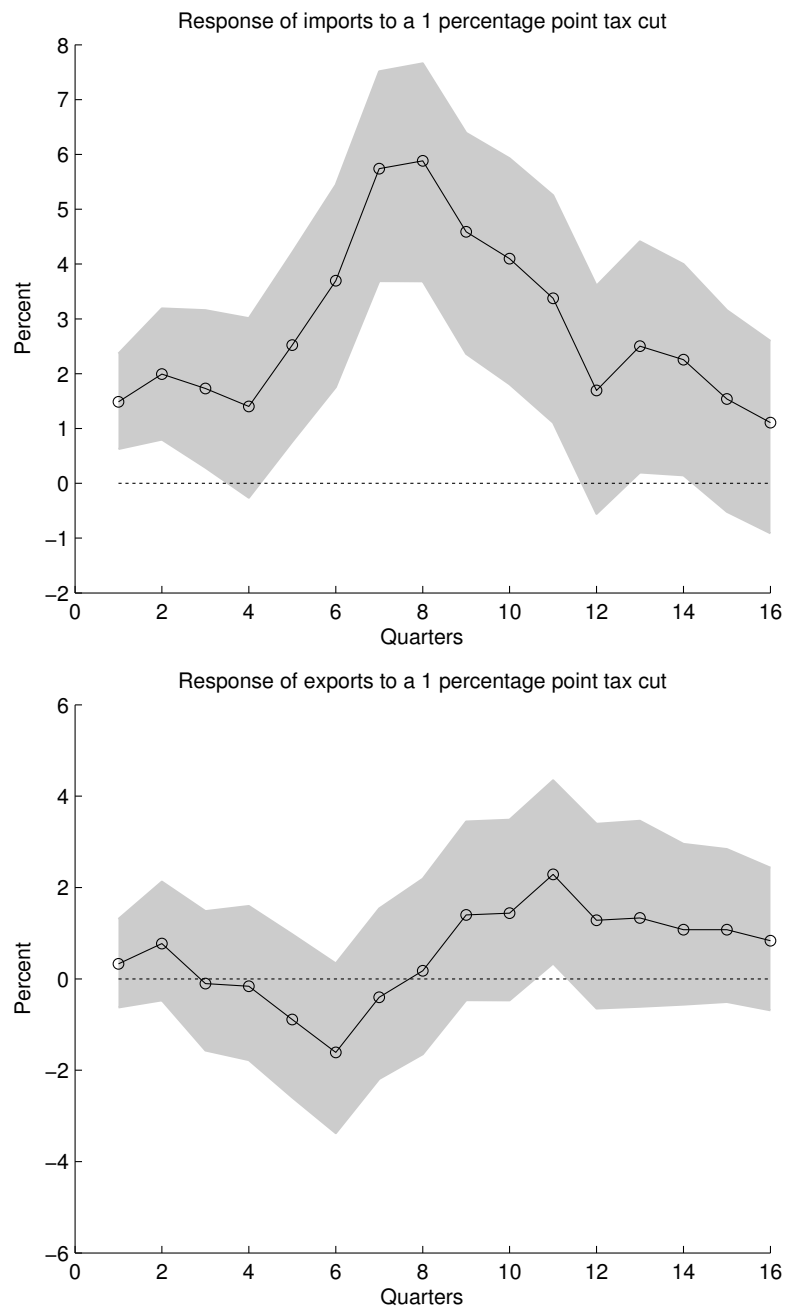


Figure 2.8: *Response of imports and exports to 1 per cent of GDP cut in taxes*

In short, this section demonstrates a striking result. Tax cuts (increases) have large, positive (negative), significant and persistent effects on key macroeconomic aggregates in the U.K.

### 2.3.2 The labour market response

I now consider the effect on labour market variables of a 1 percentage point cut in taxes. Unfortunately, data for hours worked and the real wage are not available for U.K. over the whole period 1955–2009; I therefore use a restricted sample.

Hours worked are defined as average weekly hours worked per person and this series is only available from 1971Q1. The real wage is defined as the (nominal) Average Earnings Index divided by the GDP deflator. This series is available from 1963Q1 onwards. I first check that the GDP response to the tax shock is similar when the sample is restricted to these time periods: the GDP response is indeed very similar in shape, magnitude and persistence. I then add each of the labour market variables to the VAR.

Figure (2.9) illustrates the effect of the tax cut on the real wage and on hours worked. The impact effect on the real wage is sizable at 1.2 per cent and rising to 3.3 per cent after 11 quarters (both with p-values approximately zero).

Hours worked, however, exhibit a smaller response. This can be seen in the bottom panel of figure (2.9). The response is not statistically significant for much of the period and the size of the response is everywhere less than 1 per cent. This suggests that hours worked do not respond much in response to a tax shock. These results are similar to Mertens and Ravn (2010) who find, following a surprise shock, that hours worked are less significant and not as sizable as the other variables (although their hours response peaks above 1 per cent, which is higher than my estimate).

The labour market results are interesting: so far the GDP, consumption and investment broadly reflect neoclassical predictions (at least qualitatively and including features such as investment adjustment costs as in Christiano et al. (2005)). The hours response is qualitatively what one would expect from a typical theoretical model (given the substitution effects from distortionary taxes), although the real wage may well be too responsive. Further work is needed to explore how well theory can fit these facts.

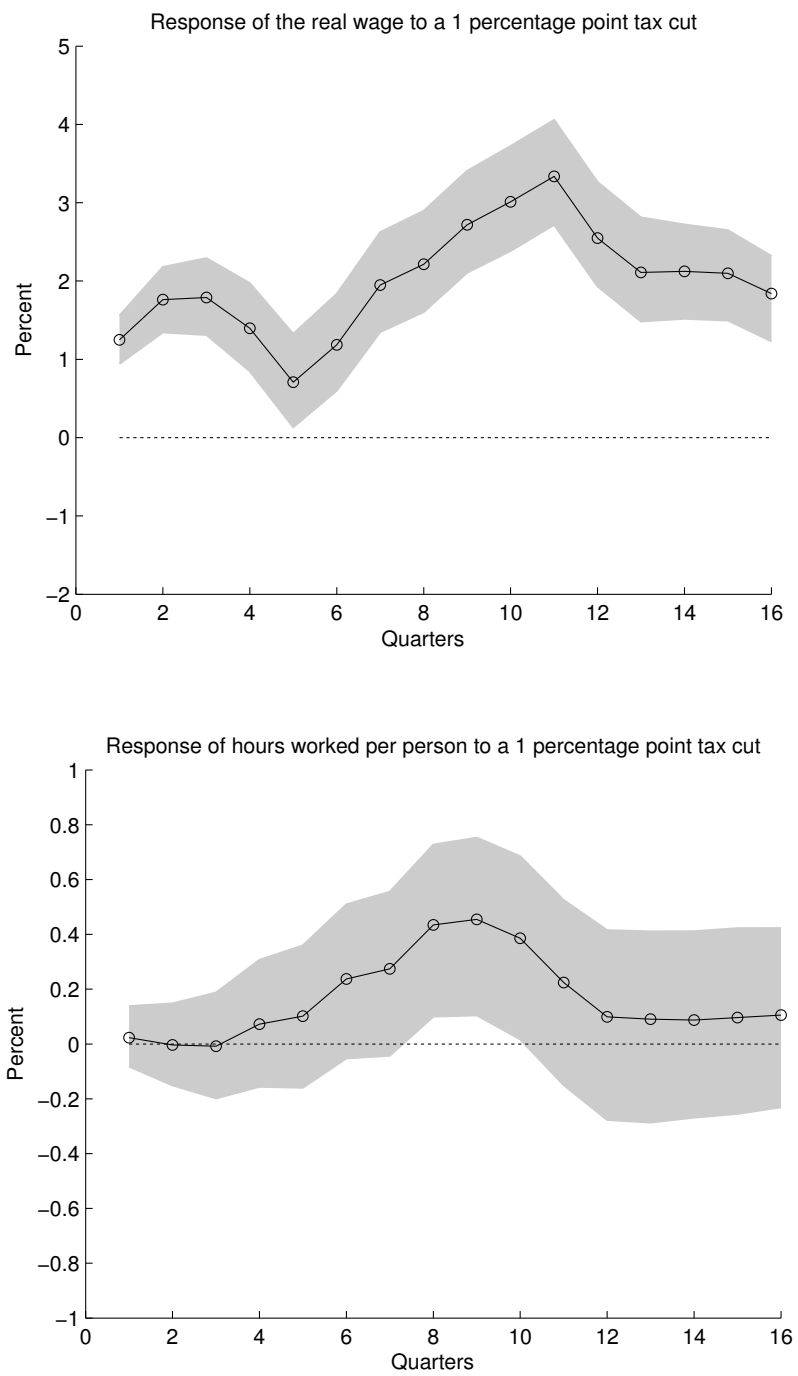


Figure 2.9: *Response of the real wage and hours worked to 1 per cent of GDP cut in taxes*



## 2.4 Robustness

### 2.4.1 Estimation of a first differences model

To guard against the possibility of spurious results deriving from unit roots in the output, consumption and investment series,<sup>26</sup> I also estimate a first difference version of the VAR with the endogenous variables as the growth rates.<sup>27</sup>

On impact the contraction is very similar at 0.65 per cent ( $p = 0.02$ ) and the greatest impact is again at 11 quarters at 2.96 per cent ( $p = 0.005$ ). The shape is very similar although the VAR in growth rates produces a more persistent response (but this is sensitive to the lag length  $Q$ ). Certainly the short to medium term magnitudes and dynamics are very similar to the model estimated using levels. However, the first-differences model is less precisely estimated with wider standard errors, particularly at longer horizons. Given the focus on short to medium term effects in this chapter, I continue to use the levels specification for the baseline results.

### 2.4.2 Controlling for other shocks to revenues

Perotti (2010) argues that one needs to control for the possibility that changes in revenues have an additional effect on output other than via changes in  $d_t$  (for example, the effects of the automatic stabilisers). In general — and illustrated below — Perotti’s argument implies one needs to control for other shocks to revenue to consistently estimate the effects of the exogenous taxes. Suppose that (log of real) revenues ( $s_t$ ) is described by the follow relationship:

$$\Delta s_t = \eta \Delta y_t + \chi d_t + \epsilon_t^s \quad (2.6)$$

where  $\epsilon^s$  can be thought of as a shock to revenues and picking up influences other than the cyclical changes due to output growth or policy.<sup>28</sup> Perotti argues that estimating a model such as (2.5) ignores the effect of other changes in revenues. For consistent estimation we must implicitly maintain the assumption that revenues (or in his setup, specifically  $\Delta s_t - \chi d_t$ ) do not affect the endogenous variables other than via  $d_t$ .

However, the problem is more general and applies even if we include revenues in equation (2.5). Consider the following regression model:

$$\Delta y_t = \alpha_1^y \Delta y_{t-1} + \beta_0^y \Delta s_t + \beta_1^y \Delta s_{t-1} + \gamma_1^y d_t + \gamma_2^y d_{t-1} + \epsilon_t^y \quad (2.7)$$

<sup>26</sup> Augmented Dicky Fuller tests fail to reject the null hypothesis of a unit root in these log real per capita series.

<sup>27</sup> This specification is used by Perotti (2010). However, it is very common to find VARs estimated in levels, especially in the fiscal shocks literature.

<sup>28</sup> Note that Perotti assumes  $\chi = 1$  but this is an inappropriate restriction as the RR shocks are the nominal change in revenues to GDP, not the change in log real exogenous discretionary taxes.

$$\Delta s_t = \alpha_0^s \Delta y_t + \alpha_1^s \Delta y_{t-1} + \beta_1^s \Delta s_{t-1} + \gamma_1^s d_t + \gamma_2^s d_{t-1} + \epsilon_t^s \quad (2.8)$$

where equation (2.8) nests equation (2.6). We can always rewrite this model in the Perotti form with the new regressor being  $\Delta s_t - \chi d_t$ . Write this system as:

$$\begin{bmatrix} 1 & -\beta_0^y \\ -\alpha_0^s & 1 \end{bmatrix} \begin{bmatrix} y_t \\ s_t \end{bmatrix} = \begin{bmatrix} \alpha_1^y & \beta_1^y \\ \alpha_1^s & \beta_1^s \end{bmatrix} \begin{bmatrix} y_{t-1} \\ s_{t-1} \end{bmatrix} + \Theta(L)d_t + \epsilon_t \quad (2.9)$$

where  $\Theta(L)$  is a  $(Q + 1)$  lag polynomial.

Defining the left hand side coefficient matrix as  $\mathbf{A}$ , the coefficient matrix on the lagged terms  $\Xi$  and  $Z_t$  as the vector of endogenous variables, the reduced form of this model can be written as:

$$Z_t = \mathbf{A}^{-1} \Xi Z_{t-1} + \mathbf{A}^{-1} \Theta(L) d_t + \mathbf{A}^{-1} \epsilon_t \quad (2.10)$$

which implies a relationship between the reduced form residuals  $u_t$  of:

$$u_t^y = \beta_0^y u_t^s + \epsilon_t^y \quad (2.11)$$

$$u_t^s = \alpha_0^y u_t^y + \epsilon_t^s, \quad (2.12)$$

requiring  $n(n-1)/2 = 1$  restriction on the  $\mathbf{A}$  matrix to identify the structural shocks  $\epsilon_t$ . Given that we are including contemporaneous  $d_t$  it does not make sense to then restrict  $\beta_0^y = 0$  and equation (2.6) implies that we should not restrict  $\alpha_0^s = 0$  either. In short, there is a standard identification problem unless we are willing to assume that the only way revenues affect output contemporaneously is through shocks to  $d_t$  ( $\beta_0^y = 0$ ).

The consequences of this are twofold. First, and more obviously, excluding revenues from the model may lead to inconsistent estimates. But secondly, even when we include revenues in our VAR specification as an additional endogenous variable, we cannot consistently estimate the coefficients. To see this more clearly, substitute the revenues equation into the output equation. To simplify the exposition and enhance the comparability with (2.6), I restrict the coefficients as follows:  $\gamma_2^s = \alpha_1^s = \beta_1^s = 0$ ,  $\gamma_1^s = \chi$  and  $\alpha_0^s = \eta$ . We can now write the reduced form, single equation model as:

$$\begin{aligned} \Delta y_t = & \frac{\alpha_1^y + \eta \beta_1^y}{1 - \beta_0^y \eta} \Delta y_{t-1} + \frac{\gamma_1^y + \chi \beta_0^y}{1 - \beta_0^y \eta} d_t + \frac{\gamma_2^y + \chi \beta_1^y}{1 - \beta_0^y \eta} d_{t-1} \\ & + \frac{\beta_0^y}{1 - \beta_0^y \eta} \epsilon_t^s + \frac{\beta_1^y}{1 - \beta_0^y \eta} \epsilon_{t-1}^s + \frac{1}{1 - \beta_0^y \eta} \epsilon_t^y \end{aligned} \quad (2.13)$$

and note that if  $\beta_0^y \neq 0$  then shocks to  $\Delta s$  affect  $\Delta y$  contemporaneously. This implies that the lagged  $\epsilon^s$  terms are correlated with the lagged  $y$  terms.

As can be seen from equation (2.13), the problem is that we need to control for potential other shocks to revenue. However, we cannot simply include a fitted residual  $\epsilon^s$  in equation (2.13): as shown above,  $\epsilon^s$  is not identified without restrictions on the

$\mathbf{A}$  matrix. Obviously one restriction that would work is  $\beta_0^y = 0$  but this was ruled out above. Additionally we could impose the restriction  $\eta = 0$ , allowing us to construct  $\epsilon^s$  from (2.11) and (2.12).<sup>29</sup> But again this was ruled out.

Equation (2.13) illustrates the two problems mentioned above. If we exclude revenues and they do exert an independent effect on output our estimates will be inconsistent. Furthermore, including  $s_t$  does not solve the identification problem.<sup>30</sup>

Perotti pursues an instrumental variable approach which solves the identification problem without requiring restrictions on the  $\mathbf{A}$  matrix. We cannot directly estimate (2.6) as  $\epsilon^s$  is correlated with  $\Delta y_t$ . The solution is to use lagged values of  $\Delta y_t$  as instruments and then estimate the parameters  $\eta$  and  $\chi$ . This allows us to construct a fitted value of  $\epsilon^s$  which can be used in the regression (2.13).

As a robustness check I implement this method. Given the specification of equation (2.6), it is more straightforward to directly use the model with the  $\mathbf{X}$  vector in first differences:

$$\Delta \mathbf{X}_t = \tilde{A}_0 + \tilde{A}_1 t + \tilde{B}(L)\Delta \mathbf{X}_{t-1} + \tilde{C}(L)d_t + \tilde{D}(L)\hat{\epsilon}_t^s + u_t \quad (2.14)$$

I first estimate (2.6) with the lags 1 to 4 of  $\Delta y_t$  and lags 0 to 4 of  $d_t$  as instruments for  $\Delta y_t$  and construct  $\hat{\epsilon}^s$ . I then estimate equation (2.14) using  $\hat{\epsilon}^s$  and its lags.<sup>31</sup> Having corrected for other shocks to revenues the results are very similar. The effect on impact is 0.57 per cent ( $p = 0.026$ ) and the maximum effect is 2.2 per cent ( $p = 0.012$ ). Interestingly, the estimate of  $\eta$  (the elasticity of revenues to GDP) is 1.47, which is higher than the constructed elasticity of 0.76 in Perotti (2005) and closer to his figure for the United States of 1.85.<sup>32</sup>

### 2.4.3 Controlling for other structural shocks

If the tax series is truly exogenous there should be no need to control for other structural shocks such as monetary policy or government spending shocks. However, in a smaller sample, there may be chance correlation and in this section I control for that possibility.<sup>33</sup>

#### Monetary policy shocks

To control for monetary policy shocks I include extra monetary variables in the VAR (2.5).  $\mathbf{X}$  now includes the inflation rate and the Bank of England policy interest rate.

<sup>29</sup>Note that this discussion works the other way round if we had substituted the output equation into the revenues equation.

<sup>30</sup>Of course, in the special case where all the  $\beta$  coefficients are zero or where  $\epsilon_t^s = 0, \forall t$  neither problem arises.

<sup>31</sup>As  $\hat{\epsilon}^s$  is a generated regressor the two step estimation procedure needs to be repeated when bootstrapping in order to take account of the sampling distributions of  $\eta$  and  $\chi$ .

<sup>32</sup>Perotti (2005) argues that the low elasticity for the U.K. might be due to some of the components being underestimated. He therefore augments the baseline value by 0.5. It is interesting that I estimate a higher value.

<sup>33</sup>Mertens and Ravn (2010) argue that one should control for both monetary and spending shocks. Romer and Romer (2010) also control for spending shocks, concluding that their results are robust.

The Bank of England policy rate is available from the Bank of England website, although this series contains all the changes in the rate on a specific day. I therefore convert this into a quarterly series using the rate prevailing at the end of the quarter. The inflation rate is the annualised Retail Price Index — a series which is available for the full sample (unlike the Consumer Price Index).

To avoid similar identification issues to those described in Section 2.4.2 we need to impose some identifying assumptions. The interest rate is allowed to be affected contemporaneously by all the other endogenous variables and the tax shocks. Following Christiano et al. (1996), I employ a Cholesky decomposition of the covariance matrix of  $\varepsilon_t$  to identify appropriately the monetary policy shock as an innovation to the Bank of England nominal policy rate.

The results of this exercise are presented in figure (2.10) which shows the effect on output, consumption, investment, the Bank of England interest rate and inflation. We can see that the effect on output, consumption and investment is extremely close to the baseline case. The effect on GDP on impact is 0.59 per cent ( $p = 0.02$ ) and rises to 2.67 per cent ( $p = 0.0004$ ) after about 3 years. It is also interesting to note the effect on the other variables. On impact the tax cut lowers inflation slightly, perhaps reflecting that consumption taxes were often used in the U.K. However, over time the effect on inflation is significantly positive — as one would expect given the overall stimulus to the economy. The central bank's policy rate follows a similar path to inflation, again as would be expected from a simple interest rate rule; the policy instrument eventually becomes positive as inflation goes above target.

### Fiscal policy shocks

While the tax shocks have been constructed as exogenous from the spending decisions it is still instructive to control for spending shocks as a robustness check. First, there is always the possibility that the categorisation is not perfect. Secondly, as mentioned above, it makes sense given the smaller sample.  $\mathbf{X}$  will now include log of real government spending on goods and services per capita.

Without a better way (for example a spending narrative dataset) to identify spending shocks, I employ standard identifying assumptions on the timing of government spending shocks as in Blanchard and Perotti (2002). I order spending first in the VAR. A Cholesky decomposition of the covariance matrix of the  $\varepsilon_t$  is therefore sufficient to identify the government spending shock.

The results are shown in figure (2.11) and are again very similar. For example, output increases 0.62 per cent ( $p = 0.02$ ) on impact and the largest effect is at 2.3 per cent ( $p = 0.002$ ) after about 3 years. The Government spending response is statistically insignificant for the first two years before rising — a result consistent with Romer and

Romer (2009a).<sup>34</sup>

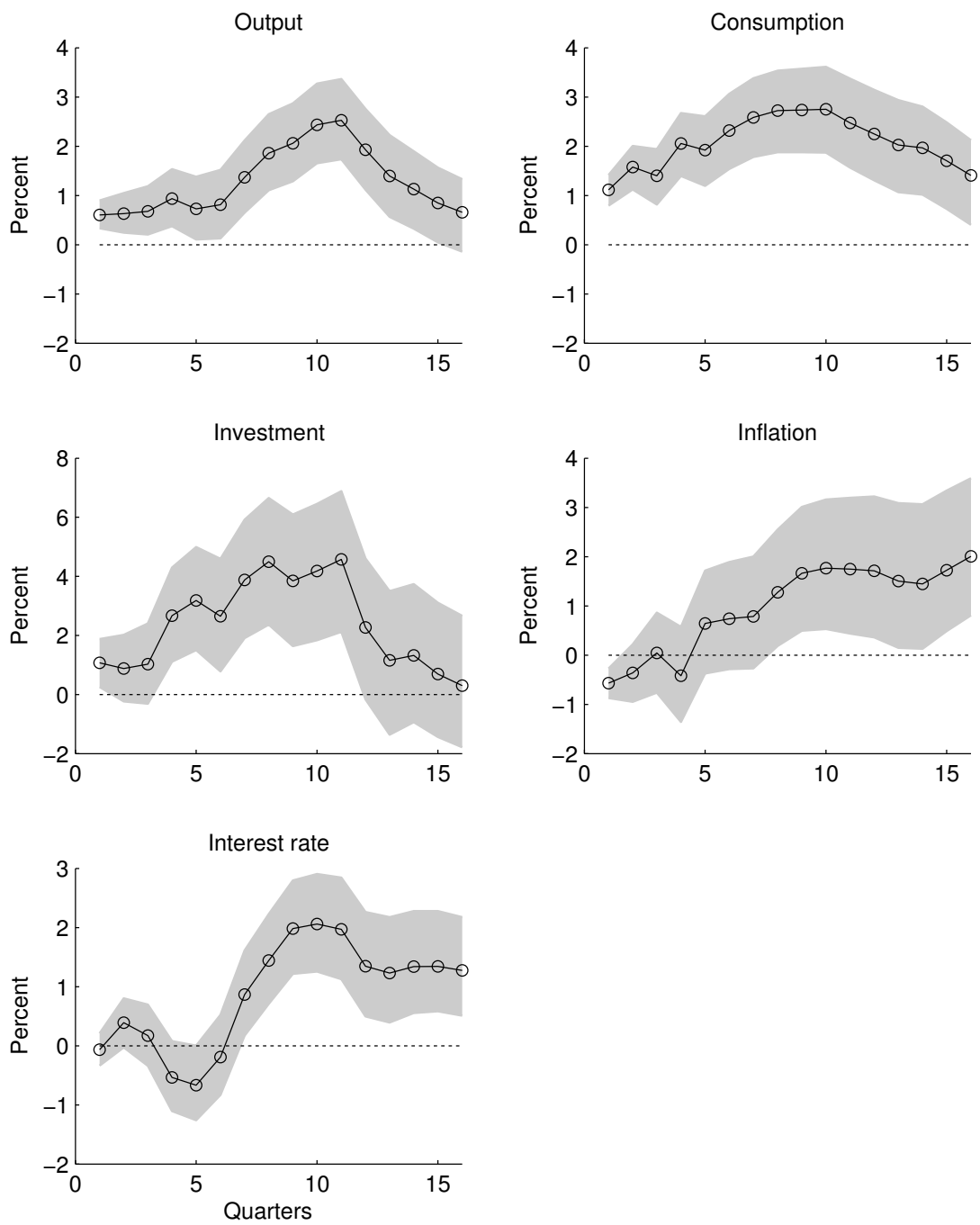


Figure 2.10: *The effects of a tax cut after controlling for monetary policy shocks*

<sup>34</sup>I also control for government total managed expenditure net of debt interest payments (as in RR) rather than government spending on goods and services (as above). The results are very similar.

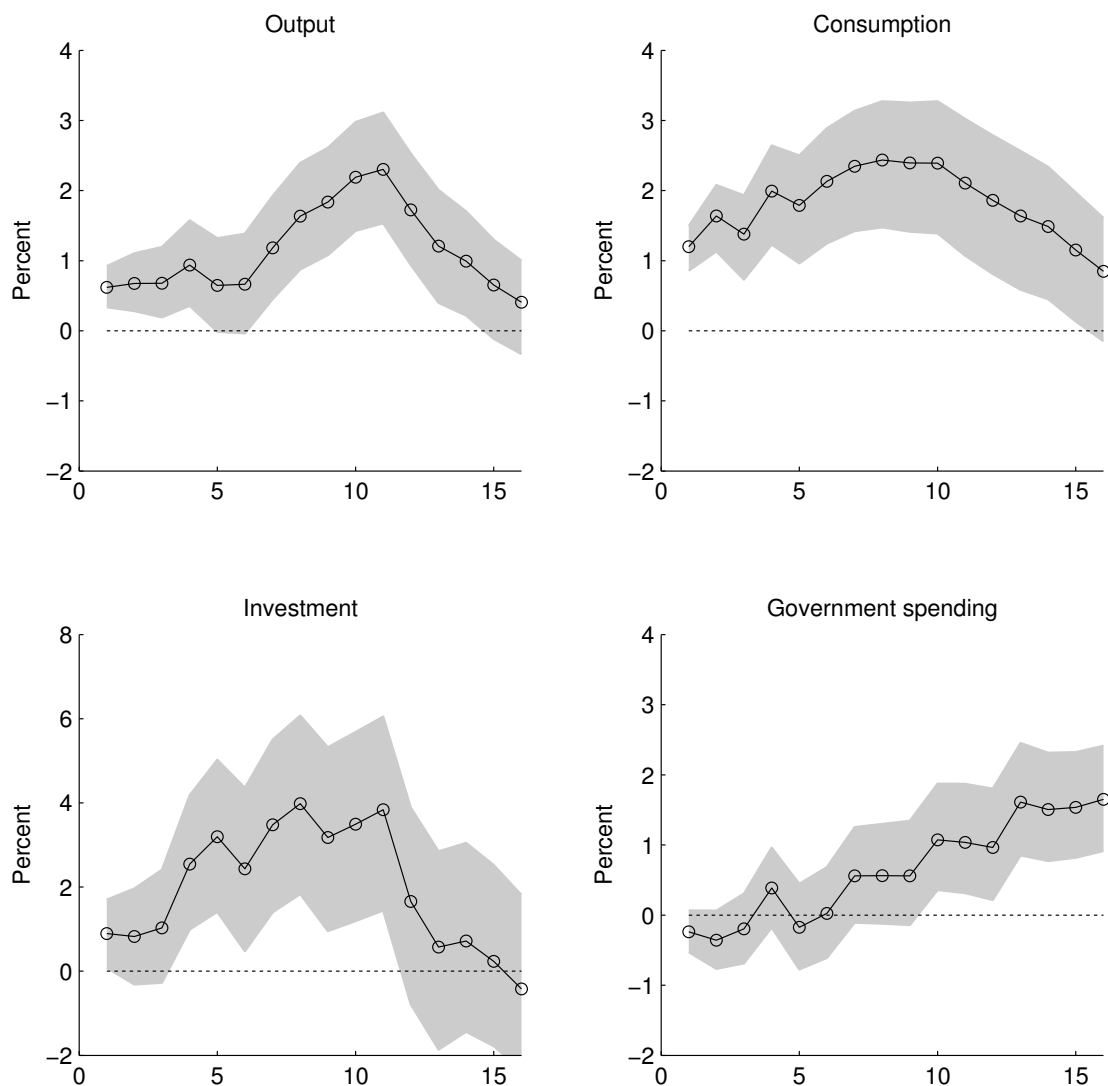


Figure 2.11: *The effects of a tax cut after controlling for fiscal policy shocks*

#### 2.4.4 Excluding anticipated shocks

By assigning the liabilities change to the implementation date we are implicitly assuming that agents react to the shock when implemented and not before. However, the implementation date is sometimes later than the announcement date and we may be concerned that agents anticipate the implementation. I therefore examine the possibility that the results are being influenced by anticipation effects.

Following Mertens and Ravn (2010), I define a surprise shock as one which is implemented within one quarter (90 days) of the announcement date. The sample is therefore split into discretionary actions whose announcement and implementation dates are the same quarter and those which may be anticipated. Figure A.1 in Appendix A.3 provides a histogram of the implementation lags, the time between announcement and implemen-

tation. We can see that the overwhelming majority of actions are surprise actions, being implemented within one quarter of announcement (and many of these are actually implemented on or around announcement). This suggests a straightforward check: I simply exclude the potentially anticipated changes, that is I only use the surprise shocks.

The first panel in figure (2.12) illustrates the effect of a surprise tax shock on output. The shape of the response and magnitude are again broadly similar although the largest fall in output is slightly deeper at over 3 per cent, still occurring between 10 and 12 quarters.

### 2.4.5 Comparison with the Romer and Romer method

Romer and Romer's baseline results come from the estimation of equation (2.4) directly. To repeat this here, they estimate:

$$\Delta y_t = \mu + \sum_{j=0}^Q \gamma_j d_{t-j} + \nu_t \quad (2.15)$$

taking  $Q = 12$ .

The purpose of this subsection is to compare the results gained from this simpler approach to the baseline VAR results above. The second panel in figure (2.12) reports the results from the single equation (darker line, crosses and long dashes) and the single equation modified by lagged GDP (lighter line, circles and short dashes). Firstly, these two are very close, with both point estimates falling within the other's confidence intervals. Secondly, the magnitudes and shapes are very similar to the baseline VAR results: an impact multiplier between 0.5 and 1 per cent, rising to around 2.5 per cent after 10-12 quarters.

### 2.4.6 Using all discretionary policy changes

Having constructed the exogenous tax series, it is instructive to ask whether the results are actually different when using the full discretionary policy decision series (endogenous and exogenous). The third panel of figure (2.12) shows that the response using all discretionary policy changes is much closer to zero. Interestingly, this magnitude is closer to the Blanchard–Perotti type estimates — suggesting that the identified shocks from this approach are biased downwards. The split between exogenous and endogenous does again appear to be an important and meaningful distinction in identifying the effects of tax shocks.

### 2.4.7 Retroactive components and the alternative classification

Until now I have made use of the series which excludes retroactive components and which has not used the 'alternative classification' method I outlined in Section 2.2. It is worth

checking that the results are robust to these assumptions.

First I include the retroactive elements. As discussed in Section 2.2, these are handled by assigning a levy of the accumulated liabilities from the retroactive implementation date to the announcement date. As a levy this is then withdrawn in the following quarter. The results are very similar to figure (2.5). The impact multiplier is 0.5 ( $p = 0.07$ ) and the maximum effect is 2.3 ( $p = 0.002$ ). Given the complications of adding retroactive components in this way, the purpose is really to check that the broad result is not distorted, which it is not.

Secondly, I consider the impact of using the alternative classification for the tax changes. Recall that this treats in the same way all changes within Budgets that had specific overall objectives. This means that seemingly exogenous tax cuts in an otherwise endogenously deflationary Budget would be classified demand management. This robustness check is designed to ensure there is not correlation between the seemingly exogenous changes and some of the endogenous ones within the same Budget. Again the results are very similar to figure (2.5) in magnitude and dynamics.

### 2.4.8 Outliers

In Section 2.2 it was noted that the timing of the income tax cuts in 1979Q4 (and income tax allowance changes for the whole fiscal year), which were to be counteracted by the V.A.T. rise in 1979Q3, lead to two large outliers in the exogenous series (which can be seen visually in the figures in Section 2.2). Obviously these changes may be important but we want to ensure that the timing properties do not unduly drive the overall results in Section 2.3. The income tax allowance increases were for the whole year, which means there was a retroactive element dating back to 1979Q2. Given our way of dealing with retroactive elements, the implementation date was therefore taken to be 1979Q3 — the same date as the V.A.T. rise. For consistency, I bring the implementation date for income tax cuts (due in October) forward one quarter from Q4 to Q3. Once these three changes are considered together (the original intention in the Budget), the spikes in 1979 are removed. This seems a more sensible way of dealing with the timing issue than simply excluding all three changes as outliers. Again, we are checking that the overall magnitude and dynamics are not being distorted. The magnitudes and dynamics are once again very similar to the baseline case, again rising to 2.3 per cent ( $p = 0.003$ ) after 11 quarters.

### 2.4.9 Making use of observations back to 1948

Although the narrative in Appendix A.1 dates from the first post-war Budget in 1945, the relevant quarterly National Accounts data are only available from 1955. However, as our tax shock series goes back to 1948 (and 1945 in revenue changes), it is desirable to use all the data. Before 1955 the U.K. did publish the Index of Production which, in the contemporary editions of Economic Trends, was presented as an aggregate production



measure. To make use of the dataset from 1948Q1, I run the single equation model (2.15) using the quarterly Index of Production growth rather than quarterly real GDP growth as the dependent variable.

As can be seen in the fourth panel of figure (2.12), although the magnitudes are slightly greater, the thrust of the main result remains — a sizable impact multiplier increasing to several per cent after 10-12 quarters.

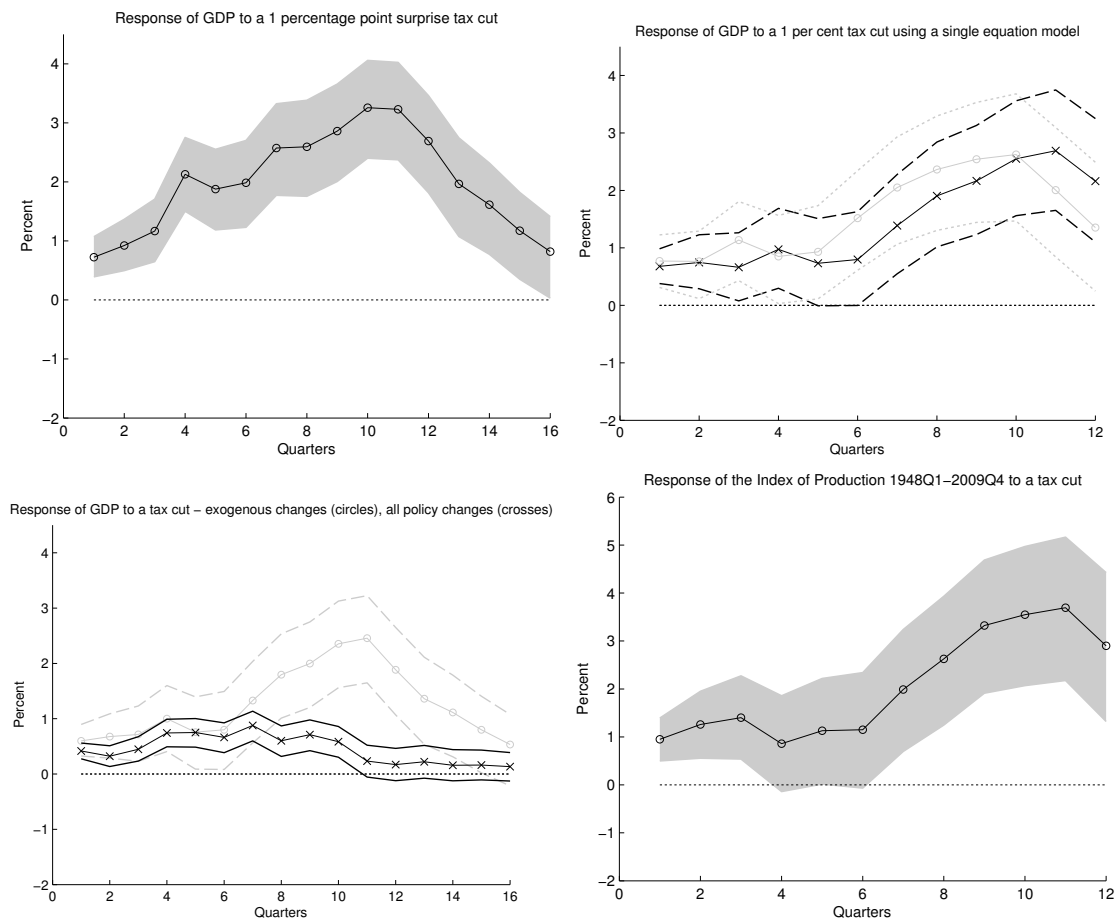


Figure 2.12: *Robustness checks: (1) only considering surprise shocks, (2) comparison with RR single equation baseline, (3) using all discretionary policy changes, and (4) using data back to 1948*

## 2.5 Effects of differently motivated shocks

Given that I have subcategories for the exogenous group of tax measures, I am able to ask other interesting questions:

- Do shocks specifically aimed at improving economic performance have more effect than ideologically motivated changes?

- What are the effects of a tax shock aimed at deficit consolidation?

To answer these questions I replace the  $d_t$  series with a subset: either long-run, ideological or deficit consolidation.<sup>35</sup> For ease of economic interpretation, I continue to consider tax cuts for long-run economic and ideological reasons but consider a tax *increase* for deficit consolidation.

The first panel of figure (2.13) illustrates the effect of a tax cut based on considerations of long-run economic performance (crosses). The shape of the response is very close to the baseline estimates. This confirms the view that long-run economic tax cuts do indeed stimulate GDP. The figure also illustrates the effect of a tax cut based on ideological considerations (diamonds). An example of this type of tax cut is an increase in the personal allowance designed to help the poorest. While the effect is larger, the first panel of figure (2.13) shows that the overall shape and magnitudes are broadly consistent with the aggregate baseline series.

The lower panel of figure (2.13) illustrates the effect of a tax *rise* for deficit consolidation. The point estimate is interesting as it differs from the shape of the other responses. Initially there is a large contractionary effect, bottoming out around 7 quarters. From then on the effect becomes increasingly positive until, by year four, the tax increase has a positive effect on GDP. One might postulate that this is in keeping with common views about deficit consolidations — the contraction in demand in the short run may cause a slowdown but, in the long-run, establishing sound public finances has a positive effect on GDP over the medium term (although it does tend back to zero eventually).

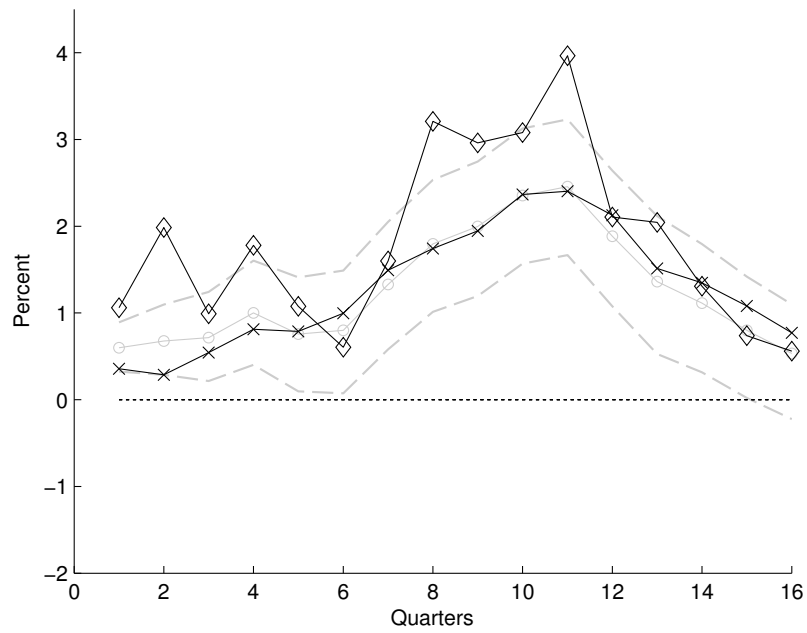
However, we must be cautious not to over-interpret these results: much of the response is insignificant. As can be seen in Section 2.2, the deficit consolidation series has far fewer observations than the other series — mostly occurring after 1980. The fewer observations may also explain the imprecision of the estimates.

Finally, it is worth briefly mentioning how excluding the deficit consolidation measures affects the results. Section 2.2 explained one might be concerned that all deficit actions are actually endogenous. As a check, I estimate the baseline VAR using the standard shock less the deficit consolidation measures. The result looks almost identical to the baseline case with an impact effect of 0.6 ( $p = 0.02$ ), peaking at 2.66 ( $p = 0.001$ ) after 11 quarters.

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<sup>35</sup>As a robustness check I include the full  $d_t$  series less the subset in question as the first endogenous variable in the VAR. This allows for contemporaneous changes in the overall exogenous tax series from changes in a specific subcomponent. The results are largely unaffected.

Response of GDP to a tax cut: long run (crosses) and ideologically (diamonds) motivated



Response of GDP to tax increase for deficit consolidation

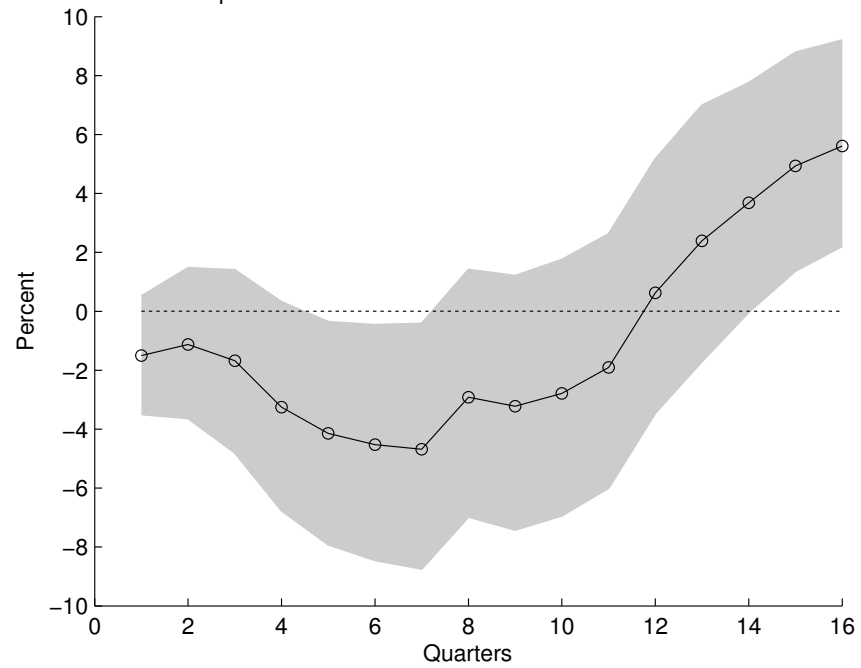


Figure 2.13: *Effect on GDP of long-run and ideologically motivated tax cuts (baseline in grey), together with the effect of a tax rise for deficit consolidation*

## 2.6 Tax shocks and the U.K. business cycle

Finally, having established the response of key variables to tax shocks, I now consider the effect of these shocks on the U.K. business cycle. King and Rebelo (1999) argue that “changes in labour and capital income taxes have effects that are similar to productivity shocks. However, these taxes change infrequently making them poor candidates for sources of business cycles fluctuations”. However, as I have discussed, in the United Kingdom taxes were changed frequently. Furthermore, it has been argued that tax shocks do play an important role in the United States business cycle. This is one of the conclusions of McGrattan (1994) and shown more recently by Mertens and Ravn (2010).

In this section I simulate the estimated model from Section 2.3 using the point estimates, the identified tax shocks and assuming all other shocks are zero (that is the fitted residuals  $\hat{\varepsilon}_t = 0, \forall t$ ). To control for other policy variables as in Section 2.4 the  $\mathbf{X}$  vector will include (in this order) government spending, output, consumption investment (all log of real per capita), the rate of inflation and the central bank policy interest rate. The resulting simulated data series is then HP-Filtered with the standard smoothing parameter of 1600 and compared against the actual (again HP-Filtered) series. This comparison is shown in figure (2.14).

Dow (2000) identifies three major recessions between 1945 and 1995: 1973–75, 1979–82 (although unemployment continued rising until 1986) and 1989–1993. He also identifies two major ‘fast growth’ periods: 1972–73 (often referred to as the Heath–Barber boom) and 1985–88 (the Lawson boom). To these episodes of interest we might also add the volatility in the 1960s leading to the 1967 devaluation and very tight Budgets of the late 1960s; the turbulent years in the run up to the 1979 General Election; the late 1990s boom; the early 2000s world slowdown and the recent overheating and crash. All of these episodes can, to some degree, be seen in the actual series.

To what extent did our tax policy shocks contribute to the U.K. business cycle? In the narrative, four clear episodes of supply-side reform can be identified: the 1950s, the early 1970s, the 1980s and the mid-1990s. These can be seen in the figures from Section 2.2.

In the 1950s, while still embracing demand management, successive Conservative Chancellors attempted to liberalise the economy. Taking the post 1955 period, in 1957 and 1958 Chancellor Peter Thorneycroft remitted considerable sums in taxation to achieve his goals of: “greater industrial efficiency and competitiveness”, “the provision of better incentives and opportunities for initiative and effort” and “the easing of the pressure of the tax system where this bears most hardly on individuals and families”.<sup>36</sup> Examining the counterfactual simulation in figure (2.14) it appears that these cuts played a major role in stimulating growth in the early 1960s.

<sup>36</sup>Hansard, HC Deb 09 April 1957 vol 568 c988

There were also considerable tax cuts and reforms from 1970 to 1973 by Chancellor Anthony Barber — hence the term the ‘Heath–Barber boom’ (Edward Heath was Prime Minister). Actual annual GDP growth rose from around 2 per cent in 1970/71 to 3.7 per cent in 1972 and 7.2 per cent in 1973. The 1972 Budget in particular made wide-ranging reforms to the tax system, including changes to Corporation Tax and the introduction of V.A.T. Woodward (2004) argued that the Government “did not only engineer a major boom, but the stimulus was applied over a relatively short period”.<sup>37</sup> All three panels in figure (2.14) imply that tax policy contributed to the boom.

As the economy recovered from the early 1980s recession Chancellor Nigel Lawson also carried out major supply-side reform and sizable cuts in taxes. In 1983 there were major cuts to income taxes, in 1984 there were wide-ranging reforms to income, capital and business taxation. These changes over predict growth in the mid 1980s. There was a pause in the magnitude of cuts in the mid-1980s Budgets, resuming in 1987 and 1988. Many commentators came to believe these giveaways overstimulated an overheating economy by the end of the decade. The delayed effects of these show up as contributing to the end of the Lawson boom in figure (2.14). It is worth noting that, while Dow dates the end of the boom as 1989, GDP did not start falling until the third quarter of 1990.

Following the 1990–91 recession, by the middle of the decade Chancellor Kenneth Clarke was able to cut income taxes again. This is the fourth major episode of supply-side reform. Still aiming at a 20 pence basic rate of income tax, the major cuts came in the 1995 and 1996 Budget, where the Chancellor argued “low direct taxes are the most effective way to encourage enterprise and hard work”.<sup>38</sup> From figure (2.14) these appear to have fuelled what the incoming Labour Government of 1997 saw as overheating.<sup>39</sup>

In short, these exogenous tax shocks do appear to have played an important role in key episodes in the U.K. business cycle.

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<sup>37</sup>Woodward (2004), page 141.

<sup>38</sup>Hansard, HC Deb 26 November 1996 vol 286 c170.

<sup>39</sup>Hansard, HC Deb 25 November 1997 vol 301 c773.

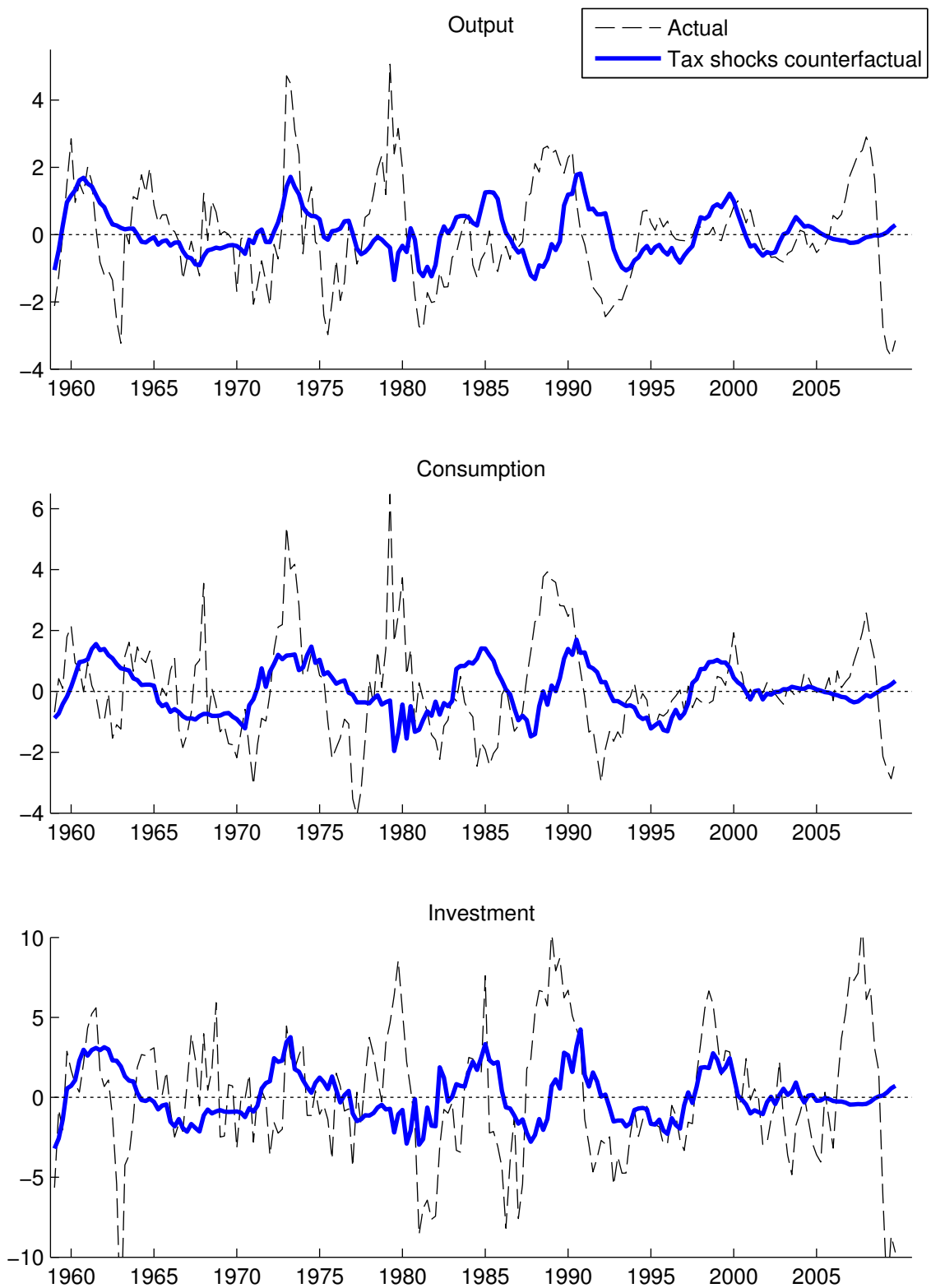


Figure 2.14: Simulated output, consumption and investment based on tax shocks vs actual

## 2.7 Conclusion

This chapter has shown powerful, persistent, positive and significant effects of a tax cut on GDP, consumption, investment, hours worked, the real wage and imports in the United Kingdom. Inflation and the policy interest rate also become positive, as one would have expected. Output increases by around 0.6 per cent on impact, rising to 2.5 per cent over 3 years. This implies that tax cuts stimulate above trend growth for over three years.

There are two important implications of the results in this chapter. Firstly, that ‘exogenous’ tax cuts (increases) have important stimulus (contractionary) effects on the U.K. economy and have played a role in key episodes in the U.K. business cycle. Furthermore these findings are more robust than existing U.K. results. Secondly, in providing new narrative-based estimates I contribute directly to the international evidence. The Romer–Romer results for the U.S. have attracted much attention, in part because the effect is so large. It is quite remarkable that my U.K. results are so similar to those for the United States. This commonality is not found in the SVAR literature and this striking congruence reinforces the Romer–Romer findings. The similarity is all the more important given how the data were constructed. The two datasets (U.K. and U.S.) are not, for example, based on standardised National Accounts revenue series; they are derived from Budget processes, histories and administrative sources, which are all quite different.

The results were shown to be robust to a variety of different checks and specifications, the effect on impact was similar to the baseline and the response increased to around 2.5 per cent after about three years. The other variables were similarly affected. I am therefore confident of the robustness of the overall magnitudes and dynamics.

The identification of tax shocks is extremely challenging — possibly explaining why uncovering their effect has proven so controversial. Identification is achieved by constructing a new narrative dataset for the U.K. and employing the Romer and Romer (2010) approach. The dataset contains nearly 2,500 tax changes. These were all carefully classified by motivation to separate the decisions correlated with current and prospective economic shocks from those that could be regarded as exogenous. Full details can be found in Appendix A.1. I hope this will provide a useful new resource for further research as well as an interesting contribution to U.K. post-war economic tax history.

In short, I find robust evidence that tax changes had important macroeconomic effects in the United Kingdom and contributed to the post-war business cycle. Results for the U.K. are much scarcer (and more anomalous) than for the U.S. and evidence presented in this chapter fills that gap. That the results are so similar to the Romer–Romer findings is remarkable and lends strong weight to the argument that tax cuts do indeed have large, positive and persistent effects on the macroeconomy. Finally, the unique new U.K. dataset provides a fascinating resource for further research.

## Chapter 3

# The importance of endogenous tax changes: narrative measures in an estimated DSGE model

### 3.1 Introduction

The previous chapter considered the impact of ‘exogenous’ tax changes on the macroeconomy. Equally important are the consequences of ‘endogenous’ movements in tax policy — those taken in response to macroeconomic conditions. However, identifying the determinants and effects of these tax changes poses a significant challenge, especially for the structure-free VAR methods pursued in the previous chapter. This chapter estimates the endogenous component of fiscal policy using a DSGE structural model with Bayesian methods. Previously estimated DSGE models of fiscal policy had to assume that tax shocks were latent variables, with the tax data based on National Accounts measures of revenues. As movements in aggregate revenues are a combination of the automatic stabilisers, discretionary endogenous policy reactions and exogenous shocks, these separate components are assumed to be unobserved. As discussed in Chapter 2, a motivation for the narrative approach is to try and measure the unobserved discretionary policy changes. The central innovation in this chapter is therefore to directly use the narrative measures of endogenous and exogenous tax changes in an estimated DSGE model to identify better the feedback from key macroeconomic variables to the fiscal instruments.

Understanding the endogenous response of fiscal instruments is important for several reasons. First, policymakers (at least in the United States and the United Kingdom) have often engaged in countercyclical, debt-management and spending-driven tax policy. Understanding the macroeconomic consequences of these actions is of particular importance to policymakers, especially in the current climate of fiscal retrenchment. Second, mainstream macroeconomic models can generate a range of theoretical predictions de-



pending on how fiscal instruments finance government spending shocks and respond to debt. This theoretical point is well known (see for example Baxter and King (1993)) but Leeper et al. (2010) point out that empirical research on how fiscal instruments react to debt, for example, is “scarce”. Third, endogenous movements in tax policy suggest an important interaction between monetary and fiscal policy.

The existing literature has attempted to estimate the economic effects of changes in fiscal policy using a DSGE model with Bayesian methods; for example Coenen and Straub (2005), Forni et al. (2009), Lopez-Salido and Rabanal (2008) or Ratto et al. (2009). However, much of this literature either considers limited feedback rules, for example only from debt, or focuses entirely on exogenous fiscal shocks. The most closely related work is by Traum and Yang (2009), Zubairy (2010) and Leeper et al. (2010), who incorporate rich policy rules with feedback mechanisms from debt and output. Zubairy (2010) and Traum and Yang (2009) also employ models with monetary and fiscal policy.<sup>1</sup> Traum and Yang (2010) examine the interaction between passive and active monetary and fiscal policy rules in a DSGE model estimated using Bayesian methods. I will touch on this issue later.<sup>2</sup>

This chapter differs from previous work by making direct use of tax changes measured by the narrative approach in the estimation of a DSGE model. Consequently, particular attention is paid to the estimated endogenous feedback coefficients from debt, output and spending to the fiscal instruments.<sup>3</sup> Integrating narrative measures into the DSGE model is non-trivial. First, narrative measures are likely to be measured with error, as discussed by Mertens and Ravn (2011a). Moreover, there are likely to be expectational errors associated with deviations from the endogenous tax policy rule, in addition to exogenous tax changes of the type identified by Romer and Romer (2010) and in Chapter 2. It is unclear that the expectational errors are separately identified from the narrative measured ‘exogenous’ tax changes and their measurement errors. I use new estimates by Mertens and Ravn (2011a) of the degree of measurement error in the Romer–Romer data to calibrate the measurement error in the DSGE model.

The model includes sticky prices and the non-fiscal elements resemble New Keynesian models such as that of Smets and Wouters (2003, 2007).<sup>4</sup> The model is also based on recent work by Mertens and Ravn (2011b) who study the effect of anticipated versus unanticipated ‘exogenous’ shocks identified by Romer and Romer. To specifically focus on the endogenous policy reactions, a rich fiscal policy description is employed following Traum and Yang (2009), Zubairy (2010) and Leeper et al. (2010). So that the estimates

<sup>1</sup>The wider empirical literature jointly considering monetary and fiscal policy also tends to lack a rich description of the feedback to fiscal instruments.

<sup>2</sup>In the literature on active/passive policy regimes, various papers are not based on estimation of a DSGE model; see for example Davig and Leeper (2006, 2011).

<sup>3</sup>Chapter 2 discusses that these are the main categories of feedback found in the narrative record.

<sup>4</sup>The Smets–Wouters model does not include a rich fiscal policy specification for analysing the questions of interest here.

remain as comparable as possible to the existing literature, I focus on the United States. I therefore use the Romer–Romer narrative dataset in my estimation.

Having estimated the model’s parameters making direct use of the narrative tax measures, I focus on several aspects of the results. First, this chapter is particularly concerned with new estimates of the endogenous feedback from output, debt and spending to the fiscal instruments themselves. I find that the feedback from debt to government spending is weaker when the model is estimated including the narrative tax measures. This feedback is also weaker than estimated elsewhere in the literature. The feedback from debt to the model’s tax rates is also lower when the narrative measures are included. These results suggest that the conventional methods, which assume the tax changes are latent variables, overestimate the degree of feedback from debt to the fiscal policy instruments.

Second, properly accounting for the endogenous component of fiscal policy is important for understanding the transmission of structural fiscal shocks. The effects of a structural shock to fiscal policy depend on the current and future feedback to the fiscal instruments. For example, will the tax cut be financed with debt and, over time, how will that debt be financed? I therefore examine the effect of fiscal shocks in my estimated model using the narrative tax changes. I find that the tax multipliers are higher than estimated elsewhere — for example in Leeper et al. (2010) or Zubairy (2010) — but that the government spending multiplier is lower than found by Zubairy (2010).<sup>5</sup> The capital tax multiplier is also estimated to be significantly higher than would be obtained without incorporating the Romer–Romer narrative data in the estimation. In addition, I show that the estimated model implies that exogenous tax changes have a peak effect between estimates found by Romer and Romer (2010) and in the SVAR literature.

Third, I consider several variations of the model and examine which specification the data prefer. I exclude depreciation allowances, consider a flexible price model and, importantly, I consider a model without any endogenous feedback to the fiscal instruments. I call this the exogenous fiscal policy specification. I show that the data prefer the baseline model over these three specifications. If fiscal policy had behaved more like an exogenous process, monetary policy would have needed to violate the Taylor principle (so-called ‘passive’ monetary policy) to ensure stable debt dynamics.<sup>6</sup> That the data prefer a model where fiscal policy endogenously responds to debt, output and spending is interesting and implies that movements in the price level (at least over the full sample) have not been required to satisfy the government’s budget constraint.

The remainder of this chapter is structured as follows. Section 3.2 presents the DSGE model and discusses how the narrative measures of tax changes can be integrated. Section 3.3 describes the estimation approach and presents the baseline parameter estimates. Section 3.4 conducts impulse response analysis for various structural fiscal shocks, ex-

<sup>5</sup>Zubairy (2010) includes the deep habits mechanism of Ravn et al. (2006).

<sup>6</sup>This is often known as the Fiscal Theory of the Price Level and I provide more discussion later.

amines the implied fiscal multipliers and compares the results with those by Romer and Romer (2010). Section 3.5 compares different estimated versions of the model. Section 3.6 concludes that integrating narrative measures into the estimation of the DSGE model has important implications for estimates of the endogenous feedback to fiscal policy instruments.

## 3.2 The model

The model economy is based on Mertens and Ravn (2011b), Leeper et al. (2010) and related to Smets and Wouters (2003). The model includes habits, investment adjustment costs, variable capital utilisation, sticky prices a la Calvo (1983), depreciation allowances, distortionary labour and capital taxes and feedback from government debt, output and government spending to the fiscal policy instruments. The model is a closed economy. A major departure from previous work is the inclusion of the narrative tax shocks and this will be explained in detail below. The model economy is subject to nine stationary shocks and the two narrative tax measures are assumed to be measured with error, as discussed by Mertens and Ravn (2011a). The resulting New Keynesian structure consists of intertemporally optimising households, firms, a government with a rich set of fiscal policy instruments and a monetary authority which follows an interest rate rule.

### 3.2.1 Households

The representative household maximises utility

$$\max \sum_{t=0}^{\infty} \beta^t u_t^b \left[ \frac{(C_t - \mu C_{t-1})^{1-\sigma}}{1-\sigma} - u_t^l \omega \frac{N_t^{1+\kappa}}{1+\kappa} \right] \quad (3.1)$$

by choosing consumption of a perishable good ( $C$ ) and how much labour to supply ( $N$ ), subject to

$$C_t + I_t = (1 - \tau_t^n) w_t N_t + (1 - \tau_t^k) r_t^k v_t K_{t-1} + \Lambda_t + L S_t + \Pi_t. \quad (3.2)$$

$I_t$  denotes investment,  $w_t$  is the real wage,  $\tau_t^n$  is the aggregate labour tax rate,  $r_t^k$  is the return on capital,  $K_{t-1}$  is the stock of capital held at the end of period  $t-1$ ,  $v_t$  is capital utilisation,  $\Lambda_t$  are depreciation allowances,  $L S_t$  are lump sum transfers and  $\Pi_t$  are profits distributed to households.  $u_t^b$  is a preference shock,  $u_t^l$  is a labour supply shock,  $\sigma > 0$  and governs the degree of risk aversion,  $\mu \in [0, 1]$  governs the degree of internal habit persistence and  $\kappa \geq 0$  is the inverse Frisch elasticity.

The evolution of the capital stock is governed by

$$K_t = (1 - \delta(v_t)) K_{t-1} + \left( 1 - \phi_k \left( \frac{u_t^i I_t}{I_{t-1}} \right) \right) I_t, \quad (3.3)$$

where the function  $\delta$  governs the extra depreciation associated with more intensive utilisation of the capital stock and the function  $\phi_k$  governs the investment adjustment costs.  $\delta(1) = \delta$ ,  $\phi_k(1) = \phi'_k(1) = 0$  and it is assumed that  $\phi''_k$  and  $\delta'' \geq 0$ .  $u_t^i$  is an investment specific shock. Following Schmitt-Grohe and Uribe (2010) and Leeper et al. (2010) I adopt a quadratic functional form for  $\delta(v_t)$ :

$$\delta(v_t) = \delta + \delta_1(v_t - 1) + \frac{\delta_2}{2}(v_t - 1)^2 \quad (3.4)$$

and note that  $\delta_2 = \delta(1)'' \geq 0$ .

As in Mertens and Ravn (2011b), depreciation allowances are described by:

$$\Lambda_t = \tau_t^k \sum_{s=1}^{\infty} \delta^\tau (1 - \delta^\tau)^{s-1} I_{t-s} \quad (3.5)$$

and define capital for tax purposes as

$$\mathcal{K}_t^\tau = \sum_{s=1}^{\infty} (1 - \delta^\tau)^{s-1} I_{t-s} = \frac{\Lambda_t}{\delta^\tau \tau_t^k}, \quad (3.6)$$

where  $\delta^\tau$  is the depreciation rate for tax purposes.

The three stochastic processes are described by:

$$\ln(u_t^b) = \rho^b \ln(u_{t-1}^b) + e_t^b \quad (3.7)$$

where  $e_t^b \sim N(0, \sigma_b^2)$ ,

$$\ln(u_t^l) = \rho^l \ln(u_{t-1}^l) + e_t^l \quad (3.8)$$

where  $e_t^l \sim N(0, \sigma_l^2)$  and,

$$\ln(u_t^i) = \rho^i \ln(u_{t-1}^i) + e_t^i \quad (3.9)$$

where  $e_t^i \sim N(0, \sigma_i^2)$ .

### First order conditions

The first order conditions with respect to  $C$ ,  $N$ ,  $K$ ,  $I$  and  $v$  are:

$$(C_t) : \lambda_t = u_t^b (C_t - \mu C_{t-1})^{-\sigma} - \mu \beta \mathbb{E}_t u_{t+1}^b (C_{t+1} - \mu C_t)^{-\sigma} \quad (3.10)$$

$$(N_t) : u_t^l \omega N_t^k = \lambda_t (1 - \tau_t^n) w_t \quad (3.11)$$

$$(K_t) : \lambda_t q_{k,t} = \beta \mathbb{E}_t \lambda_{t+1} \left[ (1 - \tau_{t+1}^k) r_{t+1} v_{t+1} + (q_{k,t+1} (1 - \delta(v_{t+1}))) \right] \quad (3.12)$$

$$\begin{aligned}
(I_t) : 1 - q_{k,t} & \left( 1 - \phi_k \left( \frac{u_t^i I_t}{I_{t-1}} \right) - \phi'_k \left( \frac{u_t^i I_t}{I_{t-1}} \right) \frac{u_t^i I_t}{I_{t-1}} \right) \\
& = \beta \mathbb{E}_t \frac{\lambda_{t+1}}{\lambda_t} \left( \phi'_k \left( \frac{u_{t+1}^i I_{t+1}}{I_t} \right) \frac{u_{t+1}^i I_{t+1}^2}{I_t^2} \right) + \Gamma_t
\end{aligned} \tag{3.13}$$

where the term  $\Gamma_t$  is defined as

$$\Gamma_t = \beta \delta^\tau \mathbb{E}_t \left[ \frac{\lambda_{t+1}}{\lambda_t} \tau_{t+1}^k \right] + \beta (1 - \delta^\tau) \mathbb{E}_t \left[ \frac{\lambda_{t+1}}{\lambda_t} \Gamma_{t+1} \right], \tag{3.14}$$

reflecting equation (3.5) which implies that the choice of investment today affects future payments of depreciation allowances. Finally,

$$(v_t) : (1 - \tau_t^k) r_t^k = \delta' (v_t) q_{k,t}. \tag{3.15}$$

Equation (3.10) states that the marginal utility of consumption is equal to  $\lambda_t$ . Equation (3.11) sets the after-tax real wage equal to the marginal rate of substitution between consumption and leisure. Equation (3.12) defines  $q_t$  as the expected present value of future rental rates less depreciation. Equations (3.13) and (3.14) describe the dynamics of investment; the change in investment is related to the expected discounted present value of current and future  $q_t$  and  $\Gamma_t$ . Equation (3.15) determines the efficient level of utilisation in terms of its current net return relative to the shadow value of the capital stock.

### 3.2.2 Firms

The economy produces a single final good, in a perfectly competitive market, which is used for consumption and investment by households. There are a continuum of intermediate goods producers, indexed by  $j \in [0, 1]$ , who produce differentiated goods for use in final production. There is monopolistic competition in the intermediate goods market with each firm producing one differentiated good. This price-setting power allows these firms to make pricing decisions, make steady state profit and face an exogenous possibility of not being able to adjust their price as in Calvo (1983).

The final good is produced by combining intermediate goods

$$Y_t = \int_0^1 \left[ (y_t(j))^{\frac{\epsilon-1}{\epsilon}} dj \right]^{\frac{\epsilon}{\epsilon-1}}. \tag{3.16}$$

Cost minimisation by final goods firms implies that demand for intermediate variety  $y_t(j)$  can be expressed as a function of its price relative to the aggregate price index and aggregate output:

$$y_t(j) = \left( \frac{p_t(j)}{P_t} \right)^{-\epsilon} Y_t, \tag{3.17}$$

where  $p_t(j)$  is the price of the intermediate good and  $P_t$  is the final consumer price index

(the price of the final good).  $P_t$  is defined as:

$$P_t = \int_0^1 [(p_t(j))^{1-\epsilon} dj]^{\frac{1}{1-\epsilon}}. \quad (3.18)$$

$\epsilon$  is the price elasticity of demand faced by each monopolist.

Intermediate goods producers use technology

$$y(j) = Z_t (v_t K_{t-1}(j))^\alpha N_t(j)^{1-\alpha} \quad (3.19)$$

where  $Z_t$  is a productivity shock with  $\ln(u_t^z) = \rho^z \ln(u_{t-1}^z) + e_t^z$  and  $e_t^z \sim N(0, \sigma_z^2)$ . Cost minimisation implies that factor returns are paid their marginal product, distorted by a markup:

$$v_t r_t^k = \alpha MC_t \frac{y_t(j)}{K_{t-1}(j)} \quad (3.20)$$

and

$$w_t = (1 - \alpha) MC_t \frac{y_t(j)}{N_t(j)}. \quad (3.21)$$

As usual, it can be shown that marginal cost ( $MC$ ) is common across producers and is the inverse of the markup.<sup>7</sup>

The dynamics of price adjustment are governed by some firms being able to adjust their price in a given period and some not. The ability to adjust price is governed by a fixed probability as in Calvo (1983). Denote the probability that an intermediate producer cannot adjust their price as  $\eta \in (0, 1)$ . When firms are able to reset their price they choose  $p_t^*(j)$  to maximise expected profits

$$\max \mathbb{E}_t \sum_{s=0}^{\infty} Q_{t,t+s} [p_t^*(j) Y_{t+s}(j) - MC_{t+s}^N y_{t+s}(j)], \quad (3.22)$$

subject to

$$y_{t+s}(j) = \left( \frac{p_{t+s}(j)}{P_{t+s}} \right)^{-\epsilon} Y_{t+s},$$

where  $MC_t^N$  is nominal marginal cost.

The first order condition for firm  $j$ 's price setting problem is the familiar New Keynesian optimal reset price, common across all firms who reset in the same period:

$$p_t^*(j) = P_t^* = \frac{\epsilon}{\epsilon - 1} \frac{\mathbb{E}_t \sum_{s=0}^{\infty} \eta^s Q_{t,t+s} MC_{t+s}^N y_{t+s}(j)}{\mathbb{E}_t \sum_{s=0}^{\infty} \eta^s Q_{t,t+s} y_{t+s}(j)}. \quad (3.23)$$

Finally, the price index is an aggregate of firms who reset their price today and those who must retain last period's prices

<sup>7</sup>See, for example, Galí (2008) or Smets and Wouters (2003).

$$P_t = \left[ \eta P_{t-1}^{(1-\epsilon)} + (1-\eta) P_t^{*(1-\epsilon)} \right]^{\frac{1}{1-\epsilon}}. \quad (3.24)$$

### 3.2.3 Monetary policy

The monetary authority follows a standard interest rate rule where the interest rate responds to output, inflation and exhibits persistence

$$\hat{R}_t = \psi_R \hat{R}_{t-1} + (1 - \psi_R)(\psi_\pi \pi_t + \psi_y \hat{y}_t) + e_t^R, \quad (3.25)$$

where  $e_t^R$  is an i.i.d. interest rate shock:  $e_t^R \sim N(0, \sigma_R^2)$ . Variables with a hat represent percentage deviations from steady state and  $\pi_t = \hat{p}_t - \hat{p}_{t-1}$  (with the model linearised around a zero inflation steady state). The parameters are not restricted to satisfy the Taylor principle. During estimation this allows the data to favour a model specification with passive monetary policy and active fiscal policy (see Section 3.5).

### 3.2.4 Fiscal policy rules

Romer and Romer (2010) and Chapter 2 distinguish, in the narrative record, a variety of motives given by policymakers for changing taxes. In this chapter I focus attention on both ‘exogenous’ tax changes and the ‘endogenous’ categories which could be regarded as responding to current or prospective conditions. In Chapter 2 I noted that the ‘exogenous’ deficit consolidation (which Romer and Romer (2010) simply call deficit-driven changes) category could well be regarded as endogenous. One might argue: why cut the deficit at all if it is not to forestall an adverse future shock? In this chapter I therefore combine the deficit category in the Romer–Romer data with the other endogenous tax changes. Hence, the ‘exogenous’ tax change category is net of deficit-motivated actions.<sup>8</sup> This means that the identified endogenous tax changes occurred in response to movements in output, to fund spending decisions or to deal with the deficit and debt situation.

The model economy contains labour and capital tax rates. In solving and estimating the model it will be linearised around a deterministic steady state (see Appendices B.1 and B.2). I therefore directly express the fiscal policy rules in linearised form. Define the linearised ‘endogenous’ tax rate response ( $\Upsilon_t^i$  for  $i = \{nk\}$ ) as a function of output, government spending and debt:

$$\hat{\Upsilon}_t^n = \gamma_y^n \hat{y}_t + \gamma_b^n \hat{b}_{t-1} + \gamma_g^n \hat{g}_t + \nu_t^n \quad (3.26)$$

$$\hat{\Upsilon}_t^k = \gamma_y^k \hat{y}_t + \gamma_b^k \hat{b}_{t-1} + \gamma_g^k \hat{g}_t + \nu_t^k. \quad (3.27)$$

<sup>8</sup>Note that Romer and Romer (2010) and Chapter 2 show that excluding the deficit changes from the exogenous category does not affect the main results regarding the effect of tax changes on the macroeconomy.

The  $\nu_t$  terms are distributed  $\nu_t^n \sim N(0, \sigma_{N,n}^2)$  and  $\nu_t^k \sim N(0, \sigma_{N,k}^2)$ . These error terms pick up expectational errors associated with policy actions that deviate from the expected policy rule (the part captured by the  $\gamma$  terms). Note that these are not the same as the ‘exogenous’ shocks identified in the narrative approach. Furthermore, assume that the linearised ‘exogenous’ tax rates, as measured by the narrative approach, can be captured by autoregressive processes:

$$\hat{x}_t^n = \rho^{X,n} \hat{x}_{t-1}^n + e_t^{X,n} \quad (3.28)$$

$$\hat{x}_t^k = \rho^{X,k} \hat{x}_{t-1}^k + e_t^{X,k}. \quad (3.29)$$

where  $e_t^{X,n} \sim N(0, \sigma_{X,n}^2)$  and  $e_t^{X,k} \sim N(0, \sigma_{X,k}^2)$ .

The model’s linearised aggregate labour and capital tax rates,  $\hat{\tau}_t^n$  and  $\hat{\tau}_t^k$ , are then a combination of endogenous and exogenous components. In other words

$$\hat{\tau}_t^n = \hat{\Upsilon}_t^n + \hat{x}_t^n \quad (3.30)$$

and

$$\hat{\tau}_t^k = \hat{\Upsilon}_t^k + \hat{x}_t^k. \quad (3.31)$$

Note that it is  $\hat{\tau}_t^n$  and  $\hat{\tau}_t^k$  that appear above in the model itself.

Following Leeper et al. (2010) I allow spending and lump sum transfers to respond to debt and output as follows:

$$\hat{g}_t = -\gamma_y^g \hat{y}_t - \gamma_b^g \hat{b}_{t-1} + \hat{u}_t^g \quad (3.32)$$

with

$$\hat{u}_t^g = \rho^g \hat{u}_{t-1}^g + e_t^g \quad (3.33)$$

and  $e_t^g \sim N(0, \sigma_g^2)$  and

$$\hat{L}S_t = -\gamma_y^{LS} \hat{y}_t - \gamma_b^{LS} \hat{b}_{t-1} + \hat{u}_t^{LS} \quad (3.34)$$

with

$$\hat{u}_t^{LS} = \rho^{LS} \hat{u}_{t-1}^{LS} + e_t^{LS} \quad (3.35)$$

and  $e_t^{LS} \sim N(0, \sigma_{LS}^2)$ .

In addition, fiscal policies must satisfy the government budget constraint each period, which is given by

$$B_t = r_{t-1} B_{t-1} + G_t + LS_t - w_t N_t \tau_t^n - r_t^k v_t K_{t-1} \tau_t^k + \Lambda_t \quad (3.36)$$

where  $r_{t-1}$  is the real interest rate at the end of period  $t-1$ . Note that the Fisher relationship implies  $\hat{r}_t = \hat{R}_t - \mathbb{E}_t \pi_{t+1}$  (which can be obtained from the linearised first



order conditions). Total net tax revenue is given by

$$\mathbb{R}_t^T = w_t N_t \tau_t^n + r_t^k v_t K_{t-1} \tau_t^k - \Lambda_t. \quad (3.37)$$

### 3.2.5 Incorporating the narrative measures

The Romer–Romer narrative dataset was constructed using the prospective effect on revenues. To relate the narrative shocks to the model, I first consider the revenue gained from a particular narrative-identified shock. The total estimated revenue change identified by the narrative approach is a combination of the changes in the different tax rates. Keeping with the above notation, define the implied ‘endogenous’ capital and labour tax rates as  $\Upsilon_t^i$  where  $i = \{n, k\}$  and the equivalent ‘exogenous’ tax rates by  $X_t^i$ . Total (net) revenue from ‘endogenous’ tax rates,  $\mathbb{R}^N$ , can be thought of as

$$\mathbb{R}_t^N = w_{t-1} N_{t-1} \Upsilon_t^n + (r_{t-1}^k u_{t-1}^k K_{t-2} - \delta^\tau \mathcal{K}_{t-2}) \Upsilon_t^k \quad (3.38)$$

and similarly for ‘exogenous’ taxes

$$\mathbb{R}_t^X = w_{t-1} N_{t-1} X_t^n + (r_{t-1}^k u_{t-1}^k K_{t-2} - \delta^\tau \mathcal{K}_{t-2}) X_t^k. \quad (3.39)$$

Obviously these equations closely reflect the structure of the aggregate revenue equation (3.37) and note that I have made use of equation (3.6). The lagged variables reflect that the narrative shocks are measured *ceteris paribus*, although in practice this distinction made little difference to the estimation results in the following sections.

The narrative measures themselves are the expected percentage point change in revenues to GDP. I therefore divide equations (3.38) and (3.39) by period  $t$  GDP. These equations are also linearised around the model’s deterministic steady state in keeping with the rest of the model. Let  $\hat{\varepsilon}_t^X$  and  $\hat{\varepsilon}_t^N$  represent the model’s equivalent ‘exogenous’ and ‘endogenous’ narrative shocks. These are related to the corresponding linearised, first-differenced, versions of (3.38) and (3.39) via a scaling factor reflecting the steady state share of revenue generated by endogenous or exogenous tax actions in GDP. Without any empirical basis for calibrating this scaling factor it will be estimated. I will denote the endogenous and exogenous scaling factors  $\theta^N$  and  $\theta^X$  respectively. Appendix B.1 contains details on the linearised system and illustrates how the terms  $\hat{\varepsilon}_t^X$  and  $\hat{\varepsilon}_t^N$  precisely relate to the linearised equivalents of equations (3.38) and (3.39).

### 3.2.6 Equilibrium and model solution

An equilibrium is an allocation  $\{Y_t, C_t, I_t, K_{t-1}, N_t, B_{t-1}, v_t, \mathcal{K}_{t-1}, \Gamma_t\}$  and a price system such that the allocation solves: the household’s problem, satisfying first order conditions (3.10), (3.11), (3.12), (3.13), (3.14) and (3.15), the firm’s problem, satisfying conditions (3.20), (3.21), (3.23) and (3.24), a set of fiscal policies  $\{\tau_t^n, \tau_t^k, G_t, L S_t\}$  such that the

government's budget constraint is satisfied, a monetary policy rule, a set of exogenous processes and equilibrium conditions such that all markets clear with the aggregate resource constraint  $Y_t = C_t + I_t + G_t$  satisfied.

The model is linearised around a deterministic steady state. The details of the linearised model and the steady state relationships are presented in Appendices B.1 and B.2 respectively. The collection of first order and equilibrium conditions can, in general, be written as:

$$\mathbb{E}_t\{f(\hat{s}_{t+1}, \hat{s}_t, \hat{s}_{t-1}, \hat{\xi}_t) = 0\} \quad (3.40)$$

where  $\hat{s}$  is a vector of the model's variables in percentage deviations from steady state and  $\hat{\xi}$  the vector of shocks. The solution to the DSGE model is of the form:

$$\hat{s}_t = P(\Theta)\hat{s}_{t-1} + Q(\Theta)\hat{\xi}_t \quad (3.41)$$

where the coefficient matrices depend on the structural parameter vector  $\Theta$ . In the next section  $\Theta$  will be estimated.

### 3.3 Estimation

I estimate the structural parameters of the model economy using likelihood-based Bayesian methods. The model is estimated for the United States to maintain comparability with other recent structural empirical work on fiscal policy. I use quarterly data from 1960Q1 to 2007Q4.<sup>9</sup> The vector of observable time series contains consumption, investment, government debt, government spending, hours worked, labour tax revenues, capital tax revenues, the Federal Funds rate, inflation and the Romer–Romer measured exogenous and endogenous shocks. Variables are detrended with a constant and linear trend.<sup>10</sup> Consumption, investment, government spending, hours and revenues are all in logs and are real per capita. Appendix B.3 explains the data construction in more detail.

The model contains structural shocks to productivity, government spending, investment productivity, labour supply, transfers, the Federal Funds rate and four shocks to taxes. As discussed, the two shocks to the endogenous components can be interpreted as expectational errors associated with actions deviating from the endogenous tax policy rule. The two further exogenous, autoregressive, processes are related to the 'exogenous' policy shocks identified by Romer and Romer.

Mertens and Ravn (2011a) argue that the Romer–Romer shocks are likely to be measured with error and estimate the degree of the measurement error using a SVAR approach. Bayesian estimation lends itself naturally to including measurement equations

<sup>9</sup>This maintains comparability with the rest of the literature. It also therefore excludes the Korean War which is the only major episode in the Romer–Romer narrative where tax increases exactly matched the spending rise. Furthermore, Perotti (2007) shows that inclusion of the Korean War disproportionately drives results in narrative approaches to identifying spending shocks.

<sup>10</sup>The non-zero elements of the Romer–Romer shocks are demeaned as in Mertens and Ravn (2011a).

for the Romer–Romer shocks, potentially providing an alternative route to estimating the degree of noise in the narrative measures. Furthermore, without some measurement error it would not be sensible to jointly include the Romer–Romer shocks and tax revenues in the estimation. The measurement equations are:

$$RR_t^N = \hat{\varepsilon}_t^N + e_t^N \quad (3.42)$$

and

$$RR_t^X = \hat{\varepsilon}_t^X + e_t^X \quad (3.43)$$

where  $RR_t^j$  for  $j = \{N, X\}$  represent the observed Romer–Romer endogenous and exogenous shocks and  $\hat{\varepsilon}_t^X$  and  $\hat{\varepsilon}_t^N$  were defined earlier.

However, in the formulation so far, the  $\nu_t$  and  $x_t$  shocks in equations (3.26), (3.27), (3.30) and (3.31) would not be separately identified. Using a latent variable model, Mertens and Ravn (2011a) estimate that the correlation between the Romer–Romer ‘exogenous’ narrative measure and the true variable is about 83 per cent. I therefore calibrate the standard error of  $e_t^X$  so that the correlation between  $\hat{\varepsilon}_t^X$  and  $RR_t^X$ , when the model is simulated at the posterior means, is 83 per cent. I also restrict the endogenous and exogenous revenue to GDP ratios (the scaling factors  $\theta^N$  and  $\theta^X$ ) so that they do not jointly exceed the aggregate steady state revenue to GDP ratio.

The vector of observables is related to the model’s variables via a measurement equation

$$s_t^* = H(\Theta)\hat{s}_t + \zeta_t \quad (3.44)$$

where  $\zeta_t$  are the measurement errors and  $s_t^*$  is the vector of observables mentioned above. The model can therefore be set up as a system of measurement and transition equations.

The goal is to estimate the joint posterior distribution of the structural parameters  $\Theta$ . The log-likelihood is derived using the Kalman filter and the Sims algorithm *csmiwel* is employed to maximise the log posterior kernel with respect to the parameter vector  $\Theta$ .<sup>11</sup> The log posterior kernel is a combination of the likelihood of the data combined with the priors which I will discuss in the next section. Having found the posterior mode, the Metropolis-Hastings (MH) algorithm is used to sample from the posterior distribution and construct the posterior distribution of the structural parameters in  $\Theta$ . The MH algorithm starts by constructing a Gaussian approximation around the posterior mode (found using the *csmiwel* algorithm) with a scaled covariance matrix. New candidate parameter values are drawn from this constructed distribution and the algorithm must decide whether to accept or reject draws which lower the value of the posterior kernel. It is useful not to reject all such draws, accepting a seemingly inferior candidate may allow the algorithm to leave a local maximum to reach a global one. The choice of the scaling parameter is important as it governs the acceptance rate. I choose the scaling parameter

<sup>11</sup>All these algorithms are implemented using the Dynare Toolbox for Matlab.

Table 3.1: Calibrated parameters

Parameter	Calibration
$\beta$	0.99
$\alpha$	0.3
$\delta$	0.025
$\delta^\tau$	0.05
$\tau^n$	0.192
$\tau^k$	0.216
$\frac{G}{Y}$	0.0772
$\frac{B}{Y}$	0.293

to ensure acceptance rates close to 25 per cent. 2 million draws were generated with the first 600,000 used as a burn-in period. I run four parallel Monte Carlo Markov Chains and, on completion, diagnostics are performed to ensure convergence.<sup>12</sup>

### 3.3.1 Calibration and priors

Table (3.1) presents the calibrated parameter values for steady state variables and deep parameters that will not be estimated. I calibrate the discount factor  $\beta = 0.99$  which implies an annual steady state interest rate of 4 per cent. The share of capital in output is calibrated to be  $\alpha = 0.3$ . The quarterly depreciation rate is equal to 0.025. The value of utilisation,  $v$ , is assumed to be one in steady state. The tax rates, the ratio of government spending to GDP and the ratio of debt-to-GDP are calibrated using the mean values from the data (see Appendix B.3). These parameter choices are common in the literature. I also calibrate the steady state depreciation for tax purposes to be twice the economic rate of depreciation following Mertens and Ravn (2011b) and Auerbach (1989). As mentioned above, the variance of the measurement error in the Romer–Romer exogenous shocks is calibrated to deliver a correlation between the observed measure and the true shock of 83 per cent. Tables (3.2) and (3.3) (presented later with the results) give the prior distributions assigned to the other parameters in the model. The prior distributions for the coefficient of risk aversion  $\sigma$ , the inverse of the Frisch elasticity  $\kappa$ , the strength of consumer habits  $\mu$ , the parameter governing investment adjustment costs  $\phi_k''$ , the degree of capital utilisation  $\delta_2$ , the price elasticity  $\epsilon$ , the coefficients in the interest rate rule  $\psi_R$ ,  $\psi_\pi$  and  $\psi_y$ , and the probability of firms facing a fixed price  $\eta$  are common in the literature; for comparable prior assumptions see Smets and Wouters (2007) and Leeper et al. (2010) among others. The density functions are chosen to reflect the restrictions on parameters.  $\sigma$ ,  $\kappa$ ,  $\phi_k''$ ,  $\delta_2$  are all greater than zero, so I assume a Gamma density.  $\mu$  and  $\eta$  lie between zero and one so I assume a Beta density. I also make the same assumption for the persistence parameters in the stationary stochastic processes (the  $\rho$  terms). Note that the assumption on the distribution of  $\psi_\pi$  does not force the parameter to obey the

<sup>12</sup>These include univariate and multivariate convergence diagnostics and trace plots.

Taylor principle.

Commonly accepted ranges for the fiscal policy parameters are less common. Consequently diffuse priors were chosen for the feedback from debt and output to the tax rates. The coefficients  $\gamma_y^k$  and  $\gamma_y^n$  govern the elasticity of revenues to output. This elasticity has attracted considerable attention as it plays an important role in the SVAR identification scheme of Blanchard and Perotti (2002). Blanchard and Perotti (2002) calibrate this elasticity, on the basis of externally constructed elasticities, at 2.08 per cent; a one per cent increase in output leads to a 2.08 per cent increase in tax revenue. Mertens and Ravn (2011a) show that the narrative shocks imply a higher elasticity, even after accounting for measurement error. They find an estimate of around 3. These numbers suggest that the  $\gamma_y$  coefficients should be at least between one and two. However, there is considerable disagreement about this parameter, not least that the Blanchard–Perotti assumption is based on a constructed elasticity which itself could be subject to concerns regarding endogeneity. I therefore assume a uniform prior for the  $\gamma_y$  coefficients between 0 and 4, which implies a prior mean at 2 — marrying up with the estimate in Mertens and Ravn (2011a).

I follow Leeper et al. (2010) and assume prior means of 0.4 for the debt feedback coefficients  $\gamma_b^k$ ,  $\gamma_b^n$ ,  $\gamma_b^{LS}$  and  $\gamma_b^g$  but with a standard deviation of 0.2, which is quite diffuse, particularly allowing for parameters close to zero. In Chapter 4 I will estimate that the feedback from government spending to taxes appears low, I therefore assume a prior mean of a similar magnitude at 0.1 and with a standard deviation of 0.05.

Finally, the standard errors for the i.i.d shocks are assumed to follow an Inverse Gamma distribution with a prior mean of 1 and standard deviation of 4, making for very diffuse priors.

$\mathcal{G}$  denotes that the prior distribution is assumed to be the Gamma distribution,  $\mathcal{B}$  refers to the Beta distribution,  $\mathcal{N}$  to the Gaussian distribution,  $\mathcal{IG}$  to the Inverse Gamma distribution and  $\mathcal{U}$  to a uniform distribution.

### 3.3.2 Estimation results

Tables (3.2) and (3.3) also report the means and 5% and 95% of the posterior distribution. Figures (3.1) and (3.2) illustrate the prior distributions for the parameters together with their estimated posterior distributions.

First I examine the estimates of the more standard parameters. The estimate of  $\sigma$ , the degree of risk aversion, is well within the range of common estimates. For example, the value in table (3.2) is between the posterior mean of 1.38 estimated by Smets and Wouters (2007) and 2.7 estimated by Leeper et al. (2010) and Traum and Yang (2010). The estimate of  $\kappa$  is also very similar to values in those papers. The strength of habit persistence is slightly lower than usually estimated, with a posterior mean of around 0.4. This is lower than the posterior mean of 0.7 estimated by Smets and Wouters (2007)

Table 3.2: Priors and baseline model posterior distribution

Parameter	Prior Density	Mean	S.d.	Posterior mean	5%	95%
$\sigma$	$\mathcal{G}$	1.75	0.5	2.2	1.5	2.9
$\kappa$	$\mathcal{G}$	2	0.5	1.9	1.3	2.4
$\mu$	$\mathcal{B}$	0.5	0.2	0.41	0.33	0.50
$\phi_k$	$\mathcal{G}$	5	0.25	5.2	4.7	5.6
$\delta_2$	$\mathcal{G}$	0.7	0.5	0.0084	0.0024	0.014
$\epsilon$	$\mathcal{G}$	6	0.25	5.7	5.3	6.1
$\gamma_y^k$	$\mathcal{U}$	2	[0, 4]	1.9	1.2	2.6
$\gamma_y^n$	$\mathcal{U}$	2	[0, 4]	0.51	0.16	0.86
$\gamma_y^g$	$\mathcal{G}$	0.07	0.05	0.063	0.0025	0.12
$\gamma_y^{LS}$	$\mathcal{G}$	0.2	0.1	0.19	0.056	0.34
$\gamma_b^k$	$\mathcal{G}$	0.4	0.2	0.35	0.21	0.48
$\gamma_b^n$	$\mathcal{G}$	0.4	0.2	0.063	0.019	0.11
$\gamma_b^g$	$\mathcal{G}$	0.4	0.2	0.12	0.037	0.21
$\gamma_b^{LS}$	$\mathcal{G}$	0.4	0.2	0.23	0.077	0.38
$\gamma_q^n$	$\mathcal{N}$	0.1	0.05	0.048	-0.018	0.011
$\gamma_q^k$	$\mathcal{N}$	0.1	0.05	-0.0053	-0.081	0.069
$\theta^N$	$\mathcal{G}$	0.07	0.025	0.061	0.053	0.068
$\psi_\pi$	$\mathcal{N}$	1.5	0.25	1.7	1.51	1.84
$\psi_y$	$\mathcal{N}$	0.125	0.05	-0.0033	-0.022	0.016
$\psi_R$	$\mathcal{B}$	0.7	0.2	0.62	0.56	0.67
$\eta$	$\mathcal{B}$	0.5	0.1	0.56	0.52	0.60

Table 3.3: The shocks: priors and baseline model posterior distribution

Parameter	Prior Density	Mean	S.d.	Posterior mean	5%	95%
$\rho^z$	$\mathcal{B}$	0.7	0.2	0.98	0.96	0.99
$\rho^g$	$\mathcal{B}$	0.7	0.2	0.97	0.95	0.99
$\rho^i$	$\mathcal{B}$	0.7	0.2	0.42	0.32	0.52
$\rho^b$	$\mathcal{B}$	0.7	0.2	0.88	0.83	0.92
$\rho^l$	$\mathcal{B}$	0.7	0.2	0.998	0.995	0.999
$\rho^{LS}$	$\mathcal{B}$	0.7	0.2	0.97	0.95	0.99
$\rho^{X,n}$	$\mathcal{B}$	0.7	0.2	0.97	0.94	0.99
$\rho^{X,k}$	$\mathcal{B}$	0.7	0.2	0.95	0.92	0.98
$\sigma^z$	$\mathcal{IG}$	1	4	0.58	0.52	0.63
$\sigma^g$	$\mathcal{IG}$	1	4	3.1	2.8	3.3
$\sigma^i$	$\mathcal{IG}$	1	4	4.2	3.8	4.6
$\sigma^b$	$\mathcal{IG}$	1	4	1.4	1.1	1.6
$\sigma^l$	$\mathcal{IG}$	1	4	2.5	2.0	3.0
$\sigma^{LS}$	$\mathcal{IG}$	1	4	6.0	5.4	6.5
$\sigma^{X,n}$	$\mathcal{IG}$	1	4	2.3	2.0	2.5
$\sigma^{X,k}$	$\mathcal{IG}$	1	4	3.7	3.2	4.1
$\sigma^R$	$\mathcal{IG}$	1	4	0.33	0.29	0.37
$\sigma^{N,n}$	$\mathcal{IG}$	1	4	2.2	1.9	2.5
$\sigma^{N,k}$	$\mathcal{IG}$	1	4	1.1	0.50	1.6
$\sigma^N$	$\mathcal{IG}$	1	4	0.25	0.23	0.27

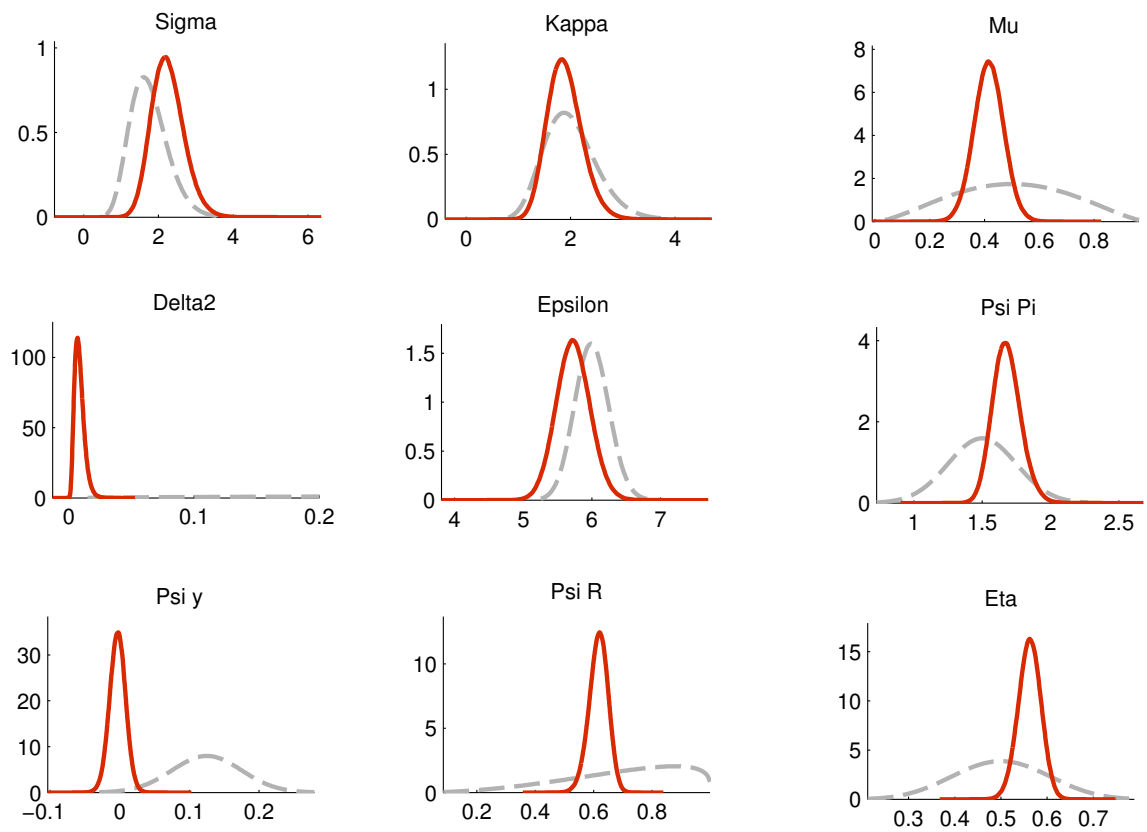


Figure 3.1: *Prior (grey, dashed) and posterior distributions (red, solid) of selected parameters*

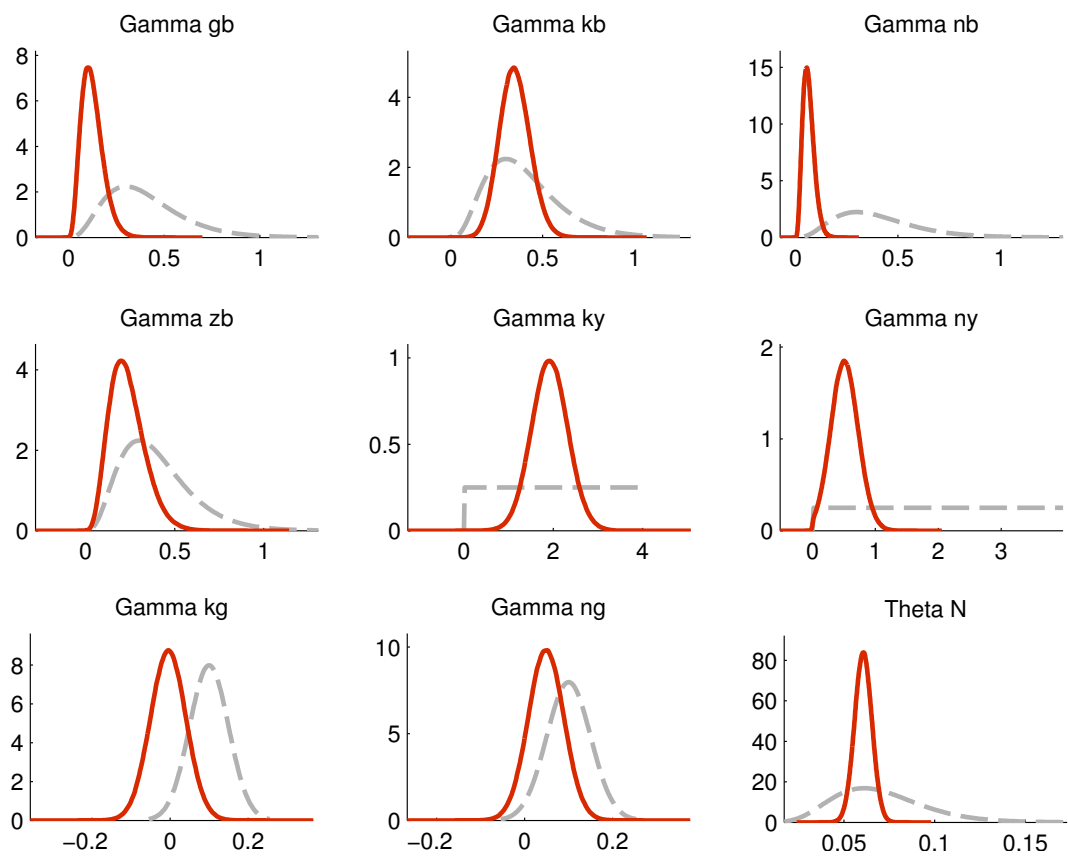


Figure 3.2: *Prior (grey, dashed) and posterior distributions (red, solid) of selected coefficients from the fiscal policy rules*



but within the 5% and 95% points of the posterior distribution found by Leeper et al. (2010). The estimate of  $\phi_k''$  is very similar to that obtained by Leeper et al. (2010) but the estimate of  $\delta_2$  is considerably lower. However, Schmitt-Grohe and Uribe (2010) estimate the parameter  $\delta_2/\delta_1$ , with both the Bayesian posterior mean and the mean from standard Maximum Likelihood estimation between 0.3 and 0.45. Mertens and Ravn (2011b) also obtain a value for  $\delta_2/\delta_1$  of around 0.6. Given that the steady state of the model implies a  $\delta_1$  of around 0.035, my estimate of  $\delta_2$  implies a value for  $\delta_2/\delta_1$  of 0.25, within the confidence intervals estimated by Schmitt-Grohe and Uribe (2010). Traum and Yang (2010) estimate a parameter which would imply a  $\delta_2$  of about 0.02. Whilst my estimate is slightly on the low side, it is not wildly different from other estimates in the literature. The estimate of  $\epsilon$  implies a steady state markup of 21%, which is similar to values normally chosen for the calibration of New Keynesian models — see for example Gali (2008).

The estimated parameters of the interest rate rule are also relatively standard. The persistence in the Federal Fund rate is estimated to be around 0.6, which is similar to the estimate by Zubairy (2010) of 0.52. The response of the interest rate to inflation satisfies the Taylor principle, making monetary policy active. My estimate of 1.68 for the posterior mean is slightly lower than the value of 2 found by Smets and Wouters (2007) or 1.9 by Traum and Yang (2010). It is, however, slightly higher than the posterior mean of 1.55 estimated by Zubairy (2010). The response of the Federal Funds rate to output is interesting as it is not significantly different from zero. This is in contrast to estimates in Smets and Wouters (2007) and Zubairy (2010), although their posterior estimates are still low. My estimate of the posterior mean of the degree of price stickiness,  $\eta$ , is also lower than common estimates, which often places it more in the region of 0.6-0.75. For example, Smets and Wouters (2007) estimates the posterior mean of this parameter to be 0.66, although my estimate is still within the 5<sup>th</sup> and 95<sup>th</sup> percentiles of their posterior distribution.

I now turn to the parameters of particular interest in this chapter, those governing the response of the fiscal policy instruments. It is useful to keep in mind two separate comparisons. First, I am interested in comparing my results with those in the wider literature. Second, I compare my results in the baseline model with a version that does not use the Romer–Romer data in the estimation of the model.

The inclusion of the Romer–Romer shocks produces a much lower estimate for  $\gamma_b^g$ . In comparison with Leeper et al. (2010), their posterior mean of 0.23 is outside the 90% Bayesian confidence intervals of my posterior distribution.<sup>13</sup> When I compare this baseline model to a version that excludes the Romer–Romer shocks, I also find that the result is lower. Estimating the model without the Romer–Romer data produces an estimate for  $\gamma_b^g$  of 0.17. These results suggest that the feedback from debt to government

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<sup>13</sup>This is also true when the feedback from spending to taxes is excluded (as it is in Leeper et al. (2010) and Zubairy (2010)).

spending is considerably weaker than previously estimated.

The posterior means for the feedback from debt to the tax rates are similar to Leeper et al. (2010), although the response of capital taxes to debt is weaker. Comparing the coefficient estimates in table (3.2) with a version of the model excluding the Romer–Romer data I find that, in the baseline case, the feedback from debt to both taxes is lower. Without using the Romer–Romer data, the feedback from debt to capital and labour taxes would have been 0.4 and 0.09 respectively.

The responses of the tax rates to output are estimated to be stronger than in Leeper et al. (2010). The posterior mean estimates for the response of capital and labour taxes are both higher, although labour tax rates respond much less than capital tax rates. Later I will consider the effect of excluding depreciation allowances. It is worth mentioning at this stage that the model without depreciation allowances produces an even higher estimate for  $\gamma_y^k$ , well above the estimates in Leeper et al. (2010) and closer to 3. Mirroring the results I will obtain in Chapter 4, the response of the tax rates to movements in government expenditure is estimated to be small.

### 3.3.3 Measurement error in the narrative endogenous tax changes

Mertens and Ravn (2011a) estimate that the Romer–Romer exogenous shocks exhibit an 83% correlation with the true (latent) variable. I discussed above that I make use of this information to help identify parts of the model. However, I did not restrict the correlation between the Romer–Romer endogenous shocks and the true (model-equivalent) variable. The posterior mean of the standard error of the measurement error in the endogenous shocks is 0.25. When I simulate the model at the estimated posterior means I find that this estimated degree of measurement error, together with all the other estimated parameters in the model, imply a correlation between the Romer–Romer endogenous shocks and the true (model-equivalent) variable of about 55%. It is interesting that this value is lower than the estimated correlation for the exogenous shocks found by Mertens and Ravn (2011a), suggesting a higher degree of noise in the narrative endogenous tax changes.

## 3.4 The effect of tax and spending shocks

As noted, for example by Baxter and King (1993), standard macroeconomic models can produce a range of theoretical predictions for the effects of fiscal shocks depending on how they are financed. The estimated endogenous feedback mechanisms in the previous section will therefore have important implications. Consequently, I pursue impulse response analysis and examine the fiscal multipliers associated with structural shocks to the fiscal policy instruments.

### 3.4.1 Impulse response analysis

In this section I consider the model's predictions for output, consumption, investment and hours worked in response to a one standard deviation structural shock to government spending, the capital tax rate and the labour tax rate.

Figure (3.3) shows that a one standard deviation increase in government expenditure leads to a rise in output of nearly 0.2 per cent on impact. Consumption and investment also both fall, as is the usual prediction of standard macroeconomic models. This is partly driven by the wealth effect on labour supply which leads households to work harder in response to decreased lifetime wealth. It also causes households to consume and save less as their after-tax lifetime income has fallen (causing both consumption and investment to fall). That output still rises in the face of changes in distortionary taxation implies that the wealth effect dominates any substitution effects. In Chapter 4 I explore this issue in more detail. In the bottom panels of figure (3.3) it can be seen that spending shocks appear more debt-financed. Note that the tax rate responses are percentage changes from steady state so, for example, the capital tax rate response is 1.5 per cent higher than steady state after 16 quarters. Given a steady state rate of around 20%, this implies the capital tax rate only changes by about 0.3 percentage points.

Figure (3.4) illustrates the effect of an exogenous cut in capital taxes. A one standard deviation cut leads to a rise in output on impact of about 0.06, increasing to nearly 0.1 per cent after four quarters. The effect on consumption is very similar, stimulated by the cut in taxes. The investment increase is strong as might be expected from a cut in taxes on capital. Hours worked fall by about 0.1 per cent on impact, rising towards zero over time as the marginal product of labour rises with the increasing capital stock.

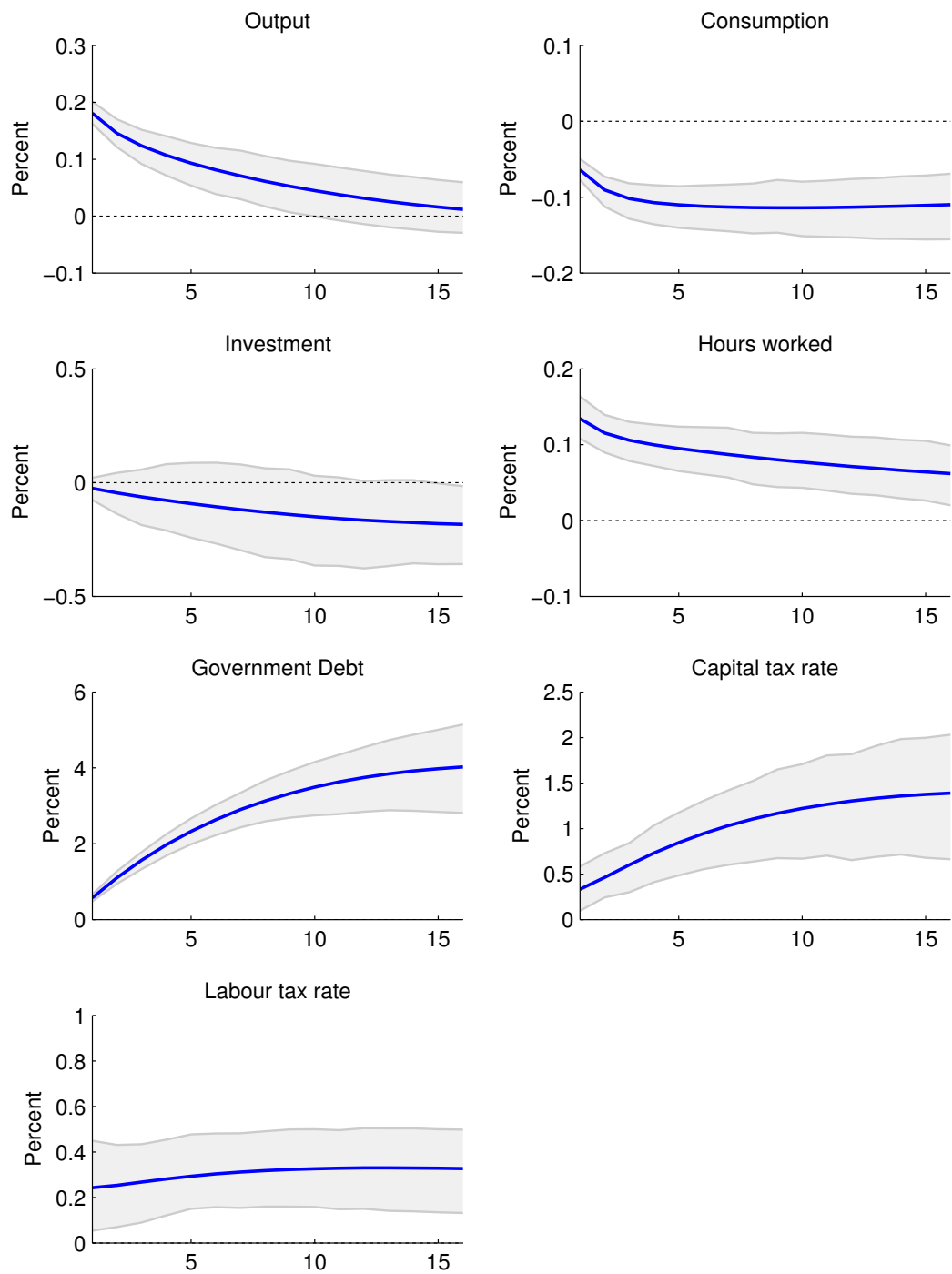


Figure 3.3: *Response to a one standard deviation increase in government spending. 95% confidence intervals.*

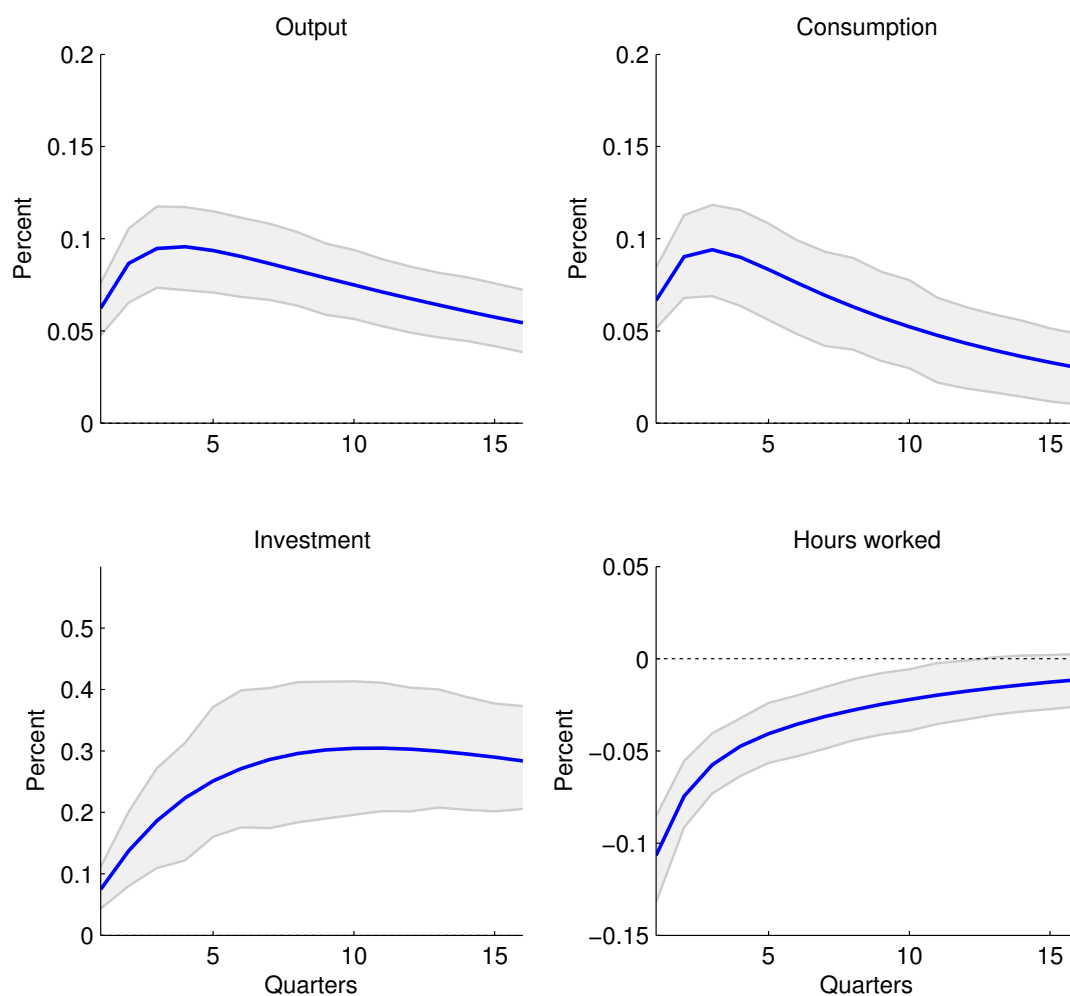


Figure 3.4: *Response to a one standard deviation cut in the exogenous capital tax rate. 95% confidence intervals.*

Figure (3.5) illustrates the effect of a one standard deviation structural labour tax rate cut. The plotted response of output and consumption is similar to a capital tax cut. A one standard deviation cut leads to a 0.07 percent rise in output, peaking around 0.1 after four quarters. Investment also rises as consumers save some of the tax cut. However, the implied investment multiplier is not as strong as with a capital tax cut, which is to be expected. In the case of a capital tax cut, households are incentivised to accumulate capital at the expense of consumption. In the next section I will examine the multipliers themselves and show that the capital tax cut is much more expansionary than the labour tax cut. Finally, figure (3.5) shows that, contrary to the capital tax cut, the cut in taxes on labour generates a rise in labour supply by raising the after-tax return to work.

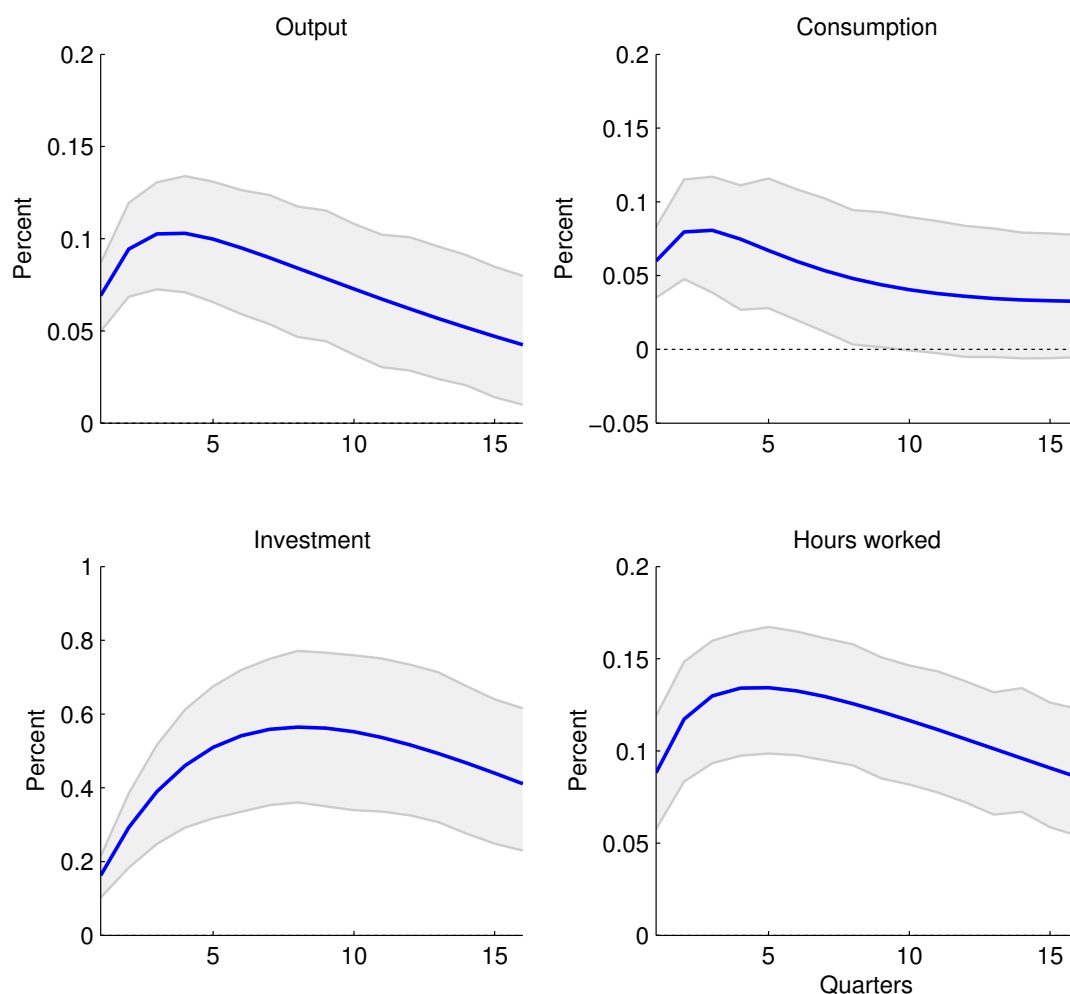


Figure 3.5: *Response to a one standard deviation cut in the exogenous labour tax rate. 95% confidence intervals.*

### 3.4.2 Fiscal multipliers

As the estimated standard deviations differ across shocks and across papers in the literature, I convert the impulse response analysis into comparable fiscal multipliers. In this section I concentrate my analysis on the output multipliers; how they are altered by including the Romer–Romer shocks in the estimation and how they compare to the rest of the literature.

Table (3.4) illustrates the fiscal multipliers implied by the impulse response functions, together with the 95% confidence intervals. As is standard, the multiplier is the change in output divided by the change in either government spending or total revenues. The multipliers in table (3.4) therefore reflect the impact on GDP of a one per cent of GDP rise in spending or a one per cent of GDP cut in tax revenues (driven by a change in either the labour or capital tax rate). The above impulse response functions give percentage

Table 3.4: Implied fiscal multipliers

Variable	Impact	Q4
$\frac{\Delta Y}{\Delta T^n}$	0.27 (0.22,0.31)	0.41 (0.32,0.48)
$\frac{\Delta Y}{\Delta T^k}$	0.73 (0.65,0.78)	1.12 (0.98,1.20)
$\frac{\Delta Y}{\Delta G}$	0.77 (0.75,0.79)	0.45 (0.33,0.55)

Q4 is the peak for the tax multipliers; for government spending the peak is on impact.

deviations from steady state. The multiplier can therefore be computed making use of the steady state values as follows

$$\frac{\Delta Y_{t+k}}{\Delta G_t} = \frac{\Delta \hat{y}_{t+k}}{\Delta \hat{g}_t} \frac{Y}{G} \quad (3.45)$$

with similarly defined multipliers for a one per cent cut in taxes as a proportion of GDP.

The multiplier for government spending is very close to that found by Leeper et al. (2010) but lower than the impact effect of 1.12 estimated by Zubairy (2010). The government spending multiplier is also very similar when the model in this paper is estimated with and without using the Romer–Romer data.

The labour tax multiplier is considerably stronger than estimated by Zubairy (2010) who finds an impact response of 0.13. My impact estimate is similar to that found by Leeper et al. (2010); however the peak response shown in table (3.4) is much higher. This is because the response in Leeper et al. (2010) peaks on impact, whereas I find the effect builds over the first year. Again, the inclusion of narrative data in estimation of my model does not affect the peak of the response.

The capital tax multiplier, however, is significantly higher once the Romer–Romer shocks have been included. The impact response would have been estimated at around 0.6, peaking at around 0.9. The estimate in table (3.4) is also considerably higher than the results of Leeper et al. (2010) and Zubairy (2010), the latter estimating an effect of 0.33 on impact and 0.36 at its peak. Making use of the Romer–Romer shocks therefore has important implications.

In summary, the inclusion of the Romer–Romer shocks appears to increase the estimated capital tax multiplier. The model in this chapter also produces higher estimates of the effect of a labour tax cut than is found by Leeper et al. (2010). However, this is true with and without the Romer–Romer shocks included in the estimation. The effect of a shock to government expenditure is also similar with and without the Romer–Romer shocks, similar to the results in Leeper et al. (2010) but smaller than the effect found by Zubairy (2010).

### 3.4.3 A comparison with Romer–Romer

Continuing the discussion of fiscal multipliers, it is interesting to compare the estimated effect of a cut in ‘exogenous’ taxes to the theory-free econometric approach in Romer and Romer (2010). As discussed, the model contains narrative tax variables (model-equivalent variables which are then related to the narrative measures). The model therefore produces impulse response functions for the implied change in the narrative ‘exogenous’ taxes following structural shocks. In this subsection I normalise the structural shocks to labour and capital taxes to generate a one per cent fall in the model’s ‘exogenous’ narrative variable. As such, this exercise simulates the results in Romer and Romer (2010). Given that the narrative shocks are a combination of labour and capital tax changes there is no good way, from the aggregate data, to choose the split between capital and labour taxes. I therefore consider the two cases separately. It is worth keeping in mind that the aggregate effect in Romer and Romer (2010) is likely to be some combination of the results below, but it is still interesting to examine whether the magnitudes are similar.

Figure (3.6) illustrates the effect on output of a cut in the capital tax rate or the labour tax rate, normalised such that the overall effect on the model’s narrative variable  $\hat{\varepsilon}^X$  is a one percentage point cut. There is a much larger effect of capital taxes than labour taxes — reflecting the multipliers above. Figure (3.7) combines these results with the VAR evidence obtained using the Romer–Romer data in the VAR specification in Chapter 2.<sup>14</sup>

The capital tax shock is initially too expansionary relative to the aggregate Romer–Romer result and lacks the hump-shaped build-up over time. The response to a labour tax shock is more akin to the Romer–Romer results on impact but the overall profile is too shallow. Some combination of the two tax shocks may well produce a response somewhere in-between, although it appears the overall magnitude after quarter 10 will still be lower.

There is an ongoing debate in the literature about the strength of the Romer–Romer response due to it being much greater than SVAR estimates (see for example Favero and Giavazzi (2010), Perotti (2010) and Mertens and Ravn (2011a)). Importantly, the model estimated in this chapter also produces impact multipliers larger than comparable SVAR estimates. In the SVAR literature the impact response is usually small, building to between 0.5 and 1 per cent over time (see, for example, Perotti (2005)). The estimated peak effect above, for both types of taxes, is also greater than the SVAR results in Perotti (2005). It is interesting that the estimated model produces peak estimates somewhere in between the SVAR results and the Romer–Romer results, even if the persistence is too low.

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<sup>14</sup>This replicates results very similar to those found in their original paper.



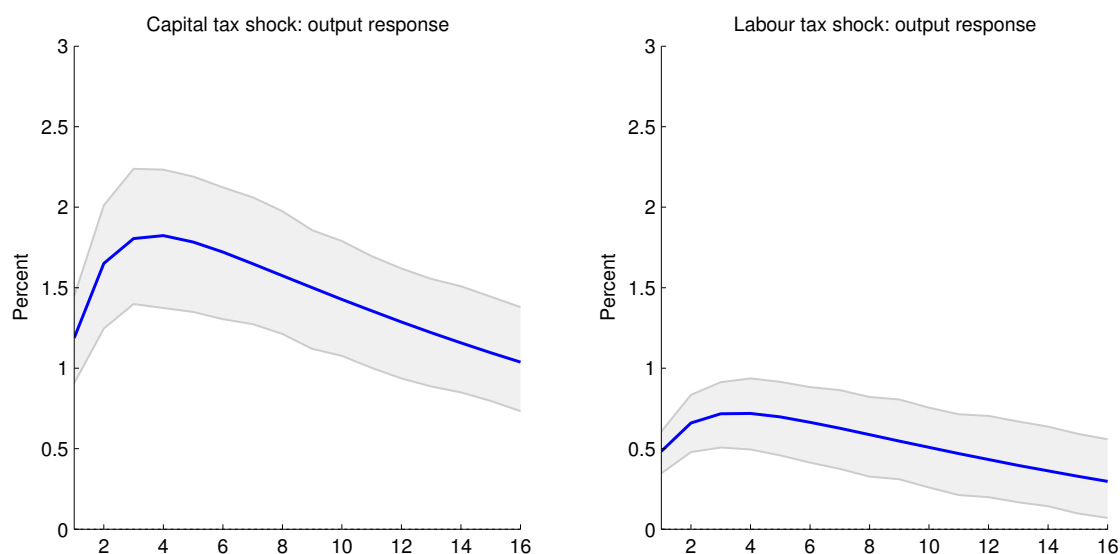


Figure 3.6: *Response of output to a one percentage point fall in the narrative exogenous tax variable*

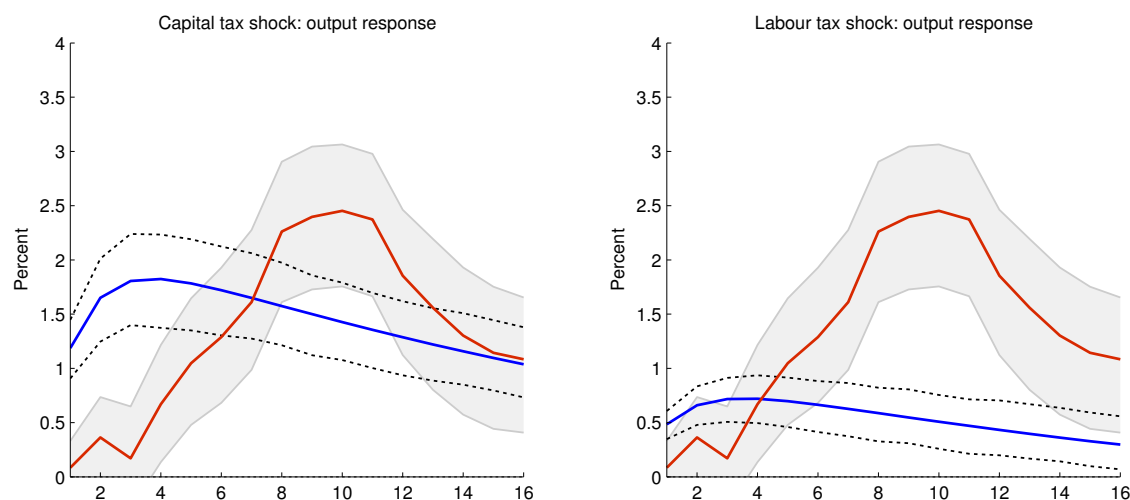


Figure 3.7: *Output response implied the model (blue/dotted) and the Romer–Romer results (red/grey)*

## 3.5 Model comparisons and robustness

### 3.5.1 Depreciation allowances and sticky prices

In this subsection I evaluate three versions of the baseline model. I examine how the parameter estimates would differ when depreciation allowances and sticky prices are excluded from the model. This facilitates a closer comparison with Leeper et al. (2010) and Zubairy (2010) whose models do not include these features.

Table (3.5) presents the parameter estimates from different versions of the baseline model. First consider the model without depreciation allowances. The major difference in the parameter estimates is a much higher value for  $\gamma_y^k$ , otherwise the results are similar. I also report the log data density, estimated using the modified harmonic mean estimator proposed by Geweke (1999). The model performs worse in terms of its log data density, suggesting that the data favour the model with depreciation allowances included.

The flexible price model generates parameter estimates for  $\sigma$  and  $\kappa$  that are somewhat higher than the sticky price model. The posterior mean for  $\sigma$  is the same as estimated by Leeper et al. (2010). In terms of the fiscal policy coefficients, the feedback from output to labour taxes is slightly higher, as is the feedback from debt to capital taxes. However, the flexible price model also performs worse in terms of its log data density, therefore favouring the baseline model.

### 3.5.2 Exogenous or endogenous fiscal policy?

As discussed by Leeper (1991), Benhabib et al. (2001) and Woodford (2003), among others, there are potentially important interactions between the stance of monetary and fiscal policy. These papers have shown that when fiscal policy endogenously reacts (strongly enough) to debt, monetary policy must often satisfy the Taylor principle to ensure stable debt dynamics.<sup>15</sup> The literature has referred to this case as one of ‘passive’ fiscal policy and ‘active’ monetary policy. Alternatively, this fiscal stance is sometimes called ‘(locally) Ricardian’ following Woodford (2003). In the baseline model  $\psi_\pi$  is estimated to be greater than one (with  $\psi_y$  close to zero), thus satisfying the Taylor principle. The coefficients determining the feedback to the fiscal policy instruments were all greater than required to satisfy the condition for passive fiscal policy.<sup>16</sup>

However, if fiscal policy were entirely unresponsive — ‘active’ or ‘non-Ricardian’ — monetary policy would need to be passive and violate the Taylor principle to ensure determinate debt dynamics. Consider a simple example of a debt-financed tax cut adopted from Davig and Leeper (2006). A debt-financed tax cut does not raise the present value of future taxes (given exogenous processes for the fiscal instruments). Households therefore perceive this as an increase in their lifetime wealth which, at initial prices and interest rates, raises the demand for goods. Monetary policy must not react too strongly (formally, it must violate the Taylor principle) because, as explained by Davig and Leeper (2006), three channels then act to satisfy the government’s intertemporal budget constraint (after imposing the transversality condition). First, passive monetary policy allows the money stock to expand and clear the market, creating seignorage revenue. Second, surprise inflation revalues outstanding nominal debt. Third, lower real interest rates allow a higher level of debt to be serviced for a given stream of primary

<sup>15</sup>See Benhabib et al. (2001) for conditions under which, given a Ricardian (or ‘passive’) fiscal policy, active monetary policy still does not ensure determinate equilibrium dynamics.

<sup>16</sup>That is, fiscal policy instruments respond enough to at least pay back the debt interest.

Table 3.5: Model comparisons

Parameter	Baseline	No D.A.	Exogenous policy	Flexible prices
$\sigma$	2.2 (1.5,2.9)	2.2 (1.5,2.9)	1.1 (0.7,1.4)	2.7 (2.0,3.4)
$\kappa$	1.9 (1.3,2.4)	2.1 (1.5,2.7)	1.4 (0.9,1.9)	3.1 (2.3,3.8)
$\mu$	0.4 (0.3,0.5)	0.4 (0.3,0.5)	0.6 (0.5,0.7)	0.14 (0.04,0.2)
$\phi_k''$	5.2 (4.7,5.6)	5.2 (4.8,5.6)	5.1 (4.7,5.5)	5.1 (4.7,5.5)
$\delta_2$	0.008 (0.002,0.01)	0.01 (0.003,0.02)	0.01 (0.004,0.02)	0.006 (0.002,0.01)
$\epsilon$	5.7 (5.3,6.1)	5.6 (5.1,6.0)	5.7 (5.3,6.1)	5.7 (5.3,6.1)
$\gamma_y^k$	1.9 (1.2,2.6)	2.8 (2.2,3.4)	-	1.8 (1.0,2.6)
$\gamma_y^n$	0.5 (0.2,0.9)	0.3 (0,0.5)	-	0.8 (0.4,1.2)
$\gamma_y^g$	0.06 (0.003,0.1)	0.06 (0.003,0.1)	-	0.07 (0.003,0.1)
$\gamma_b^k$	0.35 (0.21,0.48)	0.25 (0.1,0.4)	-	0.55 (0.41,0.68)
$\gamma_b^n$	0.06 (0.02,0.1)	0.07 (0.02,0.1)	-	0.03 (0.009,0.06)
$\gamma_b^g$	0.1 (0.04,0.2)	0.1 (0.04,0.2)	-	0.1 (0.03,0.17)
$\gamma_g^n$	0.05 (-0.02,0.1)	0.04 (-0.03,0.1)	-	0.01 (-0.06,0.08)
$\gamma_g^k$	-0.005 (-0.08,0.07)	0.01 (-0.06,0.08)	-	0.01 (-0.07,0.08)
$\theta^N$	0.06 (0.05,0.07)	0.08 (0.07,0.09)	0.07 (0.06,0.09)	0.06 (0.05,0.07)
$\psi_\pi$	1.7 (1.5,1.8)	1.7 (1.5,1.9)	0.999 (0.995,1.0)	1.8 (1.6,2.0)
$\psi_y$	-0.003 (-0.02,0.02)	0.001 (-0.02,0.02)	-	-0.02 (-0.04,0.006)
$\psi_R$	0.62 (0.56,0.67)	0.67 (0.62,0.71)	0.62 (0.57,0.68)	0.46 (0.37,0.55)
$\eta$	0.56 (0.52,0.60)	0.62 (0.59,0.66)	0.88 (0.86,0.90)	-
Log data density (relative)	0	-44	-69	-112

surpluses. This active fiscal-passive monetary policy case is often referred to as the Fiscal Theory of the Price Level.

To consider this possibility, column four of table (3.5) presents the results from a model where fiscal instruments do not respond endogenously (equivalent to the case where the  $\gamma$  terms are set to zero). Fiscal policy is therefore described by exogenous processes, which are still related to the Romer–Romer shocks to make the model comparable.  $\psi_\pi$  is estimated to be less than one, which satisfies the condition for passive monetary policy (although  $\psi_\pi$  is not restricted to be less than one).

However, the results in table (3.5) imply that the model with fiscal feedback is preferred by the data in terms of the log data density. This suggests that, at least over the whole sample, fiscal policy is sufficiently responsive to debt to ensure determinate debt dynamics. This result is similar to findings by Traum and Yang (2010). These authors also estimate a DSGE model using Bayesian methods and examine whether the data prefer active monetary-passive fiscal policy or passive monetary-active fiscal policy. They also find that the data prefer the active monetary-passive fiscal policy specification, although their fiscal policy specification is not as rich as above.

The results presented here do not, of course, consider the possibility that there were specific periods in the sample of passive or active fiscal policy. Recent work by, for example, Davig and Leeper (2006, 2011) estimate regime-switching policy rules for the United States, highlighting that different combinations of passive and active monetary and fiscal policy existed at different points in the post-war period. The use of narrative data presents an interesting avenue for future research in this direction.

### 3.6 Conclusion

In this chapter I have estimated a DSGE model using Bayesian methods to help understand the importance of the endogenous feedback from key macroeconomic variables to fiscal policy instruments. The central innovation in this chapter has been to make use of new, direct measures of tax changes constructed using a ‘narrative’ approach. Other methods, such as previously estimated DSGE models and SVARs, assume that the true tax shocks are unobserved, attempting to identify these using structural assumptions and performing estimation using National Accounts measures of tax revenues.

I showed how the narrative tax shocks can be integrated into a relatively standard medium-scale DSGE model. I then estimated the parameters in the model using likelihood-based Bayesian techniques for the United States. The central results of this paper are threefold. First I showed that, having made use of the narrative tax changes identified by Romer and Romer (2010), the feedback from debt to the fiscal instruments is reduced. My new estimates were also shown to be lower than comparable results by Leeper et al. (2010). This was particularly true for the response of spending to debt and, to a lesser extent, the response of capital taxes to debt.

Second, I showed that the capital tax multiplier is significantly increased when the Romer–Romer data are used in estimation of the model. Furthermore, in general, the tax multipliers I obtain are higher than those estimated elsewhere in the literature. In addition, I showed that the estimated model implies that exogenous tax changes have a peak effect between estimates found by Romer and Romer (2010) and in the SVAR literature. The effect of a government spending shock is found to be similar to the results in Leeper et al. (2010) but lower than in Zubairy (2010). In Chapter 4 I consider the transmission mechanisms of government spending shocks in more detail.

Third, I showed that the data prefer the baseline specification to three other versions of the model. Versions of the model that exclude depreciation allowances and sticky prices produced parameter estimates that were, in many cases, similar but there was a deterioration in the estimated log data density. I also showed that the data appear to prefer the model which allows for endogenous feedback to fiscal policy instruments. An important corollary of this is that the fiscal instruments appear to react sufficiently strongly to debt in the baseline model to ensure that passive monetary policy was not needed to ensure stable debt dynamics. However, as discussed previously, work by Davig and Leeper (2006, 2011) suggests the existence of different active/passive regimes at different points in the post-war sample. Bringing narrative data to bear on these issues is a potentially exciting avenue for further research.

Narrative data provide a rich new source of information for estimating the macroeconomic effects of fiscal policy. This chapter has shown that incorporating these new measures into the estimation of a medium-scale DSGE model has important implications for the estimated strength of feedback from debt and output to the fiscal instruments, as well as the implied fiscal multipliers in response to structural fiscal policy shocks. Making greater use of this new source of data provides interesting scope for future work.

## Chapter 4

# Government spending, wealth effects and distortionary taxation

### 4.1 Introduction

The effectiveness of government spending in stimulating the economy became a central policy question during the 2008 financial crisis. Whilst proponents and critics argued about the mechanisms determining policy success, I noted in Chapter 3 that standard macroeconomic models can generate a wide range of theoretical predictions depending on the assumptions made about how the spending increase is financed<sup>1</sup> and assumptions about how consumers respond to implied future tax increases.

In Chapter 3 I pursued a full-information approach, estimating a DSGE model using Bayesian methods. Although appealing as a method for identifying the endogenous feedback from variables such as output or debt, full-information methods impose a lot of structure on the data. As I discussed in Chapter 1, considerable faith must therefore be placed in the model.

In recent years, a debate has emerged as to whether DSGE models can adequately account for the empirical effects of structural shocks to government expenditure found *elsewhere* in the empirical literature. For example, particular attention has been paid to whether DSGE models can account for SVAR evidence that private consumption and real wages tend to rise following a structural shock to government spending; see, for example, Monacelli and Perotti (2009), Ravn et al. (2007) or Linnemann (2006).<sup>2</sup>

In this chapter I again construct and estimate a DSGE model for the United States. However, rather than assuming the model is a full description of the data generating process, I focus on the model's ability to account for a particular aspect of the data: namely the effect of government spending shocks. I employ a minimum distance ap-

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<sup>1</sup>Also see, for example, Baxter and King (1993) or Alesina et al. (2002).

<sup>2</sup>It should be noted that narrative identification approaches have tended to find a fall in private consumption. For a review of this evidence and a reconciliation with the SVAR results see Perotti (2007).

proach, matching the impulse response functions from the model to those obtained from a SVAR, identified using the method of Blanchard and Perotti (2002). Results from the estimated model can then be compared with the SVAR evidence to evaluate the model's performance.

This chapter is particularly concerned with the endogenous response of tax rates to government spending shocks and the strength of the so-called 'wealth effect' on labour supply — both of which crucially affect the predictions of standard macroeconomic models. The estimated model is shown to match key aspects of the empirical evidence with a realistic set of tax instruments and transmission channels.

For all their complexity, many standard models of fiscal policy often rely on a very simple fiscal policy instrument, the lump sum tax, to finance an expenditure shock. This includes state of the art policy models such as that of Smets and Wouters (2007) and recent papers, for example by Cogan et al. (2010), who analyse the size of fiscal multipliers in the U.S.

However, the lump sum tax assumption is far from innocuous. Lump sum tax-finance implies a 'wealth' effect as (expected) income falls. Consumption falls but, assuming leisure and consumption are normal goods, labour supply and consequently output rise. This allows the neoclassical model, and others based on it, to match empirical evidence that GDP increases following a discretionary government spending stimulus.

There are, however, several issues with this mechanism. Firstly, the output rise relies both on the strength of the wealth effect and the lack of distortions associated with the instrument. Consider using a labour income tax instead. The labour supply decision is now distorted, producing strong negative substitution effects. Generally this substitution effect dominates, lowering labour supply and output. Secondly, even if the wealth effect channel can explain the output response, it generates consumption and the real wage responses that are at odds with the empirical Structural Vector Autoregression (SVAR) literature.<sup>3</sup> Thirdly, there is the practical realism of the assumption. Lump sum taxes are rarely, if ever, used as primary instruments of tax policy. Chapter 2 and Romer and Romer (2010) illustrate that most tax actions in the U.K. and U.S. respectively were changes in distortionary taxes.<sup>4</sup>

Since there is no a priori reason to assume that a particular mix of tax instruments finances a spending increase, my first goal in this chapter is to estimate the endogenous response of tax rates for the United States and construct a New Keynesian model which replicates these.

The second goal is then to examine the strength of the wealth effect on labour supply itself. The wealth effect channel is still potentially important even after modelling and estimating the distortionary tax rules. This is because the government's budget con-

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<sup>3</sup>Again, see Perotti (2007) for a review of this evidence.

<sup>4</sup>This includes, for example, both tax changes to directly fund spending measures and tax changes to deal with a budget deficit.

straint must hold in each period. In several models (such as Burnside et al. (2004)), this is done using a lump sum tax. Furthermore, even if the budget constraint is satisfied by issuing debt, Ricardian equivalence with respect to lump sum taxes implies the same wealth effect on labour supply. It is therefore important to consider jointly the strength of the wealth effect on labour supply *and* the endogenous tax responses to the spending shock.

Following Monacelli and Perotti (2009), I use Jaimovich and Rebelo (2009) (JR) preferences which allow for a variable wealth effect on labour supply. Following Schmitt-Grohe and Uribe (2010) (who do not investigate fiscal policy issues), I estimate the size of this effect. As shown by Monacelli and Perotti, a useful feature of these preferences is that, when the wealth effect on labour supply is limited, consumption and the real wage can increase. This further motivates estimating the importance of the channel.

To evaluate the importance of other potential transmission mechanisms I include a range of more standard features such as sticky prices, variable capital utilisation and habits. I show that the estimated model can match the positive empirical response of key variables including output, consumption and the real wage, which is a challenge for many New Keynesian models. These results arise for a number of reasons. Firstly, the importance of the wealth effect on labour supply is small. Secondly, mechanisms such as sticky prices, variable capital utilisation, investment adjustment costs and habits all play an important role in matching the evidence. Thirdly, distortionary tax rates rise following the expenditure shock but their small magnitude crucially reduces the distortions involved. This explains why the positive output and consumption responses prevail.

The results in this chapter contribute, and are related, to several branches of the current literature. Firstly, I directly contribute to the literature which seeks to explain the empirical effects of discretionary shocks to government expenditure. As discussed above, much work has been focused on matching the sign of the consumption (and real wage) response.<sup>5</sup> Few papers in this specific branch of the literature have considered distortionary taxes or included empirically realistic tax policy rules (Burnside et al. (2004) and Reis (2008) being two exceptions). To my knowledge, no papers have *empirically* evaluated the importance of the wealth effect channel as a transmission mechanism of fiscal policy.<sup>6</sup>

Secondly, by estimating tax policy rules, the results in this chapter have a relationship with the literature discussed in Chapter 3, and to which Chapter 3 contributes. Both Leeper et al. (2010) and Zubairy (2010) perform Bayesian estimation of DSGE models that include feedback to the tax rates from output and debt (but not spending). However,

<sup>5</sup>Zubairy (2009), as I do, follows a minimum distance approach, estimating how well a ‘deep habits’ model of the form of Ravn et al. (2007) (with lump sum taxes) can explain a government spending shock.

<sup>6</sup>Although, as noted above, Monacelli and Perotti (2009) do show how varying the strength of this effect has useful implications.



Leeper et al. (2010) does not focus on the effects of spending shocks and Zubairy (2010) is more concerned with estimating fiscal multipliers using a DSGE model rather than matching other empirical evidence on the effects of spending shocks.

The remainder of the chapter is structured as follows. Section 4.2 estimates the empirical effects of government spending shocks using a SVAR. Section 4.3 sets up the theoretical model. Section 4.4 illustrates key features of the model with respect to the tax policy rules and their interaction with the wealth effect channel. Section 4.5 estimates the model using a minimum distance estimator. Section 4.6 concludes that the estimated model matches the empirical evidence well, that shocks appear largely debt-financed, that the wealth effect is relatively small and that sticky prices play an important role, as do the other common mechanisms.

## 4.2 The empirical effects of government spending shocks

### 4.2.1 Identification

The parameters of the model will be chosen to match the estimated empirical impulse response functions. The empirical effects of a government spending shock are identified using the method of Blanchard and Perotti (2002). Consider the following reduced form VAR:

$$\mathbf{X}_t = \alpha_0 + \alpha_1 t + B(L)\mathbf{X}_{t-1} + \mathbf{u}_t. \quad (4.1)$$

$\mathbf{X} = [g_t \ \tau^k \ \tau^n \ y \ c \ n \ w \ i \ b]'$  where  $g$  is government spending,  $\tau^k$  capital taxes,  $\tau^n$  labour taxes,  $y$  output,  $c$  consumption,  $n$  employment,  $w$  the real wage and  $i$  investment. For later reference, I also include government debt,  $b$ .  $B(L)$  is a lag polynomial of order  $P$ .

The reduced form residuals  $\mathbf{u}_t$  are likely to be correlated. For example, a shock to government spending is likely to imply contemporaneous effects on taxes, debt and so on. Pre-multiplying equation (4.1) by the square matrix  $\mathbf{A}$  (and ignoring the constant and trend for presentation) yields:

$$\mathbf{A}\mathbf{X}_t = \mathbf{A}B(L)\mathbf{X}_{t-1} + \mathbf{e}_t \quad (4.2)$$

where  $\mathbf{A}\mathbf{u}_t = \mathbf{e}_t$  and  $\mathbf{e}_t$  are the structural shocks.<sup>7</sup>

<sup>7</sup>Sometimes this is written as  $\mathbf{A}\mathbf{u}_t = \mathbf{B}\mathbf{e}_t$ . I am therefore assuming  $\mathbf{B} = \mathbf{I}$ , which is common. It is worth noting that assumptions on  $\mathbf{A}$  will replicate having some non-zero off-diagonal elements in  $\mathbf{B}$ . Since I only consider structural government spending shocks, all other elements of  $\mathbf{e}_t$  will be 0 and only the first column of  $\mathbf{B}$  is relevant. Suppose that the second element of this column was non-zero. This would imply that the structural government spending shock affects the tax (where tax is the second equation) reduced form residual. However, since  $u^g = e^g$  by the Blanchard–Perotti timing assumptions, nothing is lost by setting this element of  $\mathbf{B}$  to zero but ensuring that the relevant element of  $\mathbf{A}$ , the effect of  $u^g$  on other elements of  $\mathbf{u}_t$ , is correctly accounted for.

Identification proceeds by making assumptions about the contemporaneous correlation between variables. Identification is achieved by restricting  $n(n - 1)/2$  parameters. The Blanchard–Perotti assumptions justify certain restrictions. The key assumption is that policy decision variables are unaffected contemporaneously (within the same quarter) by changes in the other endogenous variables. This is justified by the institutional delays involved in policy decision-making. It is therefore assumed that government spending is not affected contemporaneously by any other variable.

The original Blanchard–Perotti approach, as discussed in Chapter 2, made use of tax revenues as the measure of taxes, from which they had to work out how much of the change in revenues was due to cyclical movements (in income, for example) and how much was due to genuine policy shocks. External information on tax elasticities was used to disentangle the two effects. In my empirical setup I follow Perotti (2007) and directly construct, and use, tax *rates* so that the theoretical model’s policy rules can be directly estimated. The consequence of using rates rather than revenues is that they are policy decision variables. Under the Blanchard–Perotti timing assumptions, these should also be unaffected by other endogenous variables within the quarter. However, I allow them to be affected by spending (in other words, I assume that spending decisions are taken first and then taxes can respond).

To illustrate the identification scheme, consider a smaller set of variables: government spending  $g$ , a distortionary tax rate  $\tau$ , a non-fiscal variable such as output or consumption,  $y$ , and debt,  $b$ . The relationship between the reduced form residuals and the structural shocks can be written as:

$$\begin{bmatrix} 1 & -\alpha_{g\tau} & -\alpha_{gy} & -\alpha_{gb} \\ -\alpha_{\tau g} & 1 & -\alpha_{\tau y} & -\alpha_{\tau b} \\ -\alpha_{yg} & -\alpha_{y\tau} & 1 & -\alpha_{yb} \\ -\alpha_{bg} & -\alpha_{b\tau} & -\alpha_{by} & 1 \end{bmatrix} = \begin{bmatrix} u_t^g \\ u_t^\tau \\ u_t^y \\ u_t^b \end{bmatrix} = \begin{bmatrix} e_t^g \\ e_t^\tau \\ e_t^y \\ e_t^b \end{bmatrix} \quad (4.3)$$

The timing assumptions discussed above allow us to set  $\alpha_{g\tau} = \alpha_{gy} = \alpha_{gb} = \alpha_{\tau y} = \alpha_{\tau b} = 0$ . However, it seems sensible to assume that taxes, output and debt may respond to the structural spending shock. Output and debt may also respond to taxes contemporaneously.

In the example above, these assumptions leave us one restriction short. We need to restrict either  $\alpha_{yb}$  or  $\alpha_{by}$ . With the variable ordering above, setting  $\alpha_{yb} = 0$  implies a lower triangular matrix for  $\mathbf{A}$ . Following Perotti (2007) I adopt this procedure. The most contentious assumption is therefore that debt is ordered last. Ordering the debt series last implies that debt has no contemporaneous effect on output within the quarter (or that the level of debt in period  $t$  is the outcome of the changes to the other variables and not the other way around). Ordering debt before output assumes that output has no effect on debt ( $\alpha_{by} = 0$ ) within the quarter. The latter assumption would appear

unrealistic and so I opt for the former specification.<sup>8</sup>

### 4.2.2 The data

The data are for the United States over the period 1955:1 to 2007:4. I exclude the Korean War because it is, to some extent, a unique event and can disproportionately drive the results (see Perotti (2007)).

With the exception of the tax rates and debt, all data are taken directly from the relevant sources (and appropriately deflated). The tax rates are constructed using the method outlined in Jones (2002). This approach is also adopted by Burnside et al. (2004).

The debt series would ideally be ‘Debt Held by the Public’, as used by Favero and Giavazzi (2007). However, this quarterly series does not go back far enough. I therefore construct a debt series from old editions of the U.S. Treasury Bulletin. The resulting series is very close to ‘Debt Held by the Public’, see Appendix C.1 for details. This improves on the Favero–Giavazzi method of simulating the debt series back to 1947 using annual data.

All variables, except the tax rates, are the log of real per capita variables. The tax rates are percentages. All real series are the nominal series deflated by its own implicit price deflator, with the exception of government spending and debt which are deflated by the GDP deflator. Appendix C.1 sets out the specific details of each series.

### 4.2.3 Results

The figures below report the baseline results for  $P = 4$ . The impulse response functions are simulations to a one percent structural shock to government spending. The point estimates are shown together with standard 68 percent non-parametric bootstrapped confidence intervals using 10,000 replications.

Figure 4.1 shows the response of the fiscal policy variables to the shock. The response of the labour and capital tax rates, although positive (as one might expect) are relatively modest.<sup>9</sup> Given the modest increase in taxes, it is useful to consider the response of debt. To the extent that lump sum taxes are rarely used to satisfy the government budget constraint, modest tax rate increases would imply a larger increase in debt. This is what is observed in the fourth panel of figure (4.1).

Figure 4.2 shows the responses of the other variables in the SVAR. The top two panels show the familiar SVAR result that output and consumption rise following a government spending shock. The output response on impact is 0.224. Note that this is  $\log y_t - \log y$

<sup>8</sup>In the full specification I tested alternative variable orderings. Not placing debt last, despite the above discussion, generated identical impulse response functions to three decimal places, with the standard errors only marginally affected. I switched the two tax rates around and this made little difference. I also used different combinations of the non-fiscal variables (which all appear in place of  $y$  in the shorter example), again with very little effect.

<sup>9</sup>These responses are very similar including and excluding the debt series.

and  $\log g_t - \log g = 1$  by definition. This means that the ratio of the percentage deviations can be written as  $\frac{\Delta y_t}{\Delta g_t} \frac{g}{y}$ . The multiplier,  $\frac{\Delta y_t}{\Delta g_t}$  (as in Chapter 3), is therefore the product of this ratio and average government spending to GDP ( $\frac{g}{y}$ ), which is 0.22 in the sample. These estimates imply an output multiplier of about one.

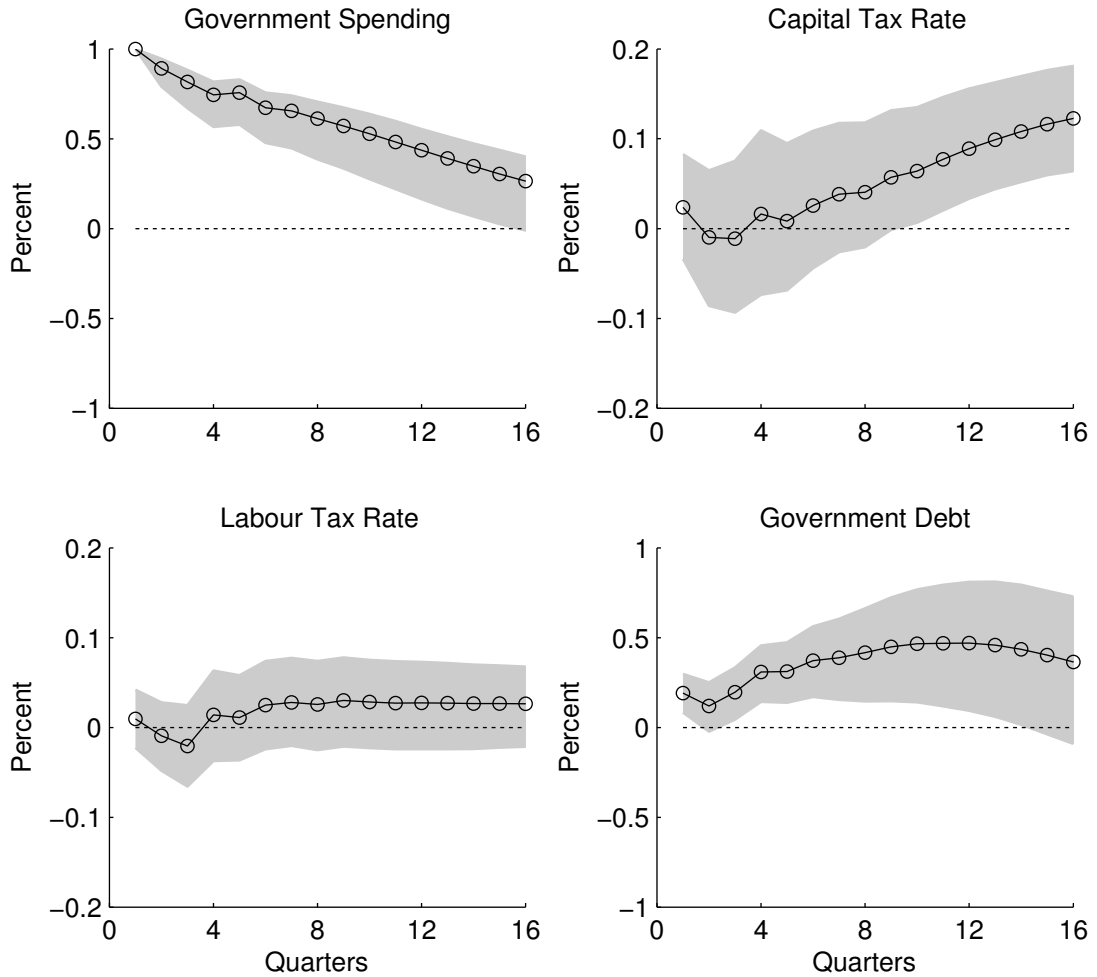


Figure 4.1: *Impulse responses for the fiscal policy variables*

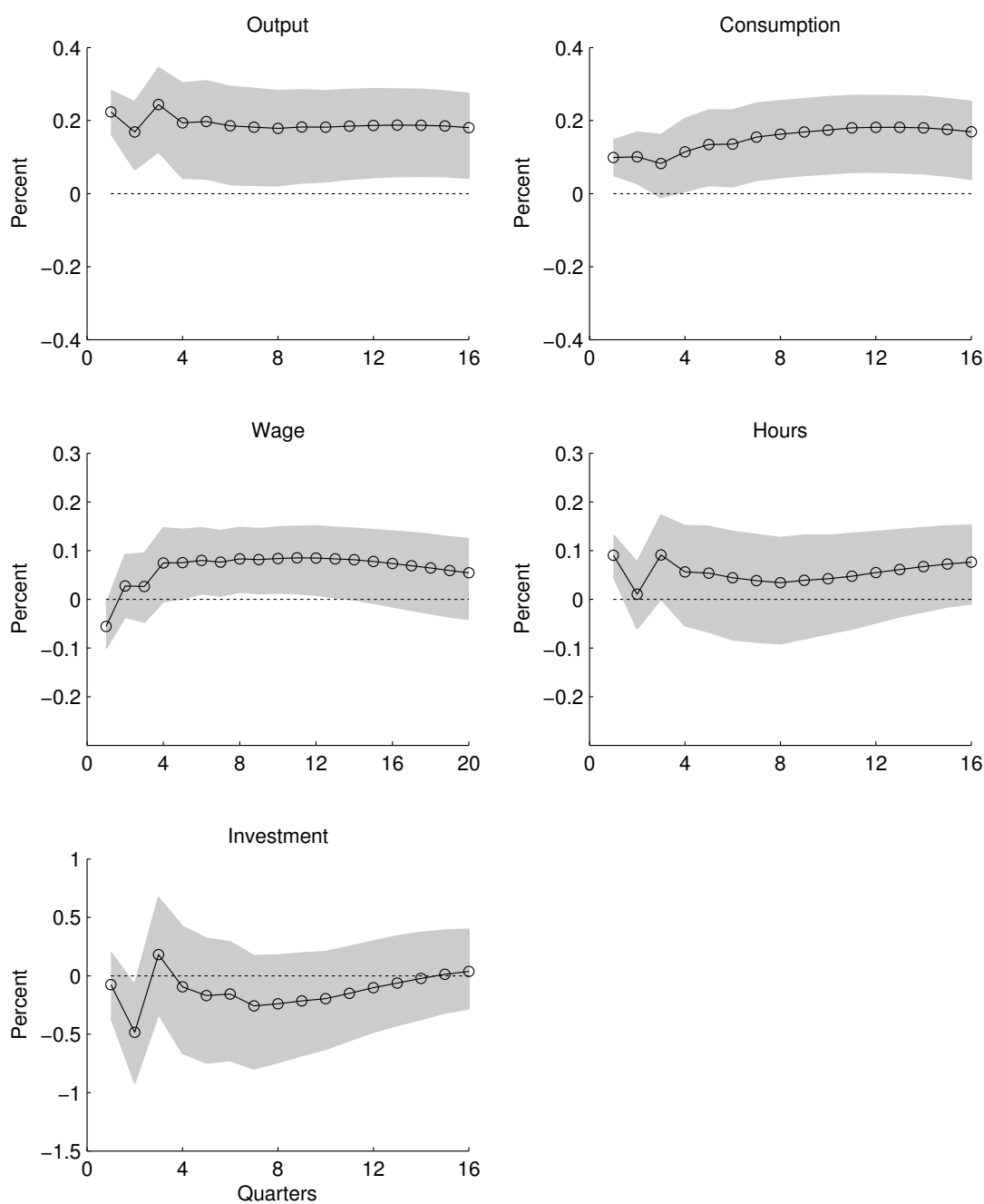


Figure 4.2: *Impulse responses for key macroeconomic variables*

Consumption exhibits the hump-shaped response often seen in SVAR results. Interestingly the labour market responses are weaker, although the point estimates are generally still positive. The investment response is generally negative, again a feature often found in other SVAR studies. For comparable findings see, among others, Perotti (2007) and Monacelli and Perotti (2009).

### 4.3 The model

To directly address the issues raised earlier, the model includes distortionary capital and labour tax rates, allowing for endogenous tax rate responses to government spending shocks. I also employ Jaimovich and Rebelo (2009) preferences which allow the strength of the wealth effect on labour supply to vary. Finally, the model includes a range of more standard features such as sticky prices, variable capital utilisation and habits.

#### 4.3.1 Households

Households derive utility from consumption ( $C$ ) and leisure ( $1 - N$ ). The household maximises lifetime utility

$$\max_{C_t, N_t, I_t, z_t, K_{t+1}, B_{t+1}} \mathbb{E}_t \sum_{t=s}^{\infty} \beta^{t-s} u(C_{t+s}, 1 - N_{t+s}), \quad (4.4)$$

subject to a budget constraint (in real terms)

$$C_t + I_t + \frac{B_{t+1}}{R_t} = B_t + w_t N_t (1 - \tau_t^N) + r_t^K(z_t)(1 - \tau_t^K)K_t - T_t + \Pi_t. \quad (4.5)$$

The capital stock evolves according to

$$K_{t+1} = (1 - \delta(z_t))K_t + I_t \left( 1 - \phi \left( \frac{I_t}{I_{t-1}} - 1 \right) \right), \quad (4.6)$$

which incorporates adjustment costs employed by Christiano et al. (2005), among others. The utility function,  $u : \mathbf{R}^2 \rightarrow \mathbf{R}$ , is assumed to be concave and twice continuously differentiable. The function  $\phi$  satisfies  $\phi = \phi' = 0$  and  $\phi'' \geq 0$ .

$K_{t+1}$  denotes capital held by households at the end of period  $t$  and  $B_{t+1}$  are real holdings of government bonds, also at the end of period  $t$ .  $C_t$  is consumption,  $I_t$  is investment,  $R_t$  is the aggregate real interest rate (gross),  $w_t$  is the aggregate real wage and  $r_t^K$  is the real return on capital.  $\tau_t^K$  and  $\tau_t^N$  are the tax rates on capital and labour income respectively.  $T_t$  are lump sum taxes.  $\delta$  is the rate of depreciation.  $\Pi_t$  are profits distributed lump sum to households.

The parametric specification for the utility function  $u(\cdot)$  follows Jaimovich and Rebelo (2009), Schmitt-Grohe and Uribe (2010) and Monacelli and Perotti (2009).

$$U(C_t, N_t) = \frac{(C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{1-\sigma}}{1-\sigma} \quad (4.7)$$

where

$$X_t = (C_t - h\tilde{C}_{t-1})^\gamma X_{t-1}^{1-\gamma}. \quad (4.8)$$

For  $\gamma = 1$  and  $h = 0$  these preferences become those considered by King et al. (1988). For  $\gamma = 0$  and  $h = 0$  they become the preferences considered by Greenwood et al. (1988)

(henceforth GHH). The latter preferences exhibit no wealth effect on labour supply. In other words, labour supply is solely affected by the real wage (net of taxes) and not by the level of consumption.<sup>10</sup>

I have modified the Jaimovich–Rebelo preferences to include habits.  $\tilde{C}_{t-1}$  is aggregate consumption in the previous period and the consumer takes this as given. Below I show that internal habits, where consumers explicitly consider  $C_{t-1}$  in their optimisation decisions, would reintroduce the wealth effect on labour supply when  $\gamma = 0$ .

The model also features variable capital utilisation. High utilisation by firms implies greater depreciation of a given stock of capital. For this reason both the return on capital and the depreciation are functions of utilisation, captured by the variable  $z_t$ .

### First order conditions

The first order conditions for the household's problem, with respect to  $C_t$ ,  $X_t$ ,  $B_{t+1}$ ,  $N_t$ ,  $I_t$ ,  $K_{t+1}$  and  $z_t$  are:

$$\lambda_t = (C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{-\sigma} + \mu_t \beta \gamma (C_t - h\tilde{C}_{t-1})^{\gamma-1} X_t^{1-\gamma} \quad (4.9)$$

$$(C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{-\sigma} \psi N_t^\xi + \mu_t = \beta \mathbb{E}_t(\mu_{t+1}(1-\gamma)(C_t - h\tilde{C}_{t-1})^\gamma X_t^{-\gamma}) \quad (4.10)$$

$$\mathbb{E}_t\left(\frac{\lambda_{t+1}}{\lambda_t}\right) = \frac{1}{R_t \beta} \quad (4.11)$$

$$\psi N_t^{\xi-1} X_t (C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{-\sigma} = \lambda_t w_t (1 - \tau_t^n) \quad (4.12)$$

$$\begin{aligned} 1 - q_t \left(1 - \phi\left(\frac{I_t}{I_{t-1}} - 1\right) - \phi'\left(\frac{I_t}{I_{t-1}} - 1\right)\left(\frac{I_t}{I_{t-1}}\right)\right) \\ = \mathbb{E}_t\left(q_{t+1} \frac{\lambda_{t+1}}{\lambda_t} \beta \left[\frac{I_{t+1}^2}{I_t^2} \phi'\left(\frac{I_{t+1}}{I_t} - 1\right)\right]\right) \end{aligned} \quad (4.13)$$

$$q_t = \beta \mathbb{E}_t\left[\frac{\lambda_{t+1}}{\lambda_t} (r_{t+1}^K (1 - \tau_{t+1}^K) + q_{t+1} (1 - \delta(z_t)))\right] \quad (4.14)$$

$$(1 - \tau_t^K) r_t'^K(z_t) = q_t \delta'(z_t) \quad (4.15)$$

where  $r'^K$  is the derivative of the return on capital with respect to utilisation.  $\mu_t$  is the Lagrange multiplier on the evolution of  $X_t$  (equation (4.8)) and  $q_t$  is the multiplier on the capital accumulation equation and reflects Tobin's marginal q.

### The variable wealth effect

Consider the extreme case where  $\gamma = 0$ . The preferences are then of the GHH-form and the marginal rate of substitution between consumption and leisure is independent of

<sup>10</sup>One reason against simply using GHH preferences is that they fail to satisfy the conditions for balanced growth, see King and Rebelo (1999) and Jaimovich and Rebelo (2009).

consumption. To see this, combine the first order condition with respect to consumption with the first order condition with respect to labour supply:

$$\psi N_t^{\xi-1} \xi X_t (C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{-\sigma} = (C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{-\sigma} w_t (1 - \tau_t^n) \quad (4.16)$$

noting

$$\lambda_t = (C_t - h\tilde{C}_{t-1} - \psi N_t^\xi X_t)^{-\sigma}. \quad (4.17)$$

This implies that

$$\psi \xi N_t^{\xi-1} = w_t (1 - \tau_t^n). \quad (4.18)$$

At an unchanged real wage and tax rate, hours do not change. In a simple graphical representation without capital, this implies that the labour supply curve does not shift outwards as consumption falls (the key neoclassical channel, raising labour supply and lowering the real wage following an increase in lump sum taxes). Under Jaimovich–Rebelo preferences, increasing  $\gamma$  from zero raises the strength of the wealth effect on labour supply.

### Habits and the wealth effect

An important feature of the preferences is the lack of wealth effect on labour supply as  $\gamma$  tends towards zero. This feature is preserved under the habits specification introduced above. To see this consider again equation (4.16). This was obtained because the marginal utility of consumption is equal to  $\lambda_t$ , cancelling on both sides of equation (4.16). Note that this would not be true with internal habits. For  $\gamma = 0$ ,  $\lambda_t$  would be:

$$\lambda_t = (C_t - h\tilde{C}_{t-1} - \psi N_t^\xi)^{-\sigma} - \mathbb{E}_t \lambda_{t+1} h \beta (C_{t+1} - h\tilde{C}_t - \psi N_{t+1}^\xi)^{-\sigma}. \quad (4.19)$$

The first order condition for labour supply is unchanged.  $\lambda_t$  no longer cancels in equation (4.16) and labour supply once again depends on consumption.

### 4.3.2 Firms

There are a continuum of monopolistically competitive firms producing final output indexed on the unit interval. The consumer's problem can still be formulated as above but note that each individual actually purchases a bundle of differentiated goods  $\int_0^1 P_t(i) C_t(i)$  where  $i$  refers to a particular firm. For each variety of goods the consumption demand function is:

$$C_t(i) = \left( \frac{P_t(i)}{P_t} \right)^{-\epsilon} C_t, \quad (4.20)$$



where

$$P_t = \left( \int_0^1 P_t(i)^{1-\epsilon} di \right)^{\frac{1}{1-\epsilon}} \quad (4.21)$$

and  $\epsilon$  is the elasticity of substitution between varieties of goods.

The minimum expenditure required to purchase a bundle of goods resulting in  $C_t$  units of the composite good is given by  $P_t C_t$  and so the consumer's budget constraint can be written as before.

The demand for the  $i^{\text{th}}$  product (the output of firm  $i$ ) is given by

$$Y_t(i) = \left( \frac{p_t(i)}{P_t} \right)^{-\epsilon} Y_t^d, \quad (4.22)$$

where  $Y_t^d$  is aggregate demand. The resource constraint is

$$Y_t = C_t + I_t + G_t. \quad (4.23)$$

Cost minimization with respect to  $N_t(i)$ ,  $K_t(i)$  and  $z_t(i)$  subject to firm  $i$ 's production function  $Y_t(i) = [z_t(i)K_t(i)]^\alpha N_t(i)^{(1-\alpha)}$  implies

$$w_t = mc_t(1 - \alpha) \frac{Y_t(i)}{N_t(i)} \quad (4.24)$$

$$r_t^K = mc_t \alpha \frac{Y_t(i)}{K_t(i)}, \quad (4.25)$$

and

$$mc_t \alpha \frac{Y_t(i)}{z_t(i)} = \frac{q_t \delta'(z_t(i)) k_t(i)}{(1 - \tau_t^K)} \quad (4.26)$$

where  $mc_t$  is real marginal cost and equation (4.26) makes use of equation (4.15).

When firms are able to reset their price they choose  $P_t^*(i)$  to maximise expected profits

$$\max \mathbb{E}_t \sum_{j=0}^{\infty} Q_{t,t+j} [(1 - \tau^P) P_{t+j}^*(i) Y_{t+j}(i) - MC_{t+j} Y_{t+j}(i) + T_{t+j}^P] \quad (4.27)$$

subject to

$$Y_{t+j}(i) = \left( \frac{P_{t+j}(i)}{P_{t+j}} \right)^{-\epsilon} Y_{t+j}^d,$$

where  $MC_t$  is nominal marginal cost.  $\tau^P$  and  $T^P$  are a tax and lump sum subsidy, which removes the steady state markup distortion.

The first order condition for firm  $i$ 's price setting problem is the familiar New Keynesian optimal reset price:

$$P_t^*(i) = \frac{\mathbb{E}_t \sum_{j=0}^{\infty} \eta^j Q_{t,t+j} MC_{t+1} Y_{t+j}(i)}{\mathbb{E}_t \sum_{j=0}^{\infty} \eta^j Q_{t,t+j} Y_{t+j}(i)}. \quad (4.28)$$

Finally, the price index is an aggregate of firms who reset their price today and those who must retain last period's prices

$$P_t = \left[ \eta P_{t-1}^{1-\epsilon} + (1-\eta) P_t^{*(1-\epsilon)} \right]^{\frac{1}{1-\epsilon}}. \quad (4.29)$$

### 4.3.3 Government

The government can finance spending,  $G$ , through a mixture of bond supply  $B$ , labour and capital income taxes  $\tau^N, \tau^K$  or lump sum taxes  $T$ , such that the government budget constraint is satisfied

$$\frac{B_{t+1}}{R_t} = B_t + G_t - \tau_t^N N_t w_t - \tau_t^K K_t r_t^K(z_t) - T_t. \quad (4.30)$$

Tax rules are necessary to specify how the government splits its financing between the various tax instruments. I assume tax rates respond to a proportion of the spending increase. Writing  $\hat{\tau}$  as the percentage point deviation from steady state, and all other lower case letters as percentage deviation from steady state, the tax rules for the linearised model are of the form:

$$\hat{\tau}_t^N = \theta^{n1} \hat{\tau}_{t-1}^N + \theta^{n2} \hat{\tau}_{t-2}^N + \theta^{ng} g_t \quad (4.31)$$

$$\hat{\tau}_t^K = \theta^{k1} \hat{\tau}_{t-1}^K + \theta^{k2} \hat{\tau}_{t-2}^K + \theta^{kg} g_t \quad (4.32)$$

I follow Reis (2008) in making government spending ARMA(1,1)

$$g_t = \phi_1 g_{t-1} + \phi_2 a_t, \quad (4.33)$$

where  $a_t$  is an AR(1) process with a white noise shock and the persistence is governed by parameter  $\rho$ .

### 4.3.4 Monetary policy

Monetary policy follows a simple rule relating the nominal interest rate ( $nomi_t$ ) to inflation. In percentage deviations from steady state (linearised form), and using the Fisher relation, the real interest rate is related to inflation by

$$nomi_t = r_t - \mathbb{E}_t \pi_{t+1} = \phi_\pi \pi_t. \quad (4.34)$$

where  $\phi_\pi > 1$ .

### 4.3.5 Equilibrium and model solution

The equilibrium is defined by an allocation  $\{K_t, C_t, N_t, Y_t, B_t, I_t, z_t, X_t\}_{t=0}^{\infty}$ , a price system  $\{w_t, R_t, q_t, r_t^k, P_t(i), P_t, mc_t, \lambda_t, \mu_t\}_{t=0}^{\infty}$ , a fiscal policy  $\{\tau_t^N, \tau_t^K, G_t\}_{t=0}^{\infty}$  and an exogenous process  $\{a_t\}_{t=0}^{\infty}$  such that the allocation  $\{K_t, C_t, N_t, Y_t, B_t, I_t, z_t, X_t\}_{t=0}^{\infty}$  solves:

1. the households' problem, maximizing (4.4) subject to (4.5), (4.6), (4.8) and a non-ponzi condition, given prices, thus satisfying (4.9), (4.10), (4.11), (4.12), (4.13), (4.14) and (4.15);
2. the firms' problem (4.27) subject to (4.22) and minimizing costs so that equations (4.24), (4.25), (4.26), (4.28) and (4.29) are satisfied.
3. All markets clear and equations (4.30), (4.31), (4.32), (4.33) and (4.34) and the resource constraint  $Y_t = C_t + I_t + G_t$  are satisfied.

The equilibrium system is therefore defined by equations (4.6), (4.8), (4.9), (4.10), (4.11), (4.12), (4.13), (4.14), (4.15), (4.28), (4.29), (4.30), (4.31), (4.32), (4.33), (4.34), the aggregate production function, the aggregates of equations (4.24), (4.25) and (4.26) and an exogenous process for  $a_{t+1} = \rho a_t + \varepsilon_{t+1}$ . The set of predetermined variables is  $\{B_t, K_t, a_t\}$ .

The model is linearised around a deterministic steady state where all firms set the same price. The collection of linearised conditions can be written in recursive form:

$$\mathbf{A}\mathbb{E}_t \begin{bmatrix} x_{t+1} \\ y_{t+1} \end{bmatrix} = \mathbf{B} \begin{bmatrix} x_t \\ y_t \end{bmatrix} \quad (4.35)$$

where  $x$  is the vector of state variables,  $x_{t+1} = \{k_{t+1}, b_{t+1}, a_{t+1}\}$ .  $y$  is the vector of control variables. The solution to this linear rational expectations model is then of the form:

$$y_t = \mathbf{Q}x_t \quad (4.36)$$

$$x_{t+1} = \mathbf{P}x_t. \quad (4.37)$$

To solve for matrices  $P$  and  $Q$  in the policy functions, I employ the Klein (2000) algorithm *solab*.

Details of the linearised system and the steady state are given in the Appendices C.2 and C.3 respectively. Of particular interest are the linearised equations governing price evolution, utilisation and investment (recall, lower case letters represent percentage deviations from steady state). The first is the New Keynesian Phillips Curve. Note that the degree of price stickiness,  $\eta$ , appears in this expression and will be estimated.

$$\pi_t = \frac{(1 - \beta\eta)(1 - \eta)}{\eta} mc_t + \beta\mathbb{E}_t \pi_{t+1}. \quad (4.38)$$

Table 4.1: Baseline calibration

Parameter	Value	Description
$\beta$	0.99	Discount factor
$\alpha$	0.3	Capital share
$\delta$	0.025	Steady state depreciation
$\tau^K$	0	Steady state capital tax rate (from sample)
$\tau^N$	0	Steady state labour tax rate (from sample)
$N$	0.2	Steady state labour
$\frac{G}{Y}$	0.2	Steady state share of government spending
$\frac{B}{Y}$	1.6	Steady state debt to GDP ratio (quarterly)
$\phi_\pi$	1.5	Coefficient on inflation in the monetary policy rule
$\xi$	1.8	Parameter governing the labour supply elasticity ( $\gamma = 0$ )
$\sigma$	1	Inverse of elasticity of intertemporal substitution ( $\gamma = 1$ )
$\rho$	0.8	Autoregressive parameter on $a_t$ shock
$\eta$	0.75	Probability of having a fixed price
$\kappa$	0.15	Parameter governing capital utilisation
$\omega$	1/3	Parameter governing the investment adjustment costs
$\gamma$	0.0001	Parameter governing the wealth effect
$h$	0.5	Parameter governing habit persistence

The degree of capital utilisation,  $z_t$ , is described by

$$(1 + \kappa)z_t = y_t - k_t - q_t + mc_t - \hat{\tau}_t^K \frac{1}{1 - \tau^K}, \quad (4.39)$$

where  $\kappa = \frac{\delta''}{\delta'}$  is the elasticity of depreciation to utilisation, and will also be estimated. Investment evolves according to

$$\frac{q_t}{\phi''} = (1 + \beta)i_t - i_{t-1} - \beta\mathbb{E}_t i_{t+1} \quad (4.40)$$

and  $\frac{1}{\phi''} = \omega$  will be estimated.

## 4.4 Key features of the model

In this section I consider some important mechanisms in the model. Before considering how the choice of tax policy instruments affects the results, I first consider how the model's more standard features interact with the strength of the wealth effect on labour supply under lump sum taxes. Table (4.1) presents the initial baseline calibration for this section. Parameters in the bottom half of the table will be estimated later.

### 4.4.1 The strength of the wealth effect on labour supply

Figures (4.3) to (4.7) illustrate the effect of turning on each mechanism one at a time while still assuming that lump sum taxes fund the spending shock.

In Figure (4.3), the model has flexible prices ( $\eta = 0$ ), no variable capital utilisation ( $\kappa = \infty$ ) and no habit formation ( $h = 0$ ).  $\gamma = 1$ , so there is a standard wealth effect on labour supply. This case can therefore be regarded as a simple baseline neoclassical model. Figure (4.3) shows the familiar neoclassical result. The higher lump sum taxes that accompany the spending shock lower lifetime wealth, lower consumption, lower savings and hence investment, but boost labour supply. The real wage therefore falls. Figure (4.4), however, illustrates the effect of turning off the wealth effect on labour supply, i.e. setting  $\gamma = 0$ . Labour supply now does not respond to the lower lifetime wealth and falls as the marginal product of labour declines. Consumption and investment are lower than before, reflecting the decrease in lifetime wealth and the lack of increased earnings from supplying more labour. All these forces cause output to fall over time. Importantly, the neoclassical model can no longer match the empirical output response. In fact the neoclassical model without a wealth effect on labour supply fails to qualitatively match any of the output, consumption, real wage or hours responses estimated in Section 4.2.

It is worth emphasising that if the shock were funded with debt rather than lump sum taxes, Ricardian equivalence implies that the result will be the same. To the extent that governments rarely, if ever, use lump sum taxes (Chapter 2 and the associated long appendix documents this for the United Kingdom and see Romer and Romer (2010) for the U.S.), increased borrowing will be needed to satisfy the government's budget constraint (assuming no distortionary taxes). It is therefore an important empirical question whether debt-finance — which raises expectations about future tax increases — generates a wealth effect on labour supply today.

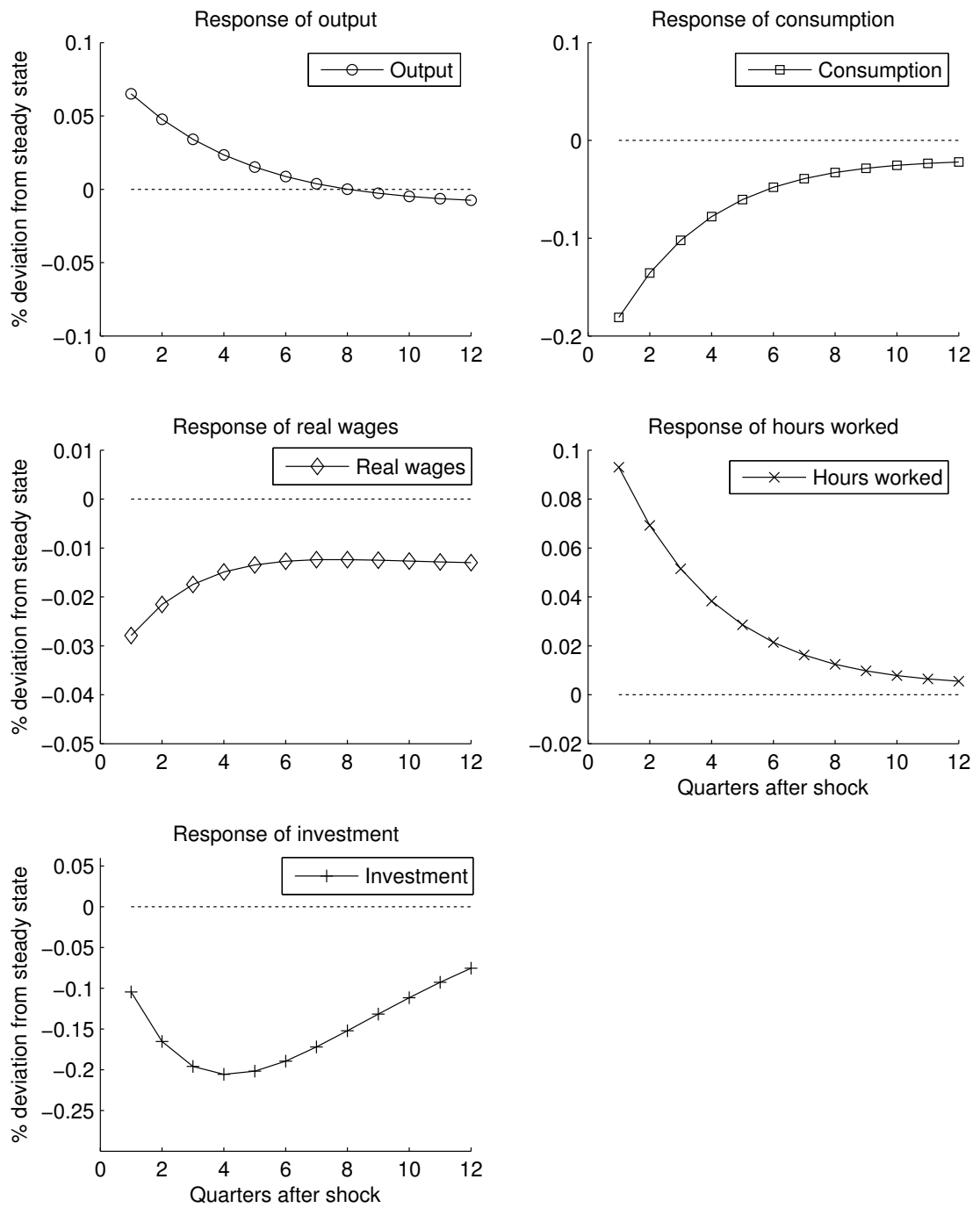


Figure 4.3: A simple Neoclassical model:  $\eta = 0$ ,  $\gamma = 1$ ,  $\kappa = \infty$ ,  $h = 0$

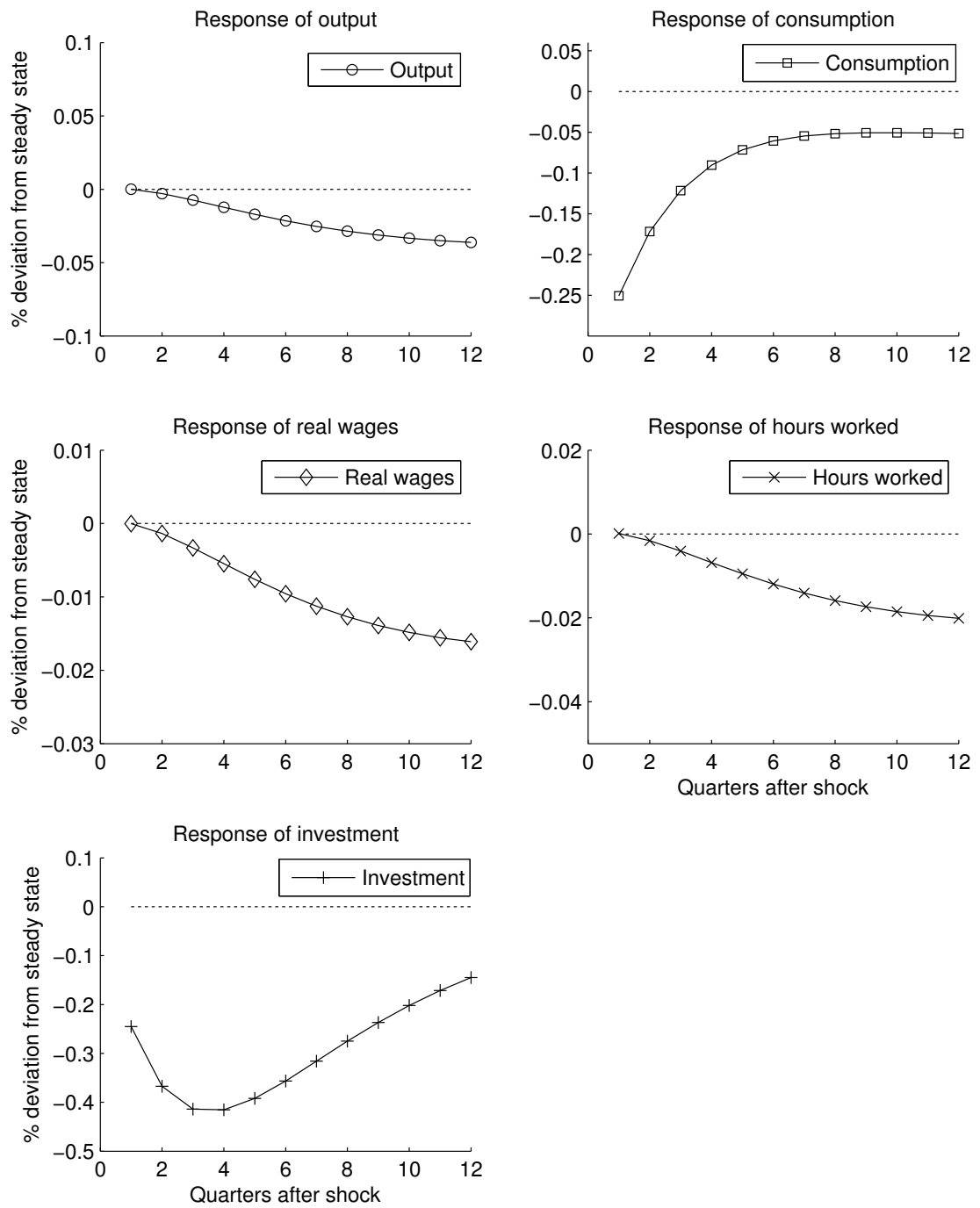


Figure 4.4: *A simple Neoclassical model (but no wealth effect):  $\eta = 0$ ,  $\gamma = 0$ ,  $\kappa = \infty$ ,  $h = 0$*

Figure (4.5) shows the result of adding sticky prices to the previous model ( $\gamma = 0$ ). This figure illustrates that government spending now has a positive effect on demand which boosts output, labour demand, the real wage, hours worked and consumption. The figure also illustrates the Monacelli and Perotti (2009) result that consumption can rise following the shock. Two features of the model produce this result. Firstly, there is no wealth effect on labour supply. This means that the real wage does not fall on impact because the labour supply curve does not shift with the increase in the marginal utility of wealth. Secondly, in response to the shock, the sticky price demand effect induces an outward shift of the labour demand curve. For sufficiently sticky prices the result is a rise in the real wage and hours — raising income enough that consumption also increases. This effect lowers the amount of dis-saving, lessening the negative effect on investment.

Adding variable capital utilisation to the model serves to amplify these effects slightly, as can be seen from figure (4.6). Finally, the inclusion of habits adds persistence to the consumption profile, with additional implications for overall demand. This can be seen from figure (4.7).

This subsection has shown that all the mechanisms in the model can interact to produce positive consumption, output, real wage and hours responses, as found empirically in Section 4.2, depending on the parameter values chosen. This contrasts with the standard neoclassical model. Limiting the strength of the wealth effect on labour supply played a key role; the empirical relevance of this mechanism is therefore of particular importance.



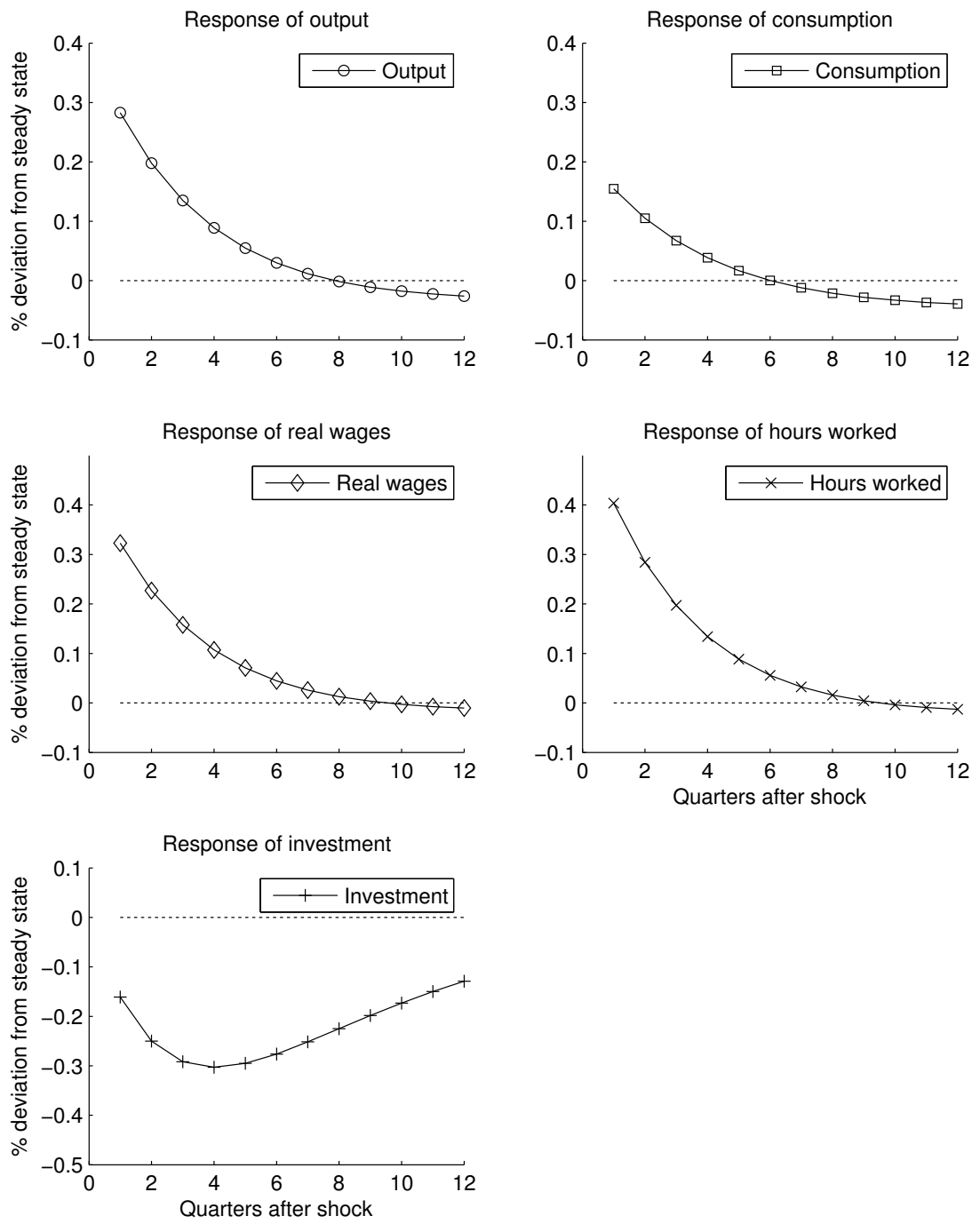


Figure 4.5: *Including sticky prices:  $\eta = 0.75$*

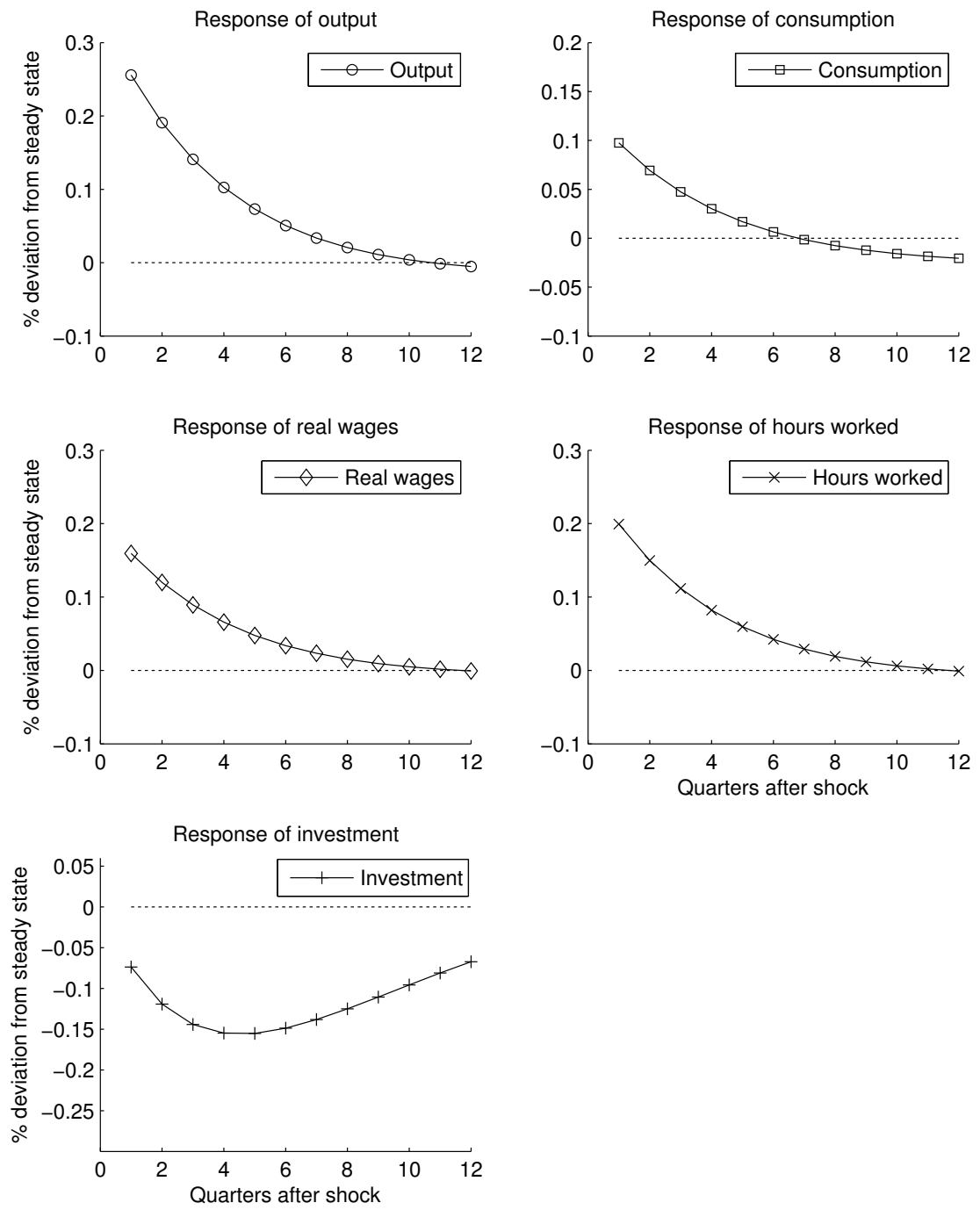


Figure 4.6: *Including variable capital utilization:  $\kappa = 0.15$*

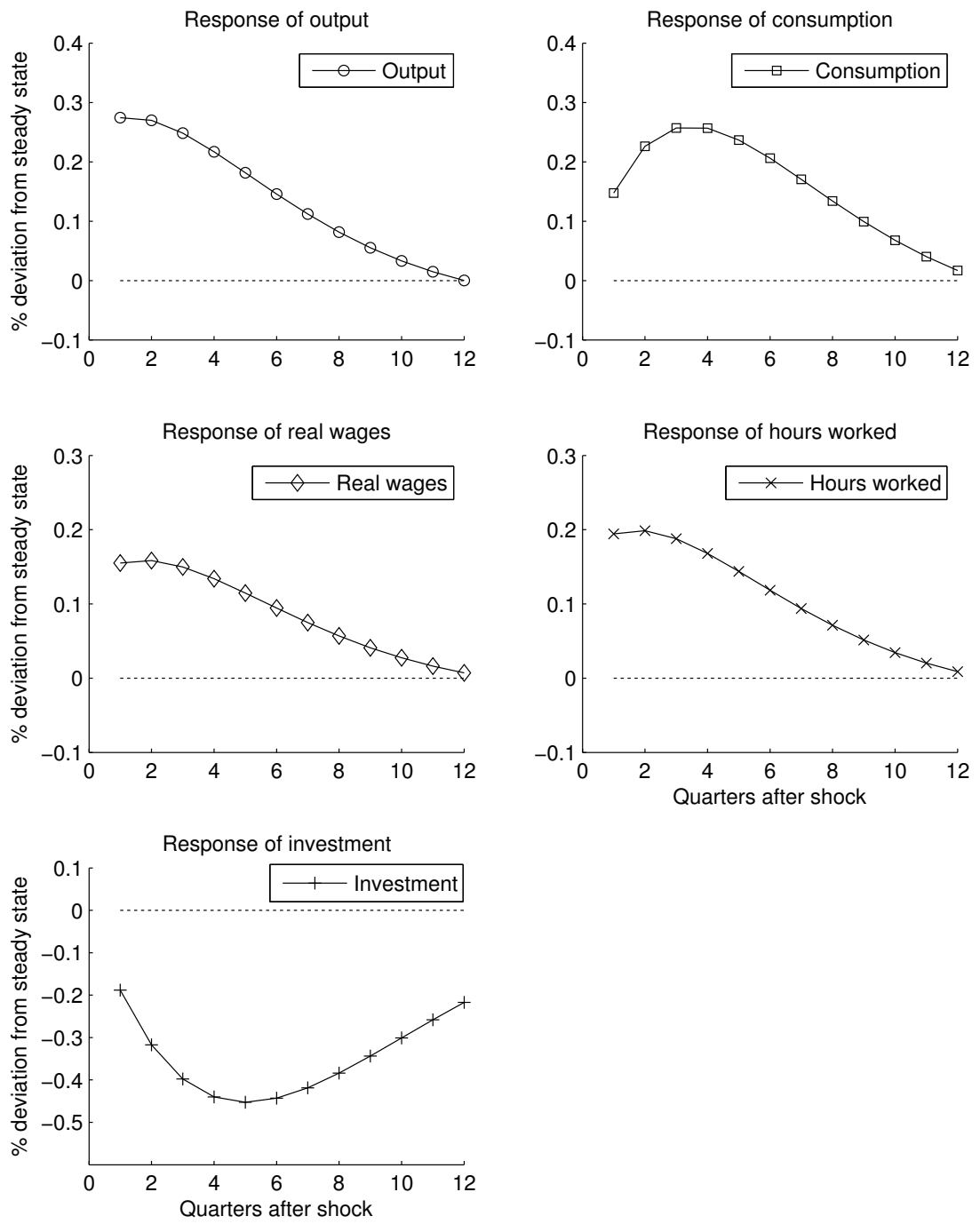


Figure 4.7: *Including habits:  $h = 0.5$*

### 4.4.2 The effect of different tax instruments

The previous subsection illustrated the importance of the wealth effect on labour supply under lump sum taxes. This subsection now evaluates the effect of adding distortionary taxes to the model and explores varying the tax instruments used to finance the shock.

In the above examples, by using lump sum taxes, there were no substitution effects. This is not true when distortionary taxes finance the spending shock. Figure (4.8) illustrates the effect of assuming that the two distortionary tax rates increase following the spending shock. I also include the results from the full model with only lump sum taxes in red (dashed) from figure (4.7). For this exercise I arbitrarily choose  $\theta^{gn} = \theta^{gk} = 0.6$ . The figure illustrates the strong negative effect on output and consumption of using distortionary taxes. In short, the results in the previous subsection depend not only on the strength of the wealth effect on labour supply, but also — quite dramatically — on the instruments used to finance the shock. I now consider the two types of taxes individually.

#### Labour income taxes

Consider the supply side effects of a rise in the labour income tax rate. There are two substitution effects. First, the intra-temporal decision is distorted and labour supply falls. In other words, it is more costly to supply labour today as the worker pays higher taxes per hour. Second, the inter-temporal decision is distorted if the tax rate is changing over time (as it may be when the tax rules are estimated). For a rising (falling) tax profile the worker may still prefer (dislike) to work today as it will be relatively less (more) costly than tomorrow. These substitution effects work to offset the wealth effect on labour supply. In the simulations below, labour supply falls considerably following a rise in government spending.

To illustrate the effect, I calibrate the coefficient on  $g_t$  in the labour tax rule to be 0.95, leaving the equivalent parameter zero in the capital tax rule. Figure (4.9) shows the strong negative effect of this change in the tax policy rule. Again, the results from the model with only lump sum taxes are shown in red (dashed). The positive effects on output, consumption and hours in the previous subsection are now reversed when labour income taxes finance the shock.

#### Capital income taxes

Figure (4.10) shows the effect of calibrating the coefficient on  $g_t$  in the capital tax rate rule to 0.95, leaving the equivalent coefficient zero in the labour tax rule. Again, results from the model with only lump sum taxes is shown in red (dashed).

Interestingly, the use of capital taxes raises consumption and output on impact but lowers the persistence. This effect is a combination of substitution effects and sticky prices (and habits). Taxing capital makes consumption relatively more attractive than

saving. As a result, *ceteris paribus*, the balance between consumption and saving tilts towards consumption. This increase in demand, given sticky prices, boosts output in the short run. With flexible prices the increase in capital taxes tends to lower consumption and output as the capital stock declines.

Another key determinant of the size of this response is the presence of capital adjustment costs. The distortions introduced by taxing capital are not fully felt immediately but become apparent over time as the capital stock adjusts. This explains the decline in output over time.

### Summary

The previous subsections have analysed the interactions between debt finance/lump sum taxes, the use of distortionary taxes and the wealth effect channel. Debt finance (or lump sum taxes) minimises the contemporaneous distortions associated with labour and capital taxes. Labour income taxes produce a strong negative effect on all the key variables. If the objective is a stimulus to output (rather than a concern with welfare), this suggests labour income taxes should be avoided. The use of capital income taxes may raise the impact stimulus by boosting consumption but will lower the persistence of the effect on output as the capital stock declines faster.

I also showed that with debt-finance (or lump sum taxes) the model's predictions rest on the strength of the wealth effect on labour supply and the degree of price stickiness (and, to a lesser extent, habits and variable capital utilisation, which reinforce the results). A low degree of wealth effect on labour supply allows the sticky price effects to jointly raise output, consumption, the real wage and hours. However, for stronger degrees of wealth effect, consumption will fall. Conversely, if the wealth effect is small, but prices are flexible, output and consumption both fall.

In short, this section has shown that the choice of tax policy instruments matters, as does the strength of the wealth effect on labour supply. In fact, the model's results are highly dependent on these parameters. However, there is no a priori reason to calibrate either the tax policy rules in a particular way or to assume a particular strength of wealth effect on labour supply. To properly evaluate the ability of the model to explain the effects of a government spending shock, arbitrarily calibrating these key parameters will not be enlightening. Estimation is therefore the most appropriate strategy to follow.

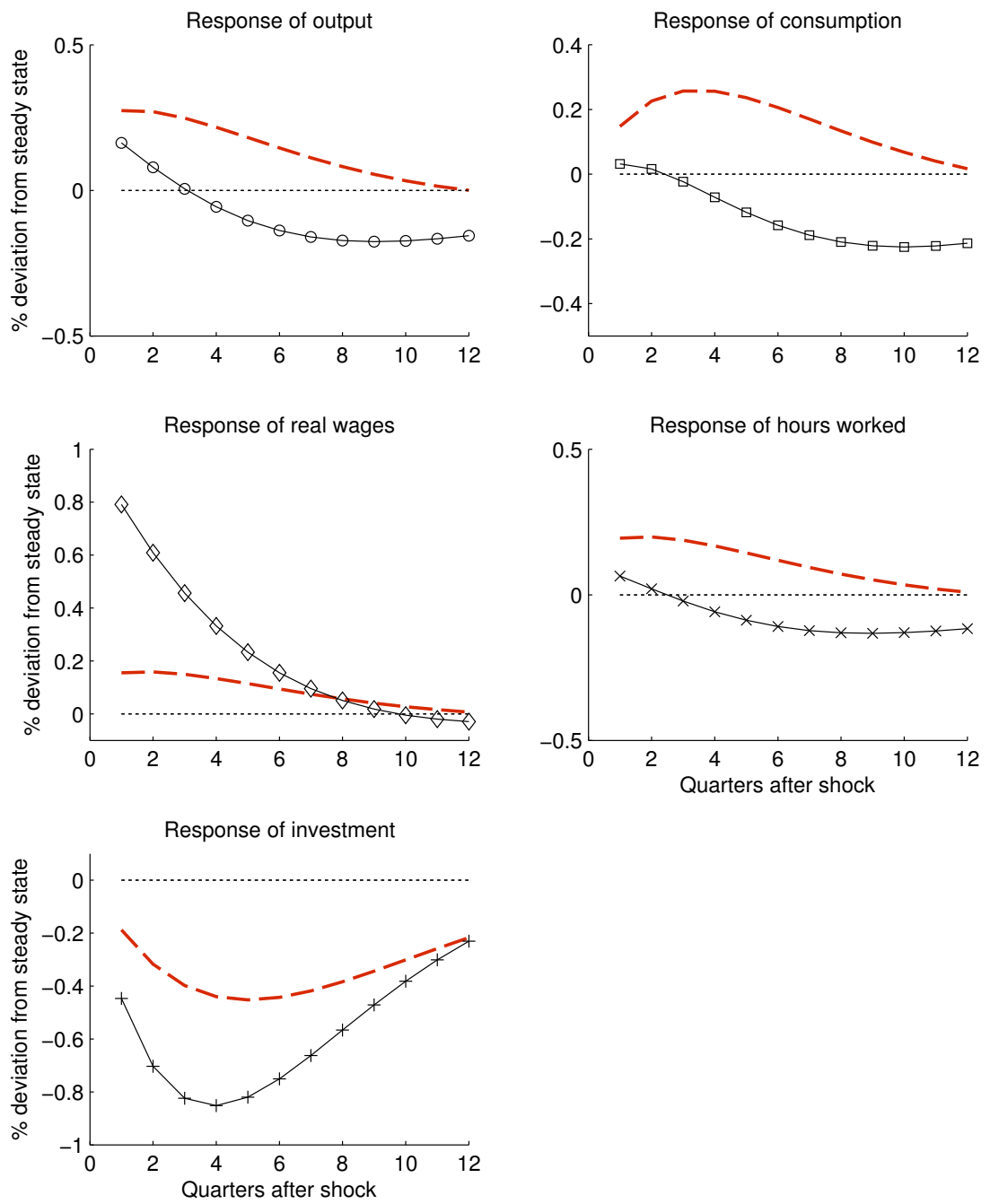


Figure 4.8: *Distortionary labour and capital tax rates respond (full model with lump sum taxes in red (dashed))*

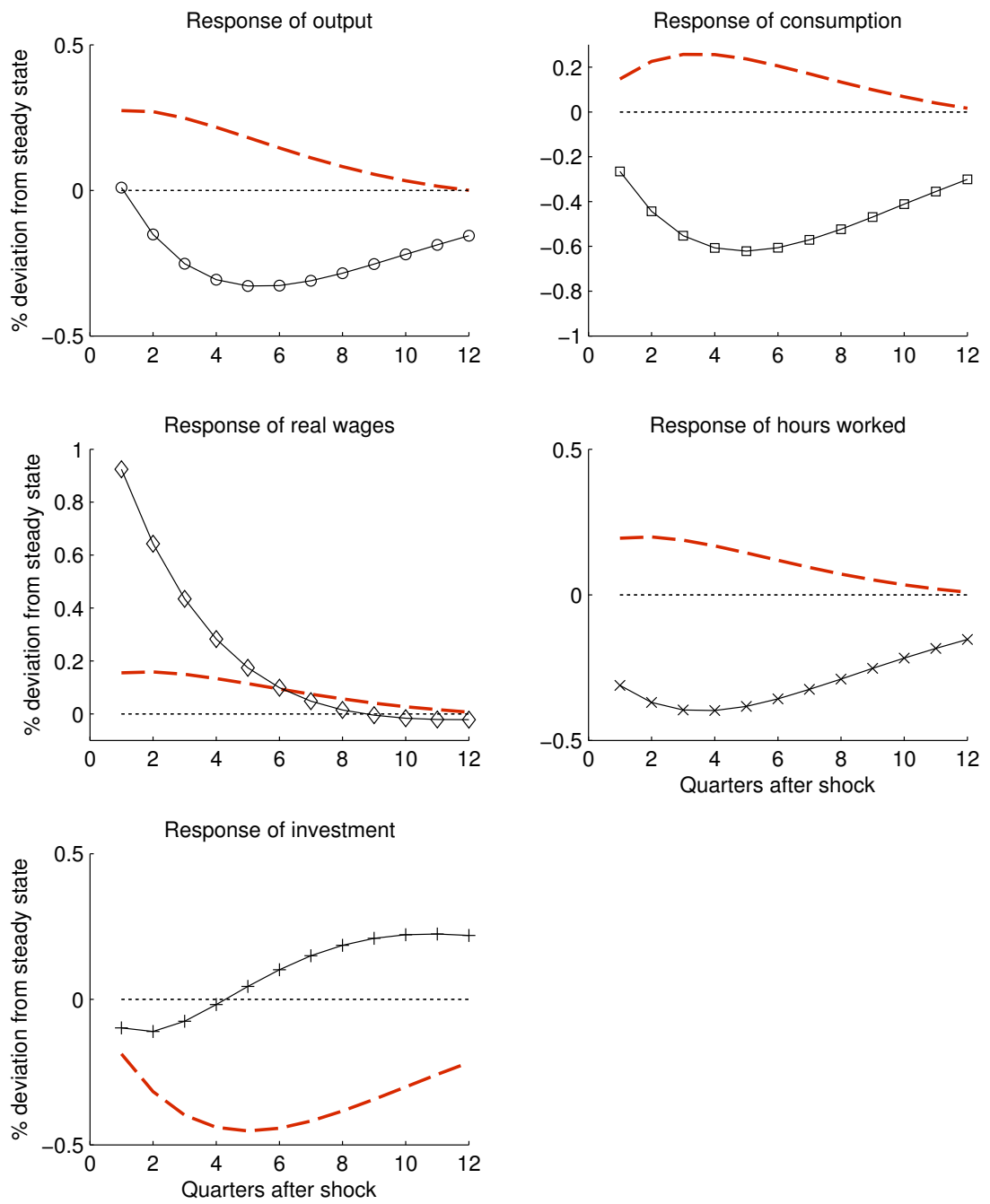


Figure 4.9: *Only the labour income tax rate responds (full model with lump sum taxes in red (dashed))*

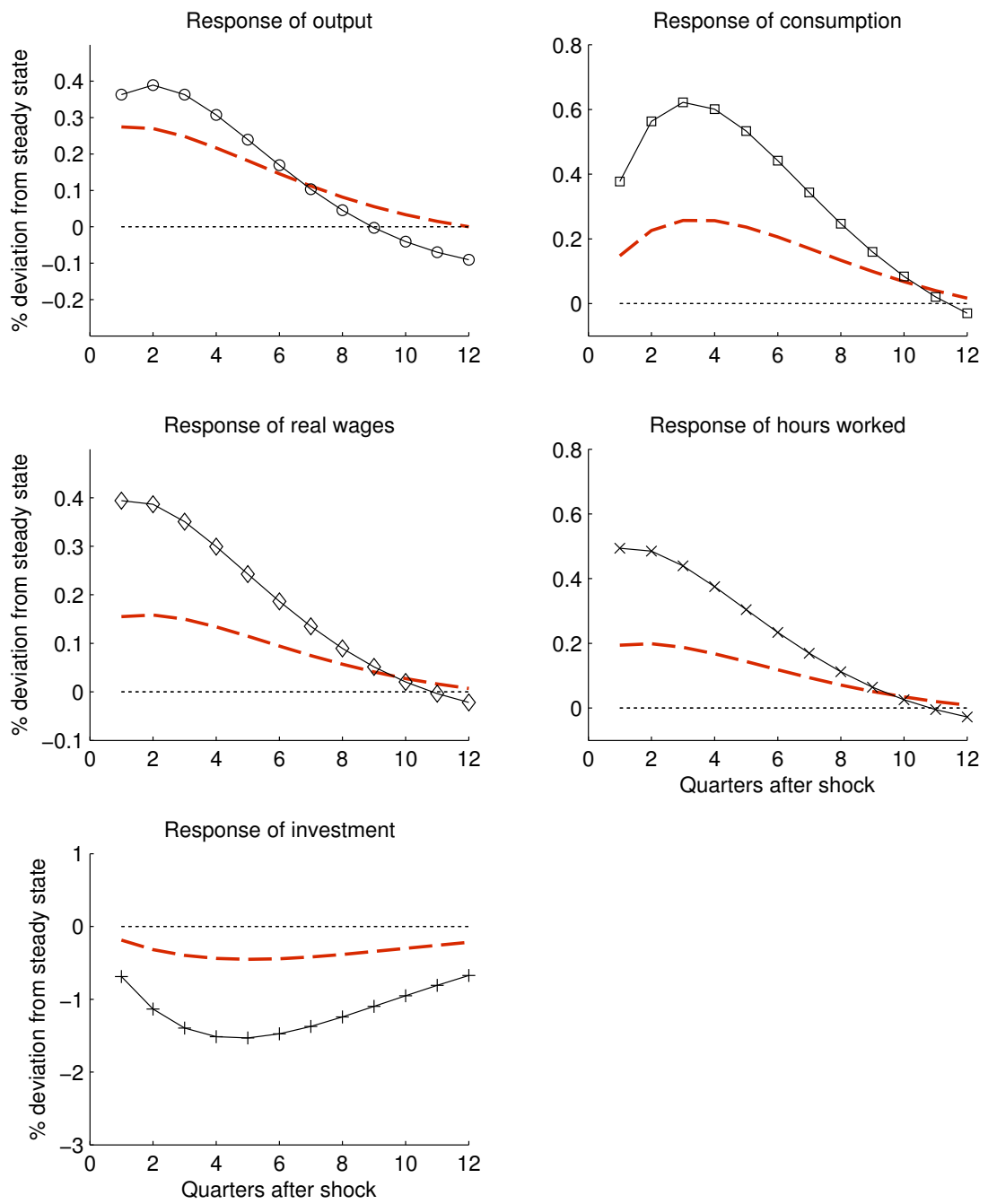


Figure 4.10: *Only the capital tax rate responds (full model with lump sum taxes in red (dashed))*



## 4.5 Estimation

I estimate the model using a minimum distance approach as discussed by, for example, Christiano et al. (2005). Key parameters of the model are chosen to minimize the distance between the model's impulse responses and the empirical impulse responses.

The model's parameters are partitioned into two blocks. The first block includes a set of parameters which are calibrated. The second block includes parameters to be estimated. I estimate all the parameters of the fiscal policy rules. I also estimate the parameters of the key mechanisms in the model:  $\gamma$  governing the size of the wealth effect,  $\kappa$  determining the degree of variable capital utilisation,  $\omega$  determining the strength of the investment adjustment costs,  $\eta$  the degree of price stickiness and the habit persistence parameter  $h$ . The parameter vector to be estimated is therefore<sup>11</sup>

$$\zeta = [\phi_1 \ \phi_2 \ \theta^{gn} \ \theta^{n1} \ \theta^{n2} \ \theta^{gk} \ \theta^{k1} \ \theta^{k2} \ \eta \ \kappa \ \gamma \ h \ \omega].$$

Let the empirical impulse responses be stacked in a vector  $\bar{\mathbf{x}}$ . The model produces impulse responses conditional on a set of parameters. Let the parameter vector be  $\zeta$  as above. Let the output of the model given the set of parameters be  $\mathbf{x}(\zeta)$ . The objective is to choose parameters to minimise the loss function

$$\zeta = \arg \min_{\zeta} [\bar{\mathbf{x}} - \mathbf{x}(\zeta)] V^{-1} [\bar{\mathbf{x}} - \mathbf{x}(\zeta)]', \quad (4.41)$$

where  $V$  is a weighting matrix which includes the variances of the empirical impulses along the diagonal and zeros elsewhere. The purpose of this matrix is to down-weight observations with larger standard errors. As such, I ensure that the estimated model's responses lie as far inside the empirical confidence intervals as possible.

I match the model's impulse responses to the first 16 periods of the nine empirical impulse responses. Dropping any observation with zero variance from the loss function (the first element of the government spending series) leaves the  $\mathbf{x}$  vectors  $((9 \times 16) - 1) \times 1$  and the  $V$  matrix  $((9 \times 16) - 1) \times ((9 \times 16) - 1)$  in dimension.

The standard errors are calculated following Hall et al. (2010). Specifically the variance-covariance matrix of the estimated parameters is found as the solution to:

$$V_{\zeta} = \left[ \frac{\partial \mathbf{x}(\zeta)'}{\partial \zeta} W^{-1} \frac{\partial \mathbf{x}(\zeta)}{\partial \zeta} \right]^{-1} \quad (4.42)$$

where  $W$  is the variance-covariance matrix of the impulse response functions and  $\frac{\partial \mathbf{x}(\zeta)}{\partial \zeta}$  is the  $((9 \times 16) - 1) \times 9$  Jacobian of the theoretical impulse responses with respect to the parameter vector.

<sup>11</sup>For a list of parameter definitions see table (4.2).

### 4.5.1 Results

The estimated parameter values are given in table (4.2). The tax rate responses to the government spending shock are estimated to be small, although the response builds over time — as can be seen from the coefficients on the lagged tax rates. Figure (4.11) displays the matched policy responses implied by the estimated model, together with the confidence intervals from the SVAR. The estimated fiscal policy parameters in table (4.2) generate responses within the empirical confidence intervals and are thus a decent replication of the empirical policy response. For reference, I also plot the simulated debt path from the model given the spending and tax rate changes. Interestingly, based on the model's estimated parameters, these tax rate changes are consistent with the empirically estimated response of debt from Section 4.2. This suggests that spending shocks are typically funded more through debt than through contemporary tax changes, again mirroring results found in Chapter 3.

Table (4.2) also reports the other estimated parameter values and their standard errors. It is worth comparing these with values discussed elsewhere. King and Rebelo (1999) take  $\kappa \in [0.1, \infty]$  and the value in table 4.2 is close to the value of 0.15 used by Jaimovich and Rebelo (2009).  $\eta$  is of the order of magnitude usually used in New Keynesian models and is similar to the value of 0.82 estimated by Altig et al. (2005). It is, however, slightly too high, which may suggest other amplification mechanisms could be included in the model to lower the required degree of price stickiness. The estimate for  $\gamma$  implies a very small wealth effect on labour supply and not statistically significant from zero. This reinforces the results of Schmitt-Grohe and Uribe (2010).  $h$  is similar to the value of 0.7 used by Monacelli and Perotti (2009) and is a fairly standard figure found in the wider literature. These estimates are also similar to those found in Chapter 3.

Figure (4.12) displays the responses of the other key macroeconomic variables. Again, the estimated model produces responses largely within the confidence intervals. It is noteworthy that the estimated model jointly replicates the output and consumption responses, which is often a problem for New Keynesian models. Although the hours response is slightly too strong, most of the real wage response is well matched. The investment response is too shallow to start with and too strong over time; however this reflects the investment adjustment cost mechanism. The parameter less well estimated is  $\omega$ , which governs the investment adjustment costs. The estimate is well below the value of 1/8 estimated by Mertens and Ravn (2011b), which itself is lower than in other studies. However, raising the value of  $\omega$  would produce too great a decline in investment. All this suggests interesting scope for considering more complicated investment dynamics in the transmission of fiscal shocks.

Table 4.2: Estimated parameter values

Parameter	Estimation	Description
$\rho$	0.94 (0.02)	Persistence of shock process
$\phi_1$	0.00 (0.08)	Persistence of spending process
$\phi_2$	-0.14 (0.06)	Effect of shock on spending
$\theta^{gn}$	0.0043 (0.02)	Contemporaneous response of the labour tax rate
$\theta^{gk}$	0.0046 (0.002)	Contemporaneous response of the capital tax rate
$\theta^{n1}$	0.19 (0.1)	Labour tax rate AR(1) coefficient
$\theta^{k1}$	1.87 (0.07)	Capital tax rate AR(1) coefficient
$\theta^{n2}$	0.038 (0.1)	Labour tax rate AR(2) coefficient
$\theta^{k2}$	-0.91 (0.07)	Capital tax rate AR(2) coefficient
$\gamma$	0.0023 (0.003)	Strength of the wealth effect
$h$	0.58 (0.06)	Strength of habits
$\eta$	0.86 (0.04)	Probability of a fixed price
$\kappa$	0.16 (0.33)	Governs capital utilisation
$\omega$	0.032 (0.03)	Governs investment adjustment costs
Loss	51.52	

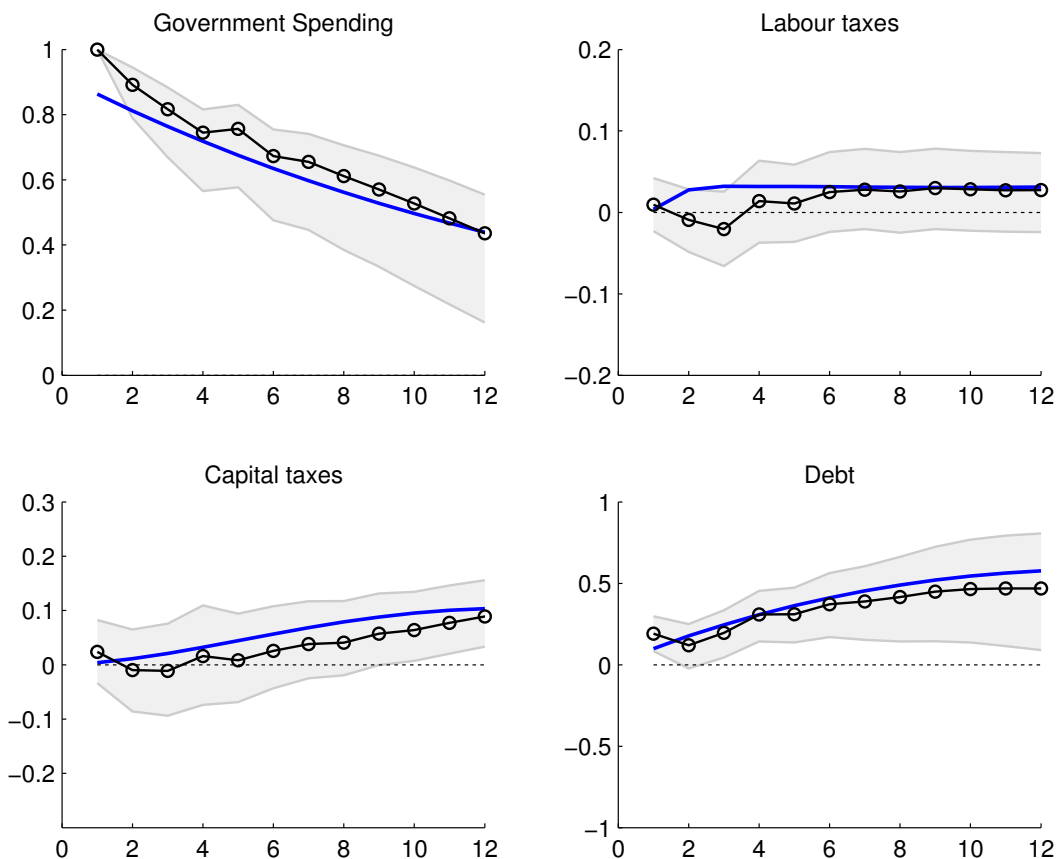


Figure 4.11: Responses of the fiscal variables given the parameter estimates

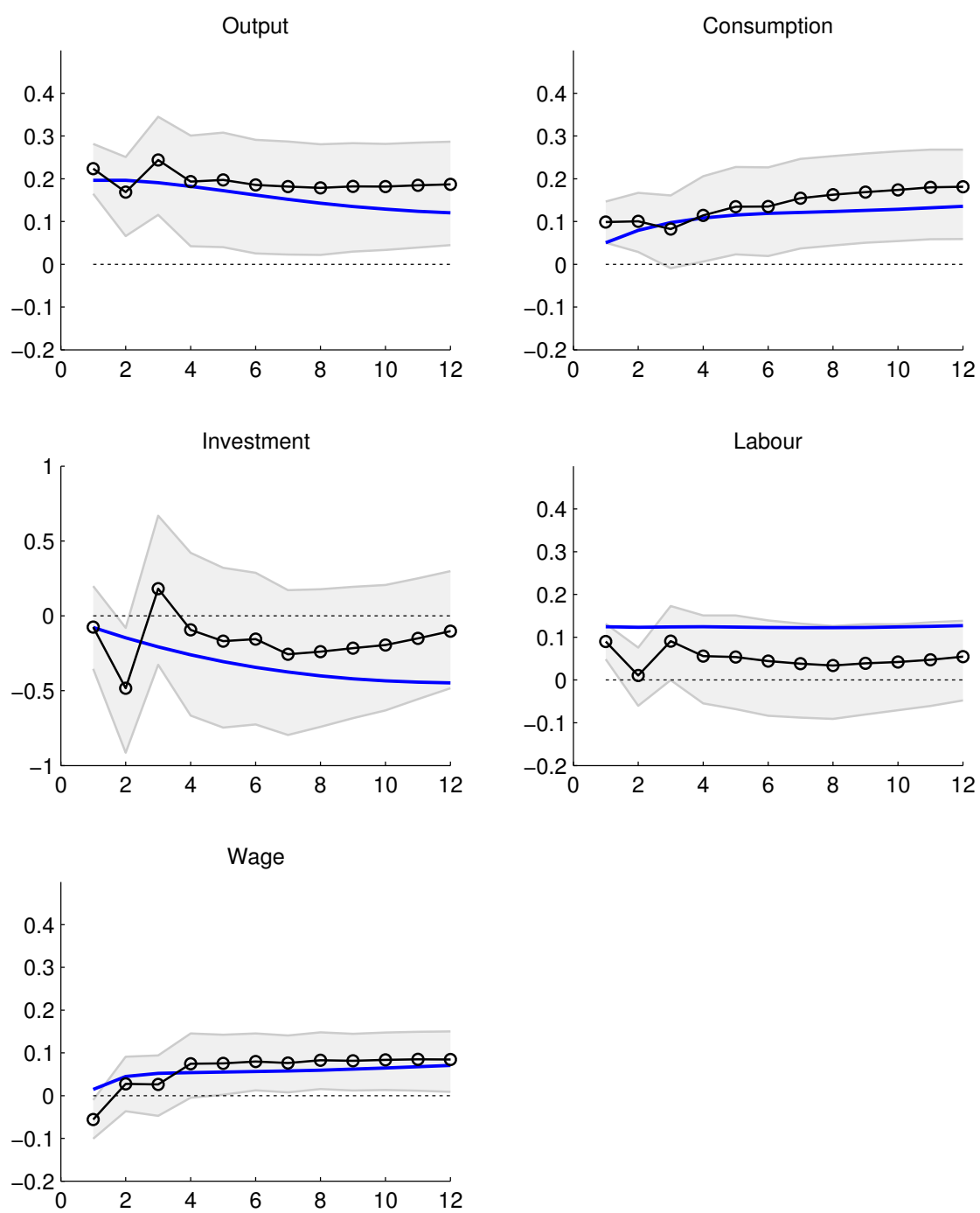


Figure 4.12: Responses of the other variables given the parameter estimates

### 4.5.2 Robustness

I now examine the robustness of the parameter estimates when each of the main mechanisms discussed earlier are turned off or directly calibrated.<sup>12</sup> Table (4.3) displays the results from these experiments.

First consider the fiscal policy parameters. Estimates of the persistence of the government spending process ( $\rho$  and  $\phi_1$ ) are very similar across all specifications. So too is the impact response of the tax rates following the spending shock ( $\theta^{gk}$  and  $\theta^{gn}$ ). The persistence coefficients in the tax rules do vary somewhat, although these estimates still produce impulse responses generally within the empirical confidence intervals.

In all cases the strength of the wealth effect on labour supply is estimated to be low. This mirrors findings by Schmitt-Grohe and Uribe (2010). Furthermore, note that the loss increases significantly when  $\gamma$  is forced to be one, the case of King-Plosser-Rebelo-type preferences. The degree of price stickiness is estimated to be high across all specifications, suggesting an important role for short-run demand effects. However, when other mechanisms are turned off — notably variable capital utilisation — the degree of price stickiness becomes implausibly high. It is also interesting to note that the flexible price model (where  $\eta = 0$ ) does not perform too badly (in terms of loss). This, however, relies on an implausibly high level of variable capital utilisation and strong habit persistence. Similarly, estimates of the habit persistence parameter increase significantly when sticky prices or variable capital utilisation are turned off. In general, the parameter estimates governing variable capital utilisation and the investment adjustment costs,  $\kappa$  and  $\omega$ , are far too low. These experiments did not, therefore, resolve the issues with the investment response discussed earlier.

These exercises confirm several important results. Firstly, that the strength of wealth effect on labour supply is robustly low across all specifications. Secondly, that the strength of the tax rate response to government spending shocks is limited. And, thirdly, all the model's mechanisms appear important for matching the empirical evidence: the baseline case achieves the smallest loss.

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<sup>12</sup>Parameter values used in table (4.3) reflect commonly chosen values elsewhere in the literature.

Table 4.3: Robustness

	$\rho$	$\phi_1$	$\phi_2$	$\theta^{gn}$	$\theta^{gk}$	$\theta^{n1}$	$\theta^{k1}$	$\theta^{n2}$	$\theta^{k2}$	$\gamma$	$h$	$\eta$	$\kappa$	$\omega$	Loss
Baseline	0.94 (0.02)	0.00 (0.08)	-0.14 (0.06)	0.0043 (0.02)	0.0046 (0.002)	0.19 (0.1)	1.87 (0.07)	0.038 (0.1)	-0.91 (0.07)	0.0023 (0.003)	0.58 (0.06)	0.86 (0.04)	0.16 (0.3)	0.032 (0.03)	51.52
Fixed habits ( $h = 0.6$ )	0.92 (0.02)	0.0003 (0.07)	-0.010 (0.06)	0.0021 (0.02)	0.0034 (0.002)	0.077 (0.1)	1.94 (0.07)	-0.093 (0.1)	-0.97 (0.07)	0.027 (0.01)	-	0.88 (0.03)	0.00 (0.03)	0.050 (0.05)	60.25
No habits ( $h = 0$ )	0.93 (0.01)	0.0002 (0.06)	-0.012 (0.05)	0.021 (0.02)	0.039 (0.01)	0.012 (0.07)	-0.063 (0.06)	-0.041 (0.07)	0.81 (0.07)	0.0042 (0.01)	-	0.91 (0.02)	0.00 (0.08)	0.0019 (0.02)	96.04
Fixed utilisation ( $\kappa = 0.15$ )	0.92 (0.02)	0.0024 (0.07)	-0.014 (0.06)	0.013 (0.02)	0.0043 (0.002)	0.029 (0.1)	1.89 (0.06)	0.16 (0.1)	-0.93 (0.07)	0.0044 (0.004)	0.55 (0.04)	0.85 (0.03)	-	0.029 (0.03)	56.16
No utilisation ( $\kappa = \infty$ )	0.93 (0.01)	0.011 (0.07)	-0.10 (0.05)	0.025 (0.01)	0.0016 (0.001)	0.054 (0.005)	2.00 (0.001)	0.0090 (0.002)	-1.00 (0.001)	0.069 (0.0002)	0.94 (0.0005)	0.97 (0.007)	-	0.014 (0.009)	80.29
Fixed adj. costs ( $\omega = 1/3$ )	0.93 (0.01)	0.00 (0.07)	-0.042 (0.05)	0.030 (0.02)	0.0027 (0.001)	-0.34 (0.07)	1.97 (0.09)	0.35 (0.08)	-1.00 (0.09)	0.041 (0.02)	0.86 (0.07)	0.97 (0.08)	0.087 (0.09)	-	54.96
Fixed $\eta = 0.75$	0.92 (0.02)	0.00 (0.07)	0.0094 (0.05)	0.010 (0.02)	0.026 (0.01)	-0.10 (0.08)	-0.020 (0.04)	0.20 (0.06)	0.93 (0.08)	0.061 (0.02)	0.89 (0.03)	-	0.0024 (0.04)	0.0077 (0.007)	60.64
Flexible prices ( $\eta = 0$ )	0.92 (0.02)	0.0016 (0.07)	0.016 (0.06)	0.027 (0.02)	0.022 (0.01)	0.012 (0.1)	0.042 (0.03)	-0.021 (0.1)	0.92 (0.09)	0.061 (0.02)	0.88 (0.05)	-	0.00 (0.04)	0.010 (0.008)	64.93
$\gamma = 0.01$	0.92 (0.02)	0.00 (0.07)	-0.024 (0.06)	0.0054 (0.02)	0.0036 (0.001)	0.076 (0.1)	1.91 (0.06)	0.0051 (0.1)	-0.94 (0.06)	-	0.56 (0.08)	0.87 (0.03)	0.00 (0.05)	0.032 (0.03)	53.98
$\gamma = 1$	0.91 (0.01)	0.00 (0.07)	0.041 (0.06)	0.024 (0.02)	0.0023 (0.001)	0.026 (0.2)	1.97 (0.06)	0.14 (0.2)	-1.0 (0.06)	-	0.18 (0.3)	0.92 (0.02)	0.00 (0.04)	0.11 (0.2)	125.42

## 4.6 Conclusion

In this chapter I have empirically investigated the importance of the endogenous tax response to government spending shocks and the strength of the wealth effect channel in the United States. The estimated model matches well the empirical effects of an increase in government spending, with parameter estimates largely in line with those estimated elsewhere in the literature.

The mix of tax policy instruments matters greatly for the sign and magnitude of key responses. For example, greater use of labour income taxes causes a contraction in output, consumption, the real wage and hours, all contrary to the empirical evidence presented in Section 4.2.

Furthermore, the degree of distortionary tax finance interacts with the strength of the wealth effect on labour supply, which can partially offset any negative substitution effects. By employing Jaimovich and Rebelo (2009) preferences, I showed that the neoclassical model with a low wealth effect on labour supply fails to match the output, consumption, real wage or hours responses found in the SVAR evidence. The presence of sticky prices, however, allows the model to qualitatively match all the empirical responses. The model also contains more standard features such as variable capital utilisation, investment adjustment costs and habits. All these played a role in replicating the empirical evidence. I showed how these mechanisms interact and this motivated estimation of the parameters governing their strength. This is particularly important given that there is little, if any, a priori information for calibrating the tax rules or the strength of the wealth effect.

The key findings that allow the estimated model to replicate the empirical impulse responses are, first, that the wealth effect on labour supply is estimated to be small. This casts further doubt on whether a simple neoclassical model can replicate the empirical evidence. Second, sticky prices, variable capital utilisation, investment adjustment costs and habits were all found to play an important role, with parameter values generally in line with those found in the wider literature. One exception is the parameter governing the investment adjustment costs. Typical calibrations of this parameter would have implied a larger fall in investment than was observed in the empirical results. My results suggest that further work should be done to investigate the response of investment following a government spending shock. Third, I find that while distortionary tax rates rise following the spending shock, their magnitudes are modest. Importantly, capital tax rates increase more than labour tax rates, limiting the contractionary effect on output and consumption. The model also implies a realistic debt path on the basis of these tax rate changes, implying that government spending shocks — at least over the short to medium-term horizon — tend to be debt-financed.

To the extent that nominal rigidities allow for short-run demand effects and, to the extent that the wealth effect on labour supply is small, my results suggest that debt-financed (or lump sum tax financed) government spending shocks will stimulate output,

consumption, hours and the real wage over the short term. The output multiplier was around one. However, the decline in investment is important as it lowers the economy's longer-term output and wealth. Furthermore, the required current and future tax increases place a welfare cost on the economy, even if consumption and output rise initially. The short-term gain of a spending stimulus then has to be traded-off against the long-term costs. Striking this balance clearly remains hugely topical in the current climate.



# Appendices

## Appendix A

# Appendices to Chapter 2

### A.1 Long Appendix to Chapter 2: The Narrative Paper

## **Discretionary Tax Shocks in the United Kingdom 1945-2009: A narrative account and dataset**

### **Summary**

This appendix constructs a narrative account of all legislated discretionary policy changes in the United Kingdom from 1945 to 2009. Following Romer and Romer (2009, 2010), evidence of the policymakers' motivation is presented from U.K. official Budget documents together with technical notes, press releases, Acts of Parliament, the Budget speech by the Chancellor of the Exchequer and related entries in the parliamentary record (Hansard). The historical context in which the decision was made is also discussed. Using the given motives I isolate tax policy changes which were not responding to, or influenced by, current or prospective economic shocks. This 'exogenous' category is comprised of actions to improve long-run economic performance, those motivated by ideological or political reasons, rulings from external bodies such as courts, and fiscal consolidation measures based on long-run considerations. By contrast, the 'endogenous' changes are actions to manage demand, to stimulate production, to offset a debt crisis and those to fund spending decisions. For all the tax changes I collect information on the announcement, implementation and withdrawal dates as well as the type of the tax (such as income tax). The dataset contains nearly 2,500 tax changes and is aggregated into a quarterly series for analysis. In addition to creating a novel dataset this appendix also contributes to the post-war history of U.K. taxation.

## Introduction

As noted in Chapter 2, despite its importance for current macroeconomic policymaking, evidence of the macroeconomic effects of tax shocks in the United Kingdom is sparse. Furthermore, while the academic literature has focused on the United States and cross country panel datasets, there is no consensus of the effects of tax changes. This reflects the difficulty of identifying tax policy shocks uncorrelated with, and uncontaminated by, other fluctuations. One major problem with common tax measures is simultaneity. Changes in taxes are likely to contemporaneously affect GDP but commonly used tax variables such as tax revenues are also contemporaneously driven by GDP.

Despite the importance of resolving this identification problem, current approaches are limited. One popular method is that of Blanchard and Perotti (2002). This seeks to cyclically adjust the change in overall revenues, net of transfers, for changes in GDP. The method assumes policymakers are not informed about, or are unable to respond to, shocks within the same quarter. External information is used to calibrate the elasticity of output to GDP. A residual term can then be constructed and, under the timing assumptions, it can be interpreted as the discretionary policy decisions uncorrelated with other fluctuations. However, this approach is not without its problems. First, the timing assumptions may not hold in reality. Second, we need to be confident that revenues have been adjusted for all the possible cyclical influences. As many factors are likely to affect revenues, it is unclear what a comprehensive list would be. Third, legislated tax shocks are not simply shocks to revenues; they alter rates and liabilities, which themselves are likely to affect the output elasticity which Blanchard and Perotti (2002) assume to be constant.

This appendix addresses the identification problem directly by constructing a new measure of the tax policy shocks in the United Kingdom that should be uncorrelated with current or projected economic fluctuations. The source for this dataset is the narrative record in the United Kingdom. I therefore pursue a narrative identification approach following Romer and Romer (2010). Other ‘narrative approaches’ have also been used to identify government spending shocks (Ramey and Shapiro (1998); Ramey (2011)) and monetary policy shocks (Romer and Romer (1989, 2004)).

To construct the narrative dataset, the first step is to collect direct measures of all the legislated tax policy changes in the United Kingdom between 1945 and 2009. The main source for these data is the official Budget documents. I then employ the Romer and Romer (2010) strategy of classifying tax changes by motivation. This allows me to identify those decisions that were taken for reasons uncorrelated with current or prospective economic conditions. I follow Romer and Romer (RR) in calling these actions ‘exogenous’ tax changes. Actions which do not satisfy this criteria are referred to as ‘endogenous’.

There are nearly 2,500 discretionary policy changes over the period. Each Budget usually had both overall objectives as well as individual motivations for the specific measures. Motives for all discretionary changes are collected from sources such as the Budget speech by the Chancellor of the Exchequer and related entries in the parliamentary record (Hansard). A variety of motives are given for actions and I divide the exogenous and endogenous groups

into subcategories. In doing so, I keep as close as possible to the stated motivation. This generates slightly different subcategories from those in RR. The ‘exogenous’ category is split into actions to improve long-run economic performance, ideological changes related to party political or social causes, rulings from external bodies such as courts, and fiscal consolidation measures based on long-run considerations. The endogenous changes contain actions to manage demand, to stimulate production, to offset a debt crisis and those to fund spending decisions.

In addition to classifying each discretionary policy action, I also collect information on their announcement dates, their implementation and end dates, their revenue effects and their type (e.g. income tax). In the narrative below I present evidence for the classification of all the major changes. I also provide an historical context, informed both by the policymakers’ own statements and the history literature.

By constructing a new measure of tax changes for the United Kingdom this appendix provides a rich new dataset dealing with the identification problem. The constructed series is so useful precisely because it isolates the policy changes which are uncorrelated with current and prospective economic shocks. This then facilitates further research for a country where surprisingly little is known about the macroeconomic effects of tax changes. In Chapter 2 I make use of this new dataset.

A number of factors make the U.K. ideal for a narrative approach. Firstly, the U.K. has made considerable use of fiscal policy post-war. Secondly, tax policy is highly centralised<sup>1</sup> and, since the Budget is a major annual event, tax changes are largely saved for this announcement with implementation taking place throughout the year. Moreover, unlike in the United States, these announcements almost always become law. Thirdly, detailed revenue forecasts are provided for all the Budget measures. Fourthly, given the extensive political debate around the Budget, there is considerable discussion of the motives.

The central contribution of this appendix is to provide a new measure of tax shocks in the United Kingdom. The first part of this appendix discusses the construction of the new dataset. I also discuss the more technical details, the assumptions made and how the 2,500 changes are aggregated. The second part of this appendix then presents the narrative chronologically by Budget. For each Budget I consider the historical context in which the policymakers’ decisions were made. I then present evidence on the overall objectives and motivation, followed by evidence of the specific motives for individual measures.

### **Instruments and implementation of tax policy in the United Kingdom**

The centrepiece of the British tax process is the annual Budget. This is a traditional and grand occasion which attracts extraordinary media coverage in spite of its technical nature. Part of the attraction is the rhetoric and theatre of the Budget speech as well as the anticipation of surprises Chancellors invariably try to pull out of their hat. However, the Budget is more than pomp and circumstance; it is also the annual presentation of the Government’s economic policy. The policy changes are — with the exception of emergency measures and recently a

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<sup>1</sup> Adam et al. (2010) note that only 5 per cent of revenue is raised locally.

second Budget-type event in the autumn (the Pre-Budget Report) — stored up for this performance. This process and the other features mentioned in the introduction make the U.K. ideal for a narrative study of tax changes.

On Budget day the Chancellor of the Exchequer – the U.K.’s Finance Minister – presents the Government’s Budget to the House of Commons of the United Kingdom Parliament. The speech usually contains a review and analysis of the economic situation together with the announcement of most of the policy changes. Many publications accompany the Budget speech. These include a comprehensive review of the policy changes in the Financial Statement and Budget Report (FSBR),<sup>2</sup> the ‘Red Book’. There are also a large number of press releases and technical notes. I discuss the specific sources below.

The implementation of most Budget changes is legislated in the annual Finance Bill. This is usually presented on the same day as the Budget and is debated and reviewed by Parliament over the following months. For a March or April Budget, the Finance Bill usually becomes an Act of Parliament and receives ‘Royal Assent’ (by the Head of State) in July or August. Parliament is allowed to revise the Finance Bill and, on occasion (though rarely), this has led to major Budget measures being added or removed. Some policy changes can also be implemented before the passing of the Finance Bill. The approval of Budget Resolutions permits this to take place. Resolutions are tabled as soon as the Chancellor has finished the speech.<sup>3</sup>

Technically some taxes are permanent, such as all indirect taxes; others require annual renewal. As every Budget tends to carefully justify all the policy changes, the announcement of annual taxes feels much more permanent than this distinction might suggest. For example, when income taxes are raised the tone of the Budget assumes that this is a permanent rise (until otherwise determined), even if technically the rate would have to be ‘renewed’ the following year. As a rule I do not consider these annual taxes as temporary changes. I discuss the temporary/permanent distinction below, as well as taxes which are *automatically* renewed or implemented (such as those required to rise in line with inflation).

The process for emergency or supplementary Budgets is similar to the process above. Sometimes there was more than one Budget per year and sometimes there were various mini-Budgets altering specific taxes. In the 1980s there was an Autumn Statement which dealt with spending and social security changes. Since 1997 there has also been a Pre-Budget Report in the autumn which, over time, closely to resemble a Budget (although many of the changes in the PBR were scheduled for the following year’s Finance Bill).

It is useful at this stage to discuss Social Security contributions. Historically the U.K. has maintained a ‘Contributory Principle’ towards welfare: citizens contributed to the National Insurance Fund through National Insurance (Social Security) contributions. However, a House of Commons review in 2000 into Social Security stated “National Insurance contributions are increasingly described by the Government as a form of taxation”.<sup>4</sup> Furthermore, the Institute

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<sup>2</sup> Before 1969 this was simply called the Financial Statement and in many years a separate Economic Survey was published.

<sup>3</sup> Some changes can also be made at a later date by Statutory Instruments (secondary legislation).

<sup>4</sup> Select Committee on Social Security Fifth Report (2000).

for Fiscal Studies (IFS) (2009) explains: “the link between the amount contributed and the benefit entitlement, which was once close, has now almost entirely gone and substantial progress has been made in aligning the NI rate structure and tax base with those of income tax. Most of this has occurred in the last 25 years”.<sup>5</sup> The point about the “last 25 years” can be clearly seen in the Budgets themselves. Until the mid-1970s it was common for the Chancellor to simply state that benefits would be going up but that the Secretary of State for Social Security would shortly be announcing changes in contributions to fund this (usually in the annual review of contributions, which also responded to the Government Actuaries’ report on the National Insurance Fund).

At least in theory, the funding of Social Security was supposed to be different from the standard Budget process. However, from about the mid-1970s (for example, the National Insurance Surcharge in the mid-1970s was not designed to top up the Fund) changes in National Insurance have been increasingly made in the Budget and their character has more closely resembled changes in taxation. In the 1980s National Insurance was widely reformed — as the IFS note — and these changes were implemented within the Budget process. By the 2000s National Insurance changes were treated in the Budget in a similar way to income tax. Circumstantial evidence of this can be seen from the 2010 General Election debate which focused on whether National Insurance should rise to help reduce the Budget deficit in the future. When part of the Budget process, I include these National Insurance changes. I am therefore implicitly categorising the other changes as endogenous and spending-driven (see below).

## Data Sources

I collect data on the forecast change in revenues resulting from discretionary changes in tax policy. The main source for these data is the so-called Budget Red Book published by Her Majesty’s Treasury (H.M. Treasury). Before 1969 this was called the Financial Statement before becoming the Financial Statement and Budget Report (FSBR, which contained economic analysis as well as data). Since 1997 there has also been an Economic and Fiscal Strategy Report (EFSR). The FSBR contains a key table with projected revenue estimates of all discretionary policy changes. In later years it contained as many as 85 changes and in total there were about 2,500 non-negligible<sup>6</sup> changes in taxation between 1945 and 2009.

Taxes were, on occasion, altered between Budgets. There are several ways of uncovering these changes. In some cases they appeared in the following year’s FSBR; some were referred to in a Budget speech; and some were discussed in the Economic Survey (for the early years) or the EFSR (since 1997). However, to avoid missing policy changes, I also made use of the history literature. Four useful texts were Christopher Dow’s “The Management of the British Economy 1945-60”, Alec Cairncross’s “The British Economy since 1945”, Andrew Britton’s “Macroeconomic Policy in Britain 1974-87” and Nicholas Woodward’s “The

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<sup>5</sup> IFS (2009), “A Survey of the UK Tax System”, Briefing Note No.9.

<sup>6</sup> The definition of a negligible action is made by Her Majesty’s Treasury (HM Treasury) and no public figure is then given for these policy changes. In 2009 for example, this was a change amounting to less than 0.0002 per cent of GDP.

management of the British economy 1945-2001". Woodward and Dow include a chronology with the dates of all major policy announcements as well as key economic events. Using all these sources I am confident that I have accounted for all the tax changes between Budgets.

To establish the implementation date of a change I normally use the FSBR (and if different from Budget day, an announcement date is also given). In some cases the implementation date is not reported. I then look directly at the Finance Act itself (or, in some cases, the relevant Statutory Instruments) or technical notes and press releases. Sometimes the implementation date is the date of passing of the Act ('Royal Assent') but this is not usually the case.

To categorise the motivations behind the policy changes I primarily use the Chancellor's Budget speeches and Hansard debates. These discuss the overall Budget objectives and strategy, the policy context and motivations for individual measures. It is typical in U.K. Budget speeches to announce most, if not all, the measures. In addition, there are other sources which proved useful. In later years the Economic and Fiscal Strategy Report provided significant justification and motivation — and this proved more useful than the Budget speeches after 1997. I also used the Economic Surveys (in the early years), any relevant White Papers (statements of government policy), technical notes and press releases. In addition, the history literature was useful in understanding the overall context. However, I almost always take the policymakers' judgements at face value. This narrative is not intended to be an extensive history of all views and opinions but rather a narrative of the reasons given for the policy changes as perceived by the policymakers themselves. Similarly, the historical context I give is not intended to be a detailed history but rather to frame the economic circumstances for the reader — one cannot understand the actions unless one also understands the environment in which they were taken.

### **Classifying the motivation**

Following Romer and Romer (2010) (RR), I distinguish between endogenous and exogenous tax policy changes. An 'exogenous' policy decision is one that was taken for reasons uncorrelated with current or prospective economic conditions. This is the most important distinction given that the objective is precisely to isolate these changes. Changes which do not satisfy this criteria are labelled 'endogenous'.

As mentioned, I have attempted to keep as close as possible to the spirit of the motivation. I split endogenous changes broadly into four categories: those to regulate demand (demand management), those to boost production (supply stimuli), those to deal with a deficit crisis (deficit reduction) and those that financed spending decisions. The table on the following page summarises all the categories and subcategories, giving examples.

A demand management change attempts to adjust aggregate demand (or specific components) in response to contemporaneous or projected fluctuations in the economy. There are many examples from 1945 to 1979.<sup>7</sup> A classic example is a stimulus to aggregate demand

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<sup>7</sup> Dow (1964) argues "there is probably no country in the world that has made a fuller use than the United Kingdom of budgetary policy as a means of stabilising the economy".



**Table: Summary of the categories**

<b>Group</b>	<b>Sub category</b>	<b>Explanation and examples</b>
<b>Endogenous (N)</b>	1. Demand management (DM)	<ul style="list-style-type: none"> <li>• Targeting the aggregate level of demand e.g. to boost investment, consumption, growth, or curb inflation.</li> <li>• Specific help to households and individuals by stimulating disposable income.</li> <li>• Dealing with a balance of payments crisis via demand.</li> </ul>
	2. Supply stimulus (SS)	<ul style="list-style-type: none"> <li>• Certain help for businesses during a downturn (e.g. NIC cut).</li> <li>• Short term sector support (e.g. targeted tax cuts for a sector).</li> </ul>
	3. Deficit reduction/BoP crisis (DR)	<ul style="list-style-type: none"> <li>• Direct measures to deal with a budget or external deficit contemporaneously caused.</li> </ul>
	4. Spending-driven (SD)	<ul style="list-style-type: none"> <li>• Taxes which fund specific spending commitments.</li> </ul>
<b>Exogenous (X)</b>	1. LR performance (LR)	<ul style="list-style-type: none"> <li>• Measures to improve competitiveness, productivity, efficiency and long-run growth (but not taken to offset a shock).</li> <li>• Simplification and deregulation measures.</li> <li>• Long-term support for business or sectors of the economy.</li> </ul>
	2. Ideological (IL)	<ul style="list-style-type: none"> <li>• Long-term social or political goals, independent of their effect on performance and not to offset current shocks.</li> <li>• Some anti-avoidance measures (where no other motive is given).</li> </ul>
	3. External (ET)	<ul style="list-style-type: none"> <li>• Court rulings and enforcement of directives.</li> </ul>
	4. Deficit consolidation (DC)	<ul style="list-style-type: none"> <li>• Measures to lower inherited deficit for reasons of economic philosophy or to offset current actions in the future.</li> <li>• Does not include actions forced on the government or decisions contemporaneous motivated by a current shock.</li> </ul>

to offset a negative shock to output. However, there are many cases where the policymaker was responding to curb inflation or rectify a balance of payments crisis. The crucial element is whether demand regulation via a tax change was the key mechanism to offset another shock.

Where a supply-side reform attempts to offset an immediate shock I classify this as a supply stimulus. A good example is the 1985 cuts to National Insurance contributions. As a consequence of the early 1980s recession, unemployment had been rising sharply to 1985 and this motivated policy action. The approach was, however, justified in terms of making it less costly to hire workers and policymakers specifically rejected a stimulus to demand.

I classify a policy as a deficit reduction action if it was specifically triggered by concern over current movements in the deficit (for example concerns about the Government's credit rating) or a clear consequence of another shock. For example, the Government in 1993 argued the deficit was a direct consequence of the recession and was rising too fast: immediate action was required and taxes were increased. There is clear evidence in the U.K. narrative of policy contemporaneously responding to deficit changes.

Spending-driven changes explicitly finance a spending action. I only assign this category where there is a clear link between a tax change and a spending decision. A good example of a spending-driven change was the 2002 increase in National Insurance contributions to fund expansion of the National Health Service.

The exogenous actions are split into four categories: measures taken to boost long-run economic performance, those motivated by ideological or political reasons, those enforced by external bodies and, less obviously, those to deal with an inherited deficit or for future deficit consolidation.

Although long-run economic actions are not designed to offset a current shock, these need not only be taken in times of calm. The 1979 Conservative Government made a number of supply-side reforms as part of their long-term economic strategy even during a recession. Such measures were not designed to offset the current recession. In cases where a supply-side action is intended to offset a shock, supply stimulus would be a more appropriate categorisation.

Ideological changes are those taken for political and philosophical reasons, not explicitly to influence economic performance. The 1992 Conservative Government's emphasis on the married couples' allowance (and the 1997 Labour Government's removal of it) is a clear example of this.

External changes are those imposed on policymakers by rulings from external bodies. Examples of external decisions are court judgements and the enforcement of European directives.

The previous three categories are more obviously exogenous: policy changes do not react to shocks. Policy actions in the fourth exogenous category, deficit consolidation, are likely to reflect past shocks (for example the effect of a previous recession). RR define a deficit-driven policy change as either dealing with an inherited deficit for long-run reasons (for example, a belief that it will support long-run growth) or a planned future consolidation to offset a current fiscal action. However, there are no examples in the U.K. where an incoming government decided to deal with a deficit independent of the current macroeconomic situation. There was always a sense of crisis and this led me to introduce the new endogenous deficit reduction category.

There are, however, some cases where deficit consolidations were planned for future years. This was a way of anchoring credibility while spreading the consolidation over time. For example, the fiscal stimulus designed to offset the 2008-09 recession was accompanied by planned tax rises several years later. It can be argued that, when implemented, these tax changes will be uncorrelated with current and prospective shocks. To that extent they are still 'exogenous'.

It is useful to note the similarity with the RR categories. Their ‘countercyclical’ category relates to demand management and supply stimuli policy changes. ‘Spending-driven’ is a similar category. The new endogenous category is ‘deficit reduction’ as there is sufficient evidence of contemporaneous influences on deficit actions. For the exogenous changes, long-run, ideological and external can be matched to RR’s ‘long-run’ category and ‘deficit consolidation’ is similar although more restrictive.

### **Specific issues in applying the categorisation**

Budgets tended to have an overall motivation as well as providing separate justifications for each measure. In the narrative below I present evidence of the overall Budget motives. I also present evidence of the specific motives given for each discretionary policy action. I carefully weigh up both the overall and specific comments to disentangle the primary motivation. Where there is conflict, this is discussed. I therefore categorise the Budgets action by action.

#### *The ‘alternative’ classification*

In a few cases the overall objective appears in direct conflict with the specific objective. Consider a simple example. In 1968 all but two changes were to limit demand (tax increases) but the other changes are designed to help the elderly (a tax cut) and this is clearly marked as delivering on a long-run social objective. In one sense the latter is exogenous but in another sense it is part of the overall Budget package: the remission may have to be offset elsewhere. A similar tension occurs where a Budget aims to reduce the deficit, such as in 1997 but still cuts taxes. The problem is that the measures often have different implementation dates and do not offset each other in the aggregate. The two actions may therefore be correlated if a seemingly exogenous action precipitates a larger endogenous one. In these more complicated cases I provide an ‘alternative’ classification taking the whole Budget package together. In the 1968 example I would classify all measures — including an ideological tax cut — as demand management.

#### *Packages*

Another related but simpler issue is the treatment of packages of measures or actions designed to offset other actions. For example, between 1979 and 1997 there were considerable alterations in the balance of taxation from income tax to Value Added Tax (V.A.T.). It was argued that the V.A.T. rise was funding an income tax cut and the income tax cut was designed to stimulate long-term growth. Rather than categorise the income tax cut as ‘long-run’ and the V.A.T. rise as, for example, ‘deficit reduction’, it seems wise to categorise the package as ‘long-run’, even if a V.A.T. rise on its own might harm the economy.

### **Transforming the data into a quarterly dataset**

The objective is to construct a quarterly time series of classified tax changes from 1945 to 2009. The final Budget I consider is April 2009. The December 2009 Pre-Budget Report contained measures to be implemented in the 2010 Finance Bill although, with a General

Election scheduled for the first half of 2010, it was unclear at the time of analysis which measures would actually become law.

The data are derived from revenue forecasts in the Budget documents. These estimates therefore reflect the implied *change* in revenues and will be normalised by nominal GDP to reflect the change in the aggregate average tax rate. My focus is on the change in tax liabilities. In general, measures which simply alter the timing of existing taxes are excluded. Good examples of this are the introduction of quarterly payments of tax for small employers or where a reduction in Advance Corporation Tax was “to be balanced by an increase in the subsequent liability to mainstream Corporation Tax”.<sup>8</sup> However, for some taxes exclusion is less appropriate. In the 2000s there were several examples of attempts to raise fuel duty but then, following volatility in the oil market or protests, this was deferred. In several cases the postponement was explicitly designed to support consumers’ expenditure, a form of stimulus, and it seems prudent to leave these changes in the series.

In keeping with the focus on liabilities I make use of the ‘full year’ revenue estimate. This was the on-going annualised revenue effect (rather than any temporary revenue effect in the short run due to the timing of revenues reaching the Exchequer). Following RR I assign this figure to the implementation date.<sup>9</sup> In more recent years estimates were given for several years ahead rather than as a ‘full year’ figure. However, the figures for the later years’ forecast are usually very similar. It is normally clear what reflects the ‘full year’ estimate and, where figures did not correspond to a ‘full year’ concept, this is explained in the Budget documents. I therefore use the latest year of data, although carefully watch for changes in revenue which do not appear to follow the ‘full year’ concept.

Having assigned a motivation to a revenue change I aggregate the tax series based on motivation and implementation date. This requires assigning the calendar dates to quarters. I follow RR by assuming that changes implemented in the second half of a calendar quarter have their economic effect in the next quarter. For example, a change implemented on 25<sup>th</sup> March is assigned to quarter two and not quarter one. In terms of announcement dates the appropriate dating method is the actual quarter of announcement.

The resulting aggregate series represents the forecast ‘full year’ change in revenues in each quarter, by motive. As mentioned above, I follow RR and scale this measure by the annualised level of nominal GDP in each quarter. This is appropriate as the revenue figures are also annualised (hence quarterly revenue divided by quarterly GDP would generate the same ratio). U.K. GDP is not available quarterly prior to 1955 and so the consistent part of the series must begin in 1955Q1. However, annual GDP is available from 1948 to 1955 and for these years I use the annual nominal GDP figure for the four quarters within that year.

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<sup>8</sup> FSBR 1988, page 47.

<sup>9</sup> However, as I also record the announcement date the dataset could be recompiled based on announcement dates instead.

## Specific issues in constructing the aggregate dataset

### *Temporary Changes*

For temporary changes I do not use the ‘full year’ or latest year figures. Typically temporary changes have a very low, if not zero, ‘full year’ estimate. In general, I make use of the estimate for the year of operation although the appropriate figure is usually clear from the pattern of the revenue forecast. For example, if a change is supposed to last for the next six months, the revenue change in the current year is normally large and in later years much smaller or zero. It therefore makes sense to use the figure which most closely reflects the dates of the temporary change. On the specified end date I reverse the original change, placing an equal and opposite amount of revenue against the end date. In some cases end dates were deferred and I treat the deferment decision as a new temporary measure continuing from where the old one was designed to finish. Only in a few cases — highlighted in the narrative — is there deviation from this.

### *Announcement and implementation dates*

The announcement date is taken to be the date when the specific change, the revenue consequences and the implementation timetable is announced. Some changes are, of course, rumoured or trailed in advance, for example in an election manifesto. However, the specific form of the policy, the rates and the implementation timetable are not given. This is also true of consultations but many options tend to be presented and no specific implementation plan is set out. One may still worry that the announcements are forecastable, but this is shown not to be the case in Chapter 2. These announcement dates are usually the date of the Budget itself (or emergency speech).

Implementation dates are normally provided by statements of the form ‘this takes effect on x date’. Sometimes the implementation date is implied — for example the start of the tax year or Budget day. To confirm this I turn to the legislation itself (e.g. Finance Act or Statutory Instrument). Only in a few, very minor cases,<sup>10</sup> is it difficult to infer the implementation date (or motivation) and I exclude these.

There are some changes which have multiple implementation dates. Sometimes the revenue change for each progressive implementation is given explicitly and in these cases I treat them as separate measures. In some cases different changes can be inferred from the path of revenues over the forecast years. In a few cases it is unclear how different changes affect revenue and, in these rare cases, I assign the ‘full year’ estimate to the initial implementation date.

### *Statutory indexation, revalorisation and indexation*

Some taxes — for example certain duties and income tax thresholds — were either uprated with inflation by law or expected to rise with inflation. These changes are virtually automatic and represent the default action each year.

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<sup>10</sup> The measures which cannot be classified or where a specific implementation date could not be verified account for less than 1 per cent of the revenue change in the given year.

There are two types of ‘default’ changes, the first of which is statutory indexation. This was applied to income tax rates, thresholds and allowances from the tax year 1978-9 and for capital gains and inheritance taxes (capital transfer tax) from 1983-4. The Treasury presents figures from these dates against an ‘indexed base’ which essentially tells the reader the new policy change over and above that which statutory indexation required. This is the closest to the definition of a new discretionary policy action and I use these figures.

The second category applies to many indirect taxes such as excise duties. From the mid-1980s onwards successive Chancellors argued that it was right to presume the real value of consumption taxes would be maintained in each Budget and then often imposed inflation increases.<sup>11</sup> Over the years the Treasury also began reporting these taxes against an indexed base and for the first year that the indexed data series makes a significant appearance, in 1987, I begin using these data.

### *Escalators*

One special case of uprating was the so-called duty escalators. These committed the Government to increasing certain duty rates by a specific percentage (usually above inflation) each year. One example was the fuel duty escalator introduced in March 1993 (and increased in November 1993 and June 1997) which committed the Government to a specific above-inflation increase each year (first 3 per cent in real terms, then 5 per cent, then 6 per cent). It is difficult to assign a ‘full year’ cost to the first implementation of this policy as the revenue yield dramatically rises with each subsequent year. I therefore treat each confirmation as a separate implementation date but still use the original announcement date.

### *Retroactive components*

There are a sizable minority of retroactive changes, although these are by no means significant (about 120 of the 2500 have retroactive elements). I follow RR in dealing with this issue. A tax change with a retroactive implementation date has two components. First, the future effect on revenues going forwards (the non-retroactive element) which can be adequately captured by the ‘full year’ estimate. But, second, there are also the outstanding liabilities for the period before the announcement. The simplest way to deal with the retroactive element is to exclude it and I follow RR constructing the baseline series in this way. For an alternative ‘retroactive’ series, I include the extra retroactive liabilities by adding the accumulated liabilities as a levy in the quarter of announcement (so it is reversed the following quarter). As the ‘full year’ estimates are normalised by annual GDP, it is sufficient to simply multiply the normalised ‘full year’ estimate by the number of retroactive quarters to determine the appropriate size of the levy.

The remaining question is: what implementation date to assign the non-retroactive element. RR use the passing of the legislation. However in the U.K. it is not usually this straightforward. As mentioned, many taxes are enacted by Resolution, many announced changes take effect close to Budget day and very few are reversed before the Bill passes into

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<sup>11</sup> For example, the EFSR 2008 stated it was Government policy “that fuel duty rates should rise each year at least in line with inflation”.

law. I therefore take the division between retroactive and non-retroactive to be the announcement date itself. This is the date from which all *future* tax liabilities have changed. Consequently the tax series which excludes retroactive elements simply alters the implementation date of a retroactive policy change from the past date given to the announcement date. The series including retroactive changes then includes a levy of the accumulated retroactive liabilities on the announcement date and is reversed the following quarter.<sup>12</sup>

#### *Tax credits*

Tax credits became an integral part of the 1997-2010 Labour Government's social strategy. However, they were similar to, and seen as part of, the welfare system. Moreover, according to particular rules, tax credits were claimed and were not automatically part of the Pay-As-You-Earn income tax system. Furthermore the Treasury — as well as the Institute for Fiscal Studies — records these items as expenditure rather than tax changes and I follow this procedure. Personal income tax credits are therefore classified as transfers and excluded. However, I continue to record the (much more limited) use of business tax credits. These are more akin to standard changes in Corporation Tax allowances and deductions rather than to welfare transfers.

#### *Post-war credits*

During the Second World War the burden of taxation was high. In what Her Majesty's Revenue and Customs now describes as "a unique arrangement", additional taxes paid during the war were credited to the payer of tax at the time. These were then repaid during the post-war period.<sup>13</sup> There are a couple of instances in the narrative where the arrangements of the repayments were altered or speeded up — and these were always times where the economy needed a stimulus (see 1959 and 1962). As these actions were all endogenous, excluding them from the exogenous category is not a major problem. Given their unique nature, that they were known in advance as a reversal of a previous (out of sample) tax rise, that they were more akin to transfers of money and that the endogenous series is not the object of analysis, I exclude these.

#### *Measures altered or reversed before implementation*

In a few cases there are modifications to announced measures during the Parliamentary debate. If a change is completely dropped (or reversed) and had not been implemented I simply exclude this measure. If the change had been implemented I construct an estimate of the implied temporary change in liabilities. This latter case also applies to measures which were postponed.

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<sup>12</sup> I use this retroactive series as a robustness check. There are many issues with this method, not least that the resulting series will be negatively serially correlated across the quarters in which these levies are applied and then removed. Luckily, there are not that many retroactive changes.

<sup>13</sup> <http://www.hmrc.gov.uk/history/taxhis6.htm>

### **The Presentation of the Narrative**

The narrative presented below is chronological. I begin each year with a short discussion of the historical context in which the Chancellor made his decision, followed by the overall judgement and tone of the Budget. The historical context is not intended to be an exhaustive economic history. Nor is it intended to capture all the developments and possible causes and consequences. The purpose is to understand better the context of the Chancellor's statements.

I also present the individual Budget measures and their specific motivations. The narrative is lengthy but this reflects that every year there was at least one major piece of legislation changing dozens of taxes. Consequently there are many more legislative bills than in the United States. Furthermore, over the years, the number of Budget measures rose dramatically. Over time, for presentational brevity, I make greater use of a distinction between major and minor changes. A major change is defined as one which accounted for more than 5 per cent of the revenue gain or loss in a particular Budget. The full categorisation of all the minor changes is lengthy, although can be made available on request. This distinction proves useful in capturing at least three quarters of all the increases and remissions and often a much higher proportion.

I begin the narrative account with the first Budget after the end of the Second World War. As discussed, the final Budget is April 2009.



## 1945: Budget: 23<sup>rd</sup> October 1945

*Chancellor:* Hugh Dalton; *Prime Minister:* Clement Attlee (Labour)

### Context

The transition from a wartime to peacetime economy weighs heavily on this Budget. The new Government of 1945 was faced with high defence expenditure, low domestic production, price controls, food subsidies, rationing, high debts which had financed the War and a considerable balance of payments deficit. It is against this backdrop that Dalton's October Budget was a modest and, to some extent, 'wait and see' Budget: "Next April we shall all see the picture much more clearly than any of us can see it now".<sup>14</sup>

### Overall Budget Objectives

The overall economic concern in the October Budget was that there was too much demand and too little production to meet it: "We are now in a transition period, marked by many special, though I hope transitory, dangers. In particular we must all be resolute against inflation; we must increase the production of peace-time goods as rapidly as possible, and we must be prepared to hold back purchasing power until it is safe to release it, until there are enough goods to buy".<sup>15</sup> For these reasons above, the Budget did not contain significant reductions in taxation ("I have gone slow in tax remissions for the moment, quite deliberately, because there is an inflationary risk in any reduction of taxation, either now or in the near future"<sup>16</sup>) even though the burden of tax remained high from the War. The tax remissions which did take place were therefore largely to stimulate long-term, sustainable production: "I have selected for announcement now such tax remissions, to operate next year, as will, in my judgment, give the greatest incentive to the greatest number... If I have judged rightly in this, the inflationary risk involved in these tax remissions is at its lowest, and it is worth taking for the sake of giving increased stimulus to economic activity generally. Intensified production and a greater abundance of goods is our best counter to inflation".<sup>17</sup> Further evidence is provided below but I end up classifying all measures in this budget as *exogenous*, being aimed at raising long-run production.

### Budget Tax Measures

Income tax was cut to remove disincentives to work and stimulate production, to be implemented on 6<sup>th</sup> April 1946. It was argued: "There is plenty of evidence to show that it [income tax] has depressed morale, reduced incentive, and has, in the aggregate, diminished production. To this extent it has been a bad tax... undesirable in relation to its effect upon productive activity".<sup>18</sup> This is therefore an *exogenous* (X) change and for *long-run economic*

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<sup>14</sup> HC Deb 23 October 1945 vol 414 cc1902-3

<sup>15</sup> HC Deb 23 October 1945 vol 414 cc1875-6

<sup>16</sup> HC Deb 23 October 1945 vol 414 cc1902-3

<sup>17</sup> Ibid.

<sup>18</sup> HC Deb 23 October 1945 vol 414 cc1891-2

*performance* (LR). Of the £350 million remissions, over £300 million came from income tax changes.

There was some modernisation of alcohol taxes (to be implemented on 1<sup>st</sup> January and 1<sup>st</sup> October 1946) and hydrocarbon duties were cut to lower production costs (“Hydrocarbon oil is a most important substance for the future of our industry”<sup>19</sup>) – to be implemented on 24<sup>th</sup> October 1945. Both I classify as *exogenous, long-run*. The Purchase Tax (a sales tax) on items supporting the Government’s housing objectives was lowered on 23<sup>rd</sup> October 1945 (I propose to abolish the Purchase Tax completely over a certain range of articles of special importance in connection with the housing programme).<sup>20</sup> Being socially motivated I classify this as *exogenous, ideological* (X, IL).

The high Excess Profits Tax was to be lowered on 1<sup>st</sup> January 1946 in recognition that it was not a tax suitable for peace time: “This tax, E.P.T., at the rate of 100 per cent., is the perfect tax for a short war, but as the war period lengthens, and still more as we enter upon the post-war period, it becomes less and less satisfactory in its general character and incidence”.<sup>21</sup> This change is driven by long-term economic changes from a war to peacetime economy. As such I classify this as *exogenous, long-run* (X, LR).

## **1946: Budget: 9th April 1946**

*Chancellor:* Hugh Dalton; *Prime Minister:* Clement Attlee (Labour)

### **Context**

By the April 1946 Budget the budget deficit was lower than expected (This is a considerably smaller figure than most of the prophets anticipated.<sup>22</sup>), and defence expenditure had been falling quite rapidly (“Since the new year, the reduction has been rapid”<sup>23</sup>). In fact, on some measures “we shall not be very far off a balanced Budget this year”.<sup>24</sup> However, the large Balance of Payments deficit continued to pose a significant problem for the Chancellor. But, from the point of view of taxation policy, the external problems were largely being addressed by securing loans from the United States<sup>25</sup> and Canada.

### **Overall Budget Objectives**

The overall fear in the April 1946 Budget remained inflation (or rather too little production) – and this again weighed heavily on Dalton’s Budget judgement: “The Committee will have realised, from what I have said earlier, that we must go slow with further tax reliefs this year. Until there are more goods in the shops, the risk of inflation will remain serious. Let us not blink that fact. I must be careful not to release too great a flow of purchasing power too soon,

<sup>19</sup> HC Deb 23 October 1945 vol 414 cc1886-8

<sup>20</sup> HC Deb 23 October 1945 vol 414 c1901

<sup>21</sup> HC Deb 23 October 1945 vol 414 cc1897-9

<sup>22</sup> HC Deb 09 April 1946 vol 421 c1814

<sup>23</sup> HC Deb 09 April 1946 vol 421 c1805

<sup>24</sup> HC Deb 09 April 1946 vol 421 c1814

<sup>25</sup> The Anglo-American Loan Agreement was before Congress at the time of the April 1946 Budget and Dalton assumed this loan would be secured when making his Budget judgement.

before there are goods to absorb it.”<sup>26</sup> However, the improved situation – as the Chancellor deemed it – and the need to stimulate production allowed him to pursue “a series of modest proposals” falling “within the bounds of prudence”.<sup>27</sup> It is worth noting again here, Dalton’s lack of emphasis on budget policy to influence the level of aggregate demand. As Woodward (2004) notes: “the aims of Dalton’s budget in the Autumn of 1945 and spring of 1946 were to lower income tax and redistribute income (Pimlott 1985). It is questionable whether this was the most appropriate action, because, although tax reductions could be justified on incentive grounds<sup>28</sup>, the inflationary environment called for tax increases”.<sup>29</sup> In short this Budget was largely for longer term goals and so the measures were all *exogenous*.

### Budget Tax Measures

On income tax, three measures were introduced, two clearly announced as “reliefs” in the speech and justified on the ground that their delayed implementation would have then allowed production to expand sufficiently enough to relieve any inflationary pressure. Firstly, workers’ contributions under the National Insurance Bill were exempted from income tax from 6<sup>th</sup> April 1946<sup>30</sup>. The second was an increase in the Earned Income Relief, due to be implemented 1<sup>st</sup> October 1946. Both are classified as *exogenous, ideological*. The final income tax measure was a rise in the Wife’s Earned Income Relief, again from 6<sup>th</sup> April 1946. This was singled out as providing work incentives for women and to raise production so I classify this measure as *exogenous, long-run (LR)*.

On capital taxation, Estate Duty was lowered on 10<sup>th</sup> April 1946 for smaller estates (on the claim that a “moderate inheritance is a reasonable provision for the widow and dependants”), but increased for larger estates in light of the observation that “Unless that man has an unusually strong character, he will be tempted to become lazy and thriftless, unambitious and un-enterprising.”<sup>31</sup> Based on these comments this is *exogenous* and, on balance, *ideological* rather than long-run.

Entertainments Duty was lowered on the 5<sup>th</sup> May 1946 on various games and leisure activities and is classified as *exogenous, ideological*. The Chancellor also reviewed what specific concessions could be made on various goods subject to the Purchase Tax – as such these reliefs are classified as *exogenous, ideological*.

Finally, Dalton reaffirmed his view that the Excess Profits Tax “works against incentive and against efficiency”, proposing its repeal altogether from 31st December 1946. As

<sup>26</sup> HC Deb 09 April 1946 vol 421 c1821

<sup>27</sup> Ibid.

<sup>28</sup> And they often were in these Budget speeches (my insertion).

<sup>29</sup> That budgetary policy was not used to control aggregate demand in the early years of the new Labour administration is also noted by Cairncross (1992, 1994) who argues that it was not until Dalton’s last budget in 1947 that the pressure of demand was targeted by use of a Budget surplus.

<sup>30</sup> “The full cost will only be felt when the new and higher rates of contribution become payable. I attach importance to this fact, because my proposal is a relief, but a postponed relief, which does not become fully operative until we have had a chance to pick up production and to avoid inflation”. (HC Deb 09 April 1946 vol 421 cc1829)

<sup>31</sup> HC Deb 09 April 1946 vol 421 c1835

such this is classified as *exogenous, long-run*. The income and profits tax cuts made up the majority of the remissions in the April 1946 Budget.

### **1947: Budget 15<sup>th</sup> April 1947**

*Chancellor:* Hugh Dalton; *Prime Minister:* Clement Attlee (Labour)

#### **Context**

By the April Budget 1947 the external deficit had worsened considerably—in the Chancellor’s words “No other country in the world, without exception, faces so tough an external problem as we do”.<sup>32</sup> The country had also experienced a fuel shortage, made worse by bad weather and power stations ran short of coal. Unemployment also rose temporarily above two million (Dow 1964).

#### **Overall Budget Objectives**

In summarising his actions in the Budget speech the Chancellor said “Our internal financial position is much better, and our external trading deficit is a good deal worse than it would have been reasonable to anticipate two years ago. In this Budget, I have proposed measures which, I hope, will strengthen both the internal and the external position”.<sup>33</sup> In its discussion, the 1947 Economic Survey prioritised the fuel situation, the need to raise productivity (repeating the view that production was still too low to release purchasing power) and checking imports while boosting exports. Dalton appeared to understand the need for fiscal restraint, arguing “though I shall later propose to the Committee certain changes in taxation, some up, some down, the net effect must be to fortify rather than to weaken the revenue”.<sup>34</sup> Essentially the Chancellor was rejecting tax remissions on the scale of previous years but he was also avoiding large increases in taxation, which a demand management policy might have called-for in tackling inflation or the balance of payments deficit. Overall the Budget was mildly contractionary on the tax side, suggesting some attempt to control demand. Historians have debated when a proper demand management policy began, although many cite the November 1947 Budget, not this April one.<sup>35</sup> According to Woodward (2004), Dalton’s stated position in the spring of 1947 was not to manage demand, but to shift the burden of tax away from income tax<sup>36</sup>; this can clearly be seen in the mix of tax changes below. However, because all remissions had to be offset to control demand in the aggregate, I will be assigning an alternative classification of *endogenous, demand management* to all the *exogenous* remissions. The criteria for the ‘alternative’ classification are discussed in the first part of this appendix.

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<sup>32</sup> HC Deb 15 April 1947 vol 436 c66-70

<sup>33</sup> HC Deb 15 April 1947 vol 436 c89-90

<sup>34</sup> HC Deb 15 April 1947 vol 436 c55

<sup>35</sup> See Cairncross (1994) and Dow (1964)

<sup>36</sup> Woodward cites Dalton (1962)

### Budget Tax Measures

On income taxes there were a number of remissions starting on 6<sup>th</sup> April 1947 and costing £87 million in a ‘full year’. These remissions were to the Earned Income Relief, the Child Allowance and the Dependent Relative Allowance. Although the speech comments that Earned Income Relief increase will “give every worker an additional incentive”<sup>37</sup>, the general discussion of income tax changes states: “I am sure that I shall interpret the decided preference of the vast majority of taxpayers in selecting this as the principal field for such modest reliefs—and they must be modest—as I can give this year. Most people dislike the Income Tax more than any other tax they pay. Such is the evidence we everywhere meet”.<sup>38</sup> For this reason, and Dalton’s (1962) own comments, I classify this measure as *exogenous* but *ideological* rather than for long-run. Comments on the other two measures clearly reveal their purpose as to help specific groups and so these are classified the same way.

On business taxation the Profits Tax on distributed profits was increased from 1<sup>st</sup> January 1947. In his Budget speech the Chancellor said: “increased dividends are the clearest case, anywhere in our national economy, of an inflationary element. I am very doubtful of the wisdom of affording, in this inflationary atmosphere, to any section of our population, an increase of money income, without a proportionate increase in output or in services rendered in return”.<sup>39</sup> Confirming my classification of the income tax changes as ideological Mr. Dalton continues “I make exception here for increased incomes through tax reductions or improved social services: that is part of public policy”<sup>40</sup>. The Profits Tax increase partly reflects an attempt to regulate demand, but there is also a strong ideological element. Given that it seems more correlated with contemporaneous developments in the economy, I classify this change as *endogenous, demand management*.

Three capital tax changes were implemented — on 15<sup>th</sup>, 16<sup>th</sup> April and 1<sup>st</sup> August 1947. In some sense these appear reforms but they all have in common that they raise revenue and fall under the tax increases section of the Budget speech. In light of the Chancellor’s stated goal to more than offset the remissions and fortify the budget surplus he notes here: “My task now is to recover all, and more than all, the revenue I have lost”.<sup>41</sup> Because the purpose is to fortify the surplus, in light of previous discussions I classify these capital tax changes as *endogenous, demand management*.

There are also a number of consumption tax changes. Duties on fuel and gas oil were repealed on 15<sup>th</sup> April 1947 “to encourage the conversion of coal-burning plant to oil-burning plant”. This is classified as *exogenous, long-run*. Tobacco duties also rose on 16<sup>th</sup> April 1947 as “About 80 per cent. of our tobacco is imported from the United States; and, to satisfy this insatiable demand, we are drawing heavily and improvidently on the dollars which we earn with our exports, as well as on the proceeds of the American line of credit”.<sup>42</sup> This measure is therefore endogenous and to deal directly with the balance of payments deficit – thus

<sup>37</sup> HC Deb 15 April 1947 vol 436 c73

<sup>38</sup> Ibid.

<sup>39</sup> HC Deb 15 April 1947 vol 436 c84

<sup>40</sup> Ibid.

<sup>41</sup> HC Deb 15 April 1947 vol 436 c78

<sup>42</sup> HC Deb 15 April 1947 vol 436 c87

*endogenous, deficit reduction*. There are some minor changes to the duties on artificial silk on 1<sup>st</sup> May 1947, an *exogenous, ideological* change given the comment: “This, I have always thought, was a stupid and inappropriate tax in modern conditions”.<sup>43</sup> Finally there were some increases in the Purchase Tax on 16<sup>th</sup> April 1947 on items which worsen the fuel crisis, “In present circumstances, the exemptions can no longer be justified. Most of these appliances make heavy demands on the public gas and electricity services, where the effect of the fuel shortage is most acute and the need for economy most urgent.”<sup>44</sup> This change is clearly to influence demand and so is classified as *endogenous, demand management*. There are also some Purchase Tax remissions on the same date, favouring specific items for specific groups and these are thus categorised as *exogenous, ideological* based on their social nature.

## **1947: Budget 12<sup>th</sup> November 1947**

*Chancellor:* Hugh Dalton; *Prime Minister:* Clement Attlee (Labour)

### **Context**

The balance of payments situation had actually improved during 1946 but in 1947 the recovery was first hindered by the fuel crisis, cutting off power to large parts of industry for three weeks<sup>45</sup> and knocking between £100 and £200 million off exports during the year<sup>46</sup>. Secondly, convertibility had been restored on 15<sup>th</sup> July 1947 (one of the conditions of the 1946 dollar loan agreement) which precipitated a dollar drain so that, by August, most of the remaining loan had been used up (Woodward 2004) with the consequence that convertibility was suspended again on 20<sup>th</sup> August followed by a series of imports cuts in the late summer and early autumn. Both crises undermined the Government’s ability to deal with the external deficit. By the autumn the Government now began to accept the existence of excessive inflationary pressure (Dow 1964, p27). The April 1947 Budget had not been enough to deal with inflation and investment cuts were announced in October of about 1.5 per cent of GDP.<sup>47</sup> However, an autumn Budget was still required.

### **Overall Budget Objectives**

The overall motivation for the November Budget is best quoted in full from the introduction of Dalton’s speech: “We must strengthen still further, and without delay, our budgetary defences against inflation. This need arises from the decisions which His Majesty’s Government have taken... to increase exports and reduce imports, in order to narrow, as swiftly as we can, the very wide and dangerous gap in our overseas balance of payments... The effect of these decisions must be, if taken alone and unsupported by other measures, to increase the inflationary pressure by reducing the supply of goods available in the home market without, at the same time, reducing the total of purchasing power. To help to counteract this is the purpose

<sup>43</sup> HC Deb 15 April 1947 vol 436 c70

<sup>44</sup> HC Deb 15 April 1947 vol 436 c85

<sup>45</sup> Cairncross (1945), page 54.

<sup>46</sup> Ibid and Dow (1964) citing HC Deb. 7 Aug 1947, c1662.

<sup>47</sup> £200 million in nominal terms

of the proposals which I am making today”.<sup>48</sup> In executing this goal Dalton explained “We must reduce the total expenditure, and we must increase the total revenue. If there is a heavier inflationary pressure, we need a larger Budget surplus than would otherwise have had to be provided; just as if there were a heavy deflationary pressure, we should require a large budgetary deficit to counter it”.<sup>49</sup> Furthermore the Chancellor announced that the revenue should be raised simply and quickly and this framed the specific tax rises.

### **Budget Tax Measures November 1947**

Taxes were raised on business and consumption but not on income taxes.<sup>50</sup> From the headline motivations it is clear that all tax rises in this Budget were *endogenous, demand management*.

The major business tax change was a rise in the Profits Tax to 25 per cent on distributed and 10 per cent on undistributed profits, effective from 1<sup>st</sup> January 1947. It was also announced that, with effect from 12<sup>th</sup> November 1947, the deduction in computing profits from expenditure on certain advertisements would be restricted, raising £10 million (around 0.1 per cent of GDP) in a full year.

Customs and excise duties on beer, spirits, wines and betting were increased as of the 13<sup>th</sup> November 1946 (4<sup>th</sup> January 1948 in the case of pool betting). The Purchase Tax also rose on the 13<sup>th</sup> November.

These changes were estimated to raise about 1.5 per cent of GDP (£200 million) in a full year, a considerable sum.

### **1948: Budget 6<sup>th</sup> April 1948**

*Chancellor:* Stafford Cripps; *Prime Minister:* Clement Attlee (Labour)

#### **Context**

Hugh Dalton resigned on 13<sup>th</sup> November 1947 following a (minor by modern standards) leak of the November Budget’s contents to a journalist. However, the November 1947 Budget had set the tone for the following years.<sup>51</sup> After the crises of 1947, naturally both inflation and the external deficit shaped the 1948 Budget environment: “The very serious economic problems that confront us today fall into two broad groups; first, as to the balance of our external payments; and, second, as to the balance between our internal resources and the demands we place upon them”, said Cripps in the new Economic Survey section of the Budget speech. The

<sup>48</sup> HC Deb 12 November 1947 vol 444 c391

<sup>49</sup> HC Deb 12 November 1947 vol 444 c394

<sup>50</sup> It is useful to note the retrospective discussion of the motivation for previous years’ income tax cuts: “I do not propose today any change in the rates of Income Tax, either up or down. In each of my three previous Budgets I have given Income Tax reliefs of a varied character—relief in the standard rate, in the reduced rate, and in the personal allowances, including earned income relief, the child allowance, the special relief for married women's earnings, and the allowance for dependent relatives. In making those reductions I have been anxious to relieve large numbers on whom Income Tax pressed heavily, and also to increase incentive”. (HC Deb 12 November 1947 vol 444 c399)

<sup>51</sup> Dow (1964) comments that it was Dalton who first directed budgetary policy towards disinflation, and too little credit is given to him rather than his successor, Stafford Cripps.

rise in export volumes had not been as great as planned<sup>52</sup> – set back due to the production falls early in 1947 and 1947 had seen a drain on gold and dollar reserves. The agreement of the European Recovery Plan (the Marshall Plan) provided hope but it was clear to Cripps (as noted in his Survey) that this only bought time. On the domestic front, inflationary pressure could be observed in the excessive demand for labour and materials; costs, prices and wages all rose throughout 1947 and there was difficulty “devoting sufficient resources to those types of production which were the most urgent”.<sup>53</sup>

### **Overall Budget Objectives**

Addressing the external imbalance and halting the drain on reserves was a clear objective for 1948, though little is said of this in relation to taxation policy. The focus was more on import control (the “import programme”), although with comment of the need to “send more goods abroad even before satisfying our home market unless we can increase our production to meet both export and home demands”.<sup>54</sup>

Cripps believed “there will... almost certainly be a net increase in inflationary tendencies this year” and that while the inflationary problem is not the only one shaping the budget “it certainly is the most immediately important”. He goes on to make the clearest endorsement of demand management techniques than in any of the previous Labour budgets “there are two ways... by which inflationary pressure can be reduced – voluntary withholding of spending and Government taxation”.<sup>55</sup> Summarising the objectives Cripps states “The Budget must... have two main objectives—first, to obtain, with an equitable distribution of the load of taxation, a real and substantial surplus, which more than provides for all Government expenditure, capital and current, and leaves over a balance, to be used to counter the inflationary pressure; and second, so to adjust taxation as to encourage production, by providing a better incentive to producers”.<sup>56</sup> To prevent further inflation, personal consumption needed to be limited: “When the two claims [Government spending and investment] on national income that I have mentioned have been met, the remainder is available for personal consumption, and if inflationary pressure is to be avoided, personal consumption must be limited to this amount. Sufficient purchasing power must be with-held by taxation and by voluntary saving, to offset the purchasing power created by public expenditure and capital investment”.<sup>57</sup>

### **Major Budget Tax Measures**

In introducing his major measures, Cripps repeats the overall objectives of these “to give an excess of Government revenue over every kind of Government expenditure, so that that excess

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<sup>52</sup> Although, by this time demobilization was nearly complete – the percentage of the manpower in the armed forces fell from 24 per cent in 1945 to 4 per cent by 1948 (Dow 1964 p15). The volume of exports *had* been recovering, just not as well as hoped.

<sup>53</sup> HC Deb 06 April 1948 vol 449 c47

<sup>54</sup> HC Deb 06 April 1948 vol 449 c42

<sup>55</sup> HC Deb 06 April 1948 vol 449 c48

<sup>56</sup> *Ibid.*

<sup>57</sup> HC Deb 06 April 1948 vol 449 c47



can be used to counter the inflationary tendencies; and to provide the maximum incentive we can afford for greater production. The proposals that I am making must be considered as a balanced whole, and must not be taken one by one in isolation”.<sup>58</sup> However the overall result is a small rise in revenue overall: just under ½ per cent of GDP in a ‘full year’, much smaller than the increases in Dalton’s November 1947 Budget. The major tax rise, a tax on capital, was unlikely to directly affect consumption so, combined with income tax cuts, this Budget might actually have been mildly inflationary on the tax side.

Income taxes were cut to stimulate incentives and boost production (though focused on the social objectives of the Government – the poorest earners). As of 6<sup>th</sup> April 1948, three reliefs were given with the effect “What I have been anxious to do is to remove, as far as possible, the disincentive which arises from a high rate of taxation on marginal earnings”.<sup>59</sup> These are tricky cases as they are for long-run performance (and ideological objectives) but taken against the backdrop of needing to deal with the balance of payments. I categorise these as *endogenous, supply stimulus* measures.

A large part of the increased revenue came from capital taxes; a charge on investment income for higher earners was implemented on retrospective income only for the year beginning 6<sup>th</sup> April 1947. It was motivated as “those who possess large capital assets should make some contribution to help the country in this emergency. Some of them are now spending those assets in a manner that is distinctly inflationary in its effect”.<sup>60</sup> As justified by the Chancellor, this is an *endogenous, demand management* change.

The other main source of revenue was from consumption taxes. These changes are discussed in light of the general motivation outlined above. Duties on beer, spirits, wine, tobacco were raised on the 7<sup>th</sup> April 1948. Betting duties were also increased on the 7<sup>th</sup> April and 9<sup>th</sup> August 1948. I classify these as *endogenous, demand management*. Finally, there was a remission of the Purchase Tax on the 9<sup>th</sup> August 1948. This is tricky to categorise. The motivation appears to be in lowering prices (although in part with a social objective) “I am... most anxious to make some contribution to a lowering of prices, and, what is more important still, to provide some relief for the hard-pressed housewife”.<sup>61</sup> Later it is said that this relief will hopefully help the housewife create “the necessary morale for high industrial production”. But the former comment seems more tangible. This appears *endogenous, supply stimulus*, and this will be my primary classification.

These major changes made up over 90 per cent of the cuts and of the remissions.

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<sup>58</sup> HC Deb 06 April 1948 vol 449 c63

<sup>59</sup> HC Deb 06 April 1948 vol 449 c76

<sup>60</sup> HC Deb 06 April 1948 vol 449 c71

<sup>61</sup> HC Deb 06 April 1948 vol 449 cc67-9

## **1949: Budget 6<sup>th</sup> April 1949**

*Chancellor: Stafford Cripps; Prime Minister: Clement Attlee (Labour)*

### **Context**

According to the 1948 Economic Survey, 1948 was “a year of great and steady progress”.<sup>62</sup> The Chancellor reported some success in dealing with the inflationary pressures in 1948, the previous year’s objective “to bring about a comfortable, and not excessive, degree of disinflation... we have succeeded in doing, largely as a result of the considerable Budget surplus”.<sup>63</sup> There was a high demand for labour, with exports and production rising. The balance of payments even appeared to be moving into surplus.<sup>64</sup> However, there still remained “a serious and baffling problem in our dollar balance”.<sup>65</sup>

### **Overall Budget Objectives**

The Chancellor summarised his judgement as largely “more of the same”. The 1949 Budget was to follow a similar theme to the 1948 one: “it seems that we should follow the same general policy as last year for our Budget, though not with so sharp an accent upon the urgent need to check inflation. We shall certainly need an over-all balance on the right side, though not so large an over-all balance as we realised last year”.<sup>66</sup> As in 1948, the room for any tax remissions was small: “there is no room, this year, for any substantial alterations in taxation in a downward direction. The community as a whole will enjoy extra benefits this year in extended social services and defence measures, and cannot, therefore, have them over again in the form of remission of taxation”.<sup>67</sup> Indeed, imposing a special charge in relation to health services is discussed but dismissed at this time. Finally, the Economic Survey highlights the need for higher productivity. The Chancellor notes that, without further increases in the labour force, higher productivity will be required to boost production. The Chancellor therefore intended to hold inflationary forces at bay and in terms of tax changes this meant no significant remissions and some rises to ensure the “surplus”. However, the tax changes together implied a slight loosening of policy. In fact, most of the tax changes were remissions. The realised surplus at the end of the Budget speech was small. The measures themselves were a mixture of measures to raise revenue and some remissions for particular purposes. Given that the tax increases were small and did not offset the remissions I classify each remission on the basis of its own motivation and do not provide alternative classifications based on the overall Budget objectives.

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<sup>62</sup> Economic Survey for 1949, para.3; Dow (1964).

<sup>63</sup> HC Deb 06 April 1949 vol 463 c2070

<sup>64</sup> Dow (1964), Table 2.2 p.39.

<sup>65</sup> HC Deb 06 April 1949 vol 463 c2059

<sup>66</sup> HC Deb 06 April 1949 vol 463 c2078

<sup>67</sup> HC Deb 06 April 1949 vol 463 c2093

### Major Budget Tax Measures

The largest tax cut was the doubling of the initial allowance in respect of plant and machinery to be implemented on 6<sup>th</sup> April 1949. This remission was in response to “representations from many quarters”. The Chancellor explains “we are constantly stressing the need for higher productivity, and both sides of industry agree that one important factor in this is more and better mechanisation”.<sup>68</sup> I therefore classify this measure as *exogenous, long-run*.

A number of remissions were also made to consumption taxes, for various reasons. Tea and sugar duty was cut on 7<sup>th</sup> and 6<sup>th</sup> April 1949 respectively following the reduction in food subsidies; this is therefore an *endogenous, spending-driven* change<sup>69</sup>. Beer duty was cut on 7<sup>th</sup> April 1949 to counter falling demand “there has also been a marked falling off... in the consumption of beer over the last few months, due partly, no doubt, to the very high duty which has been imposed by successive Budgets”.<sup>70</sup> I loosely categorise this as *endogenous, demand management*. Similar comments<sup>71</sup> are made of wine duty and I therefore classify the changes to wine duty, implemented at the same time, similarly.

The tax increases were quite specific. Postal, telephone and telegraph charges increased on 1<sup>st</sup> May and 1<sup>st</sup> October 1949 respectively – which in part may “also help to reduce the pressure of demand” for these services.<sup>72</sup> I classify this as *endogenous, demand management*.

Some changes to taxation of occasional benefits<sup>73</sup> were also implemented on 6<sup>th</sup> April 1949 – described as “tidying up proposals” but raising £10 million of revenue (roughly 0.1 per cent of GDP). Again, based on the overall objectives, I classify this as *endogenous, demand management*. Finally, there was a consolidation of death duties on 30<sup>th</sup> July 1949 – billed as simplification<sup>74</sup> but raising £20 million (0.2 per cent of GDP) in a full year. Again, I classify this as *endogenous, demand management*.

### 1950: Budget 18<sup>th</sup> April 1950

*Chancellor:* Stafford Cripps; *Prime Minister:* Clement Attlee (Labour)

#### Context

In the summer of 1949 the United Kingdom suffered an exchange rate crisis. Trade had been affected by the recession in the United States and wider speculation had begun about devaluation of sterling.<sup>75</sup> In June and July the Government imposed import cuts but devaluation followed in September. Deflationary measures were introduced in October by the Prime Minister – consisting of investment and government expenditure cuts, with the

<sup>68</sup> HC Deb 06 April 1949 vol 463 c2097

<sup>69</sup> HC Deb 06 April 1949 vol 463 c2086

<sup>70</sup> HC Deb 06 April 1949 vol 463 c2096

<sup>71</sup> HC Deb 06 April 1949 vol 463 c2092

<sup>72</sup> HC Deb 06 April 1949 vol 463 c2094-5

<sup>73</sup> HC Deb 06 April 1949 vol 463 c2090

<sup>74</sup> HC Deb 06 April 1949 vol 463 c2095-6

<sup>75</sup> Dow (1964), p.41

investment cuts to come in by the second half of the next year.<sup>76</sup> Labour's majority was greatly reduced in the General Election of February 1950. However, in the Chancellor's 1950 survey he reported that exports had recovered "sharply" since September 1949.

### **Overall Budget Objective and Motivation**

The 1950 Budget contained few measures – the 'full year' cost of the measures was less than half a million pounds (less than 0.005 per cent of GDP). To that extent the Budget's tax objectives were modest. In spite of the Chancellor's positive survey of the progress in recent months, he was reluctant to introduce remissions for fear of inflation: "We must all be agreed that the present danger continues to be one of excessive spending or deficient saving<sup>77</sup> that is, of inflation".<sup>78</sup> He continued "we must continue to take the necessary measures to maintain that balance which is in constant danger of being upset<sup>79</sup>" by which Cripps meant continue to run a surplus. It was clearly the external balance which continued to weigh on the mind of the Chancellor — the Economic Survey 1950 states that "the balance of payments appears certain to remain the central economic problem in 1950 and many years ahead".<sup>80</sup>

### **Major Budget Tax Measures**

The Budget's overall policy was a cut in income tax roughly matched by a rise in fuel duty, together with a number of more minor measures; this left the overall stance essentially neutral. To this extent the Budget was simply a redistribution of taxation. However, given the overall objectives of the Budget, the case could be made that the revenue raisers were designed to offset the remissions for the purpose of demand management. In this latter case it makes sense to categorise all the remissions in the same way as the increases – otherwise an exogenous change will be correlated with an endogenous one. The main classification will take the justifications at face value. The alternative classification will then assign all changes as *endogenous, demand management*.

First, I deal with the major increases. The Purchase Tax treatment of commercial vehicles in the home market was changed from 1<sup>st</sup> May 1950. To help promote exports Cripps argued "despite all the efforts to control the number of these vehicles going on the home market by administrative methods, the excessive volume of home sales has continued, and so it has been decided to adopt fiscal measures to help to restrict demand on the home market and assist the industry to achieve the desired diversion of its output to exports".<sup>81</sup> This measure is then *endogenous, demand management* for balance of payments purposes. Petrol duties were raised from the 18<sup>th</sup> and 19<sup>th</sup> April 1950. As Cripps explained "I now come to a major matter

<sup>76</sup> H.C. Deb. 24 Oct. 1949 1018-9, cited in Dow (1964).

<sup>77</sup> At this point an amusing interjection is recorded of "An HON. MEMBER: "By the Government.""

<sup>78</sup> HC Deb 18 April 1950 vol 474 c62. At this point the Chancellor also makes a strikingly clear statement about demand management policy: "Excessive demand produces inflation and inadequate demand results in deflation. The fiscal policy of the Government is the most important single instrument for maintaining that balance".

<sup>79</sup> HC Deb 18 April 1950 vol 474 c67

<sup>80</sup> Economic Survey 1950, page 11.

<sup>81</sup> HC Deb 18 April 1950 vol 474 c73

which has a bearing upon our dollar balances as well as upon our domestic revenues”.<sup>82</sup> The measures related to fuel duties are therefore classified as *endogenous*, again for *demand management* and so assist the balance of payments.

At this point in his speech, taking all measures together (including some very minor revenue raisers), Cripps argued that the prospective surplus would now be larger than needed. As such this motivated some remissions in income tax. He said “whatever remissions we can manage must, and I hope we shall all agree on this, give proportionately more relief to those at the lower end of the income scale”<sup>83</sup> and this is what followed. “I have come to the conclusion that with reasonable optimism we could just manage to reduce the lower rates of Income Tax”.<sup>84</sup> This took effect from 6<sup>th</sup> April 1950. As this change is presented as an act of redistribution after the raising of other revenue, this change is classified as *exogenous, ideological*. However, the case could be made that the demand management tax increases were designed specially to offset the remissions. The two groups would therefore be correlated and I therefore adopt an alternative classification of *endogenous, demand management*.

These changes account for nearly 100 per cent of the increases and over 95 per cent of the remissions.

## 1951: Budget 10<sup>th</sup> April 1951

*Chancellor:* Hugh Gaitskell; *Prime Minister:* Clement Attlee (Labour)

### Context

Hugh Gaitskell replaced Cripps in October 1950. On the economic front, the outbreak of the Korean War in June 1950 precipitated large and rapid increases in defence expenditure. In addition, the world economy was already heading for a boom and the terms of trade had also moved against the UK. As a consequence commodity prices rose rapidly. These challenges were summarised in the 1951 Budget which identified three main challenges: the “massive defence programme”, “prices we have to pay for our imports have gone up so much more than the prices we get for our exports” and third “shortages of materials with the check they impose on higher production”.<sup>85</sup>

### Overall Budget Objectives

The effect of the above challenges on the balance of payments and inflation motivated action. The emphasis was on (and reveals a lot about the demand-led view of how the economy worked at that time) diverting resources to exports and defence and away from home consumption: “The task of the Budget in this situation is to ensure as far as possible that the necessary transfer of resources from producing for consumption to producing for defence and exports takes place swiftly and smoothly”.<sup>86</sup> The fear, Gaitskell continued, was that “if the

<sup>82</sup> HC Deb 18 April 1950 vol 474 c74

<sup>83</sup> HC Deb 18 April 1950 vol 474 c77

<sup>84</sup> Ibid.

<sup>85</sup> HC Deb 10 April 1951 vol 486 c826

<sup>86</sup> HC Deb 10 April 1951 vol 486 c828

Budget fails to limit expenditure accordingly, it will be a case of too much money chasing too few goods; excessive demand will either just lead to higher prices or it will pull more goods into the home market, but at the expense of exports or of defence or of investment”.<sup>87</sup> Gaitskell identified £150 million (about 1 per cent of GDP) as the shortfall in savings necessary which must be “made good by the Government”.<sup>88</sup> This figure rose to £170 million including changes to pensions, but £30 million extra savings were estimated as a result of tax changes below – so Gaitskell argued that only £140 million had to be found in order to reduce demand. It is clear that the overall objective was *endogenous, demand management*.

### **Budget Tax Measures**

In total the budget measures raised £138 million of the £140 million required in 1951, and £388 million in a ‘full year’. Given the above discussion, it makes sense to categorise all the Budget measures as *endogenous, demand management*. This differs from the Romer and Romer (2009) classification of tax rises in the United States around the time of the Korean War. They classify these measures as spending-driven on the strength of statements that higher taxation was to fund the war effort. However, the tax rises discussed in Romer and Romer closely match the extra spending required. This specificity and clear motivation – although obviously pertaining to similar mechanisms – is absent in the British Budget speech or Economic Survey. Policymakers were concerned with all forces worsening the balance of payments and the action was to alter home private demand, not specifically to lower the budget deficit (although this would be one consequence). Generally all the measures were tax rises (or net rises following some consequential losses). As all the measures together make up the £140 million earmarked for demand reduction, I classify all the measures as *endogenous, demand management*.

The standard rate of income tax and each of the two reduced rates were increased by 6d. However, this increase was done “in a manner which favours those with greater family responsibilities and who might otherwise suffer most hardship”.<sup>89</sup> Consequently, changes were made to the married, child and dependent relative allowances. Similarly, the top rate of surtax on incomes over £20,000 was lowered to prevent the combined top rate exceeding 19s. 6d. in the pound. These five measures should be taken together – in sum raising £81 million in a full year and implemented on 6<sup>th</sup> April 1951.

On business taxation ‘initial’ capital allowances were cut from 6<sup>th</sup> April 1952 as “it is for us to take action now so as to restrain investment in 1952 and later years”.<sup>90</sup> Furthermore “in present circumstances we simply cannot afford such substantial increases in dividends<sup>91</sup>” — as such the Profits Tax on distributed profits was increased from 30 to 50 per cent from 1<sup>st</sup> January 1951. Also, from the same date, certain public utility undertakings — which enjoyed complete exemption from Profits Tax — were to be charged at the lower rate of Profits Tax.

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<sup>87</sup> Ibid.

<sup>88</sup> HC Deb 10 April 1951 vol 486 c845

<sup>89</sup> HC Deb 10 April 1951 vol 486 c864

<sup>90</sup> HC Deb 10 April 1951 vol 486 c842

<sup>91</sup> HC Deb 10 April 1951 vol 486 c854

As a result of the rise in the Profits Tax, in the interests of fairness<sup>92</sup>, and from the same date, a concession increasing the allowance for directors' remuneration in certain director-controlled companies was announced. This measure is also *endogenous* as it follows the other measures to limit demand.

Consumption taxes were also increased to raise the revenue required: duty on hydrocarbon oils on 10<sup>th</sup> April 1951 ("I am satisfied that in our present circumstances there is a good case for a further contribution from this source to provide additional revenue<sup>93</sup>"), Entertainments Duty on 5<sup>th</sup> August 1951 ("I do not think it unreasonable to look to expenditure on entertainment for some modest contribution to the heavy cost of defence<sup>94</sup>") and the Purchase Tax on 11<sup>th</sup> April 1951 ("We need more revenue; that means taxing some articles at higher rates; in choosing the articles we must turn to those whose production for the home market we want to discourage because their production and sale at home is likely to conflict most seriously with the needs of export and defence<sup>95</sup>").

## 1952: Budget 11<sup>th</sup> March 1952

*Chancellor*: Richard Butler; *Prime Minister*: Winston Churchill (Conservative)

### Context

"A violent and disastrous change took place during 1951 in the overseas balance of payments" opens the Economic Survey for 1952. The last months of the Labour Government were dominated by the developing external crisis, caused mainly due "to a failure to foresee in full the consequences of the outbreak of the Korean War".<sup>96</sup> The main actions taken by the new Conservative Government – elected in October 1950 – were to impose import cuts and raise interest rates: a larger emphasis was to be placed on monetary policy which, to some extent, had been neglected by the previous administration. The new Chancellor was to argue in his 1952 Budget speech that "the state of the internal economy was such as to hamper the expansion of exports and to stimulate an increase of imports. Production did not increase so much as was expected and the [1951] Budget failed to produce any general decline in personal consumption".<sup>97</sup> In short, the backdrop for the 1952 Budget was once again the balance of payments situation.

### Overall Budget Objectives

The overriding theme of the Budget speech was therefore the balance of payments. At several points the situation is described as an "emergency". Methods for dealing with this were cuts in expenditure, direct action on import control and monetary policy, with the Bank Rate being

<sup>92</sup> HC Deb 10 April 1951 vol 486 c856

<sup>93</sup> HC Deb 10 April 1951 vol 486 c863

<sup>94</sup> HC Deb 10 April 1951 vol 486 c861; At face value this implies the motivation should be *endogenous, spending-driven*. However, given that this figure makes up the £138 million, it is treated as the latter. Either way the change is endogenous.

<sup>95</sup> HC Deb 10 April 1951 vol 486 c858

<sup>96</sup> Dow (1964) p.71.

<sup>97</sup> HC Deb 11 March 1952 vol 497 c1271

increased. The Chancellor, however, rejected more severe cuts in general consumption which would “result not in still higher exports, but in a further reduction of activity and employment, which we would all deplore”<sup>98</sup> – full employment still remained a key objective. This tension highlights the difficulty in unpicking the economic rationale in Butler’s Budgets. From a modern perspective, there is a distinct lack of clarity in the economic argument —perhaps mirroring Butler’s own comments about economics.<sup>99</sup> The set of remedial actions also reflected a change in economic philosophy from the previous Government: “high Government expenditure accompanied by high taxation themselves have an inflationary effect” and “commitments have been piled on commitments, and taxation has been raised to the ceiling... if this Budget is to fulfil its main function—to restore confidence in the pound—it must further reduce Government expenditure and make a significant start in reducing taxation”.<sup>100</sup> Taxation was seen as stifling for productivity – key to boosting production: “I am, therefore, asking that the nation should throw off some of its crippling load of expenses and taxes, and should go into action with its loins girt, inspired by the sense that if we work harder we can earn more.”<sup>101</sup> This particular medicine would become a central theme in later budgets. The approach taken in the Budget does not appear to be one of simple demand management in the aggregate; indeed on the tax side, despite the need to limit domestic consumption, the overall stance of the Budget was fairly neutral with the full year cost of the measures being a tax *cut* of about £55 million (0.3 per cent of GDP). There were also some large tax cuts within this total. I therefore look more closely at the individual measures.

### Major Budget Tax Measures

Income taxes were cut by nearly £230 million (1.4 per cent of GDP) in a ‘full year’. This took the form of reduced rates and higher allowances from 6<sup>th</sup> April 1952. The Chancellor stated “a true and lasting solution for our present troubles can be found only through increased production, harder work and increased output. It is by increased production and a new spirit of satisfaction in rewards well-earned that we shall pull through. I am convinced that the present weight of direct taxation, particularly on the lower and middle income groups, acts as a very positive discouragement to extra effort”.<sup>102</sup> The degree to which this is a long-term goal, implemented in this form irrespective of the current crisis (which would then be an exogenous, long-run measure<sup>103</sup>) and to what degree it is directly motivated by the current crisis is blurred. I err on the side of caution and classify these changes as *endogenous, supply stimulus*, even if

<sup>98</sup> HC Deb 11 March 1952 vol 497 c1284

<sup>99</sup> “It is customary in most Budget speeches to go deeply into economics and if I do not do that it may partly be through a lack of ability and training such as was so ably shown by my predecessor” (HC Deb 11 March 1952 vol 497 c1278)

<sup>100</sup> HC Deb 11 March 1952 vol 497 c1288

<sup>101</sup> Ibid.

<sup>102</sup> HC Deb 11 March 1952 vol 497 c1302

<sup>103</sup> For example, the Economic Survey 1952 notes “within this general framework [the balance of payments objectives] to adjust the burden of taxation in order to provide greater incentives to output”, p.44, and “one of the main purposes of the Budget was to help the kind of economic climate which actively fosters the growth of productivity” p.47. However in places, both in the 1952 and 1953 Economic Surveys, the freeing of industry was seen as an alternative to large reductions of “internal purchasing power” during 1952 (1953, p.6).



similar measures – in line with the new Government’s philosophy — might have been taken anyway. The Earned Income Relief and the single and married persons’ personal allowances were increased and reduced rates of income tax were changed. These remissions were for the tax year beginning 6<sup>th</sup> April 1952. Relief for small incomes was granted from the same date – although this was specifically “designed primarily to help retired people and people living on small fixed incomes<sup>104</sup>” and so I classify this as *exogenous, ideological*.

Turning to business taxation, an Excess Profits Levy (with compensating changes in Profits Tax which I treat together) was introduced at 30 per cent from 1<sup>st</sup> January 1952. The Chancellor stated “at a time like this sacrifices should be equally borne. We are not prepared to see excessive profits being made as a result of the injection of rearmament into the economy”.<sup>105</sup> This measure is correlated with both the increased defence spending and the resulting boom in the defence industry. As it directly follows the rise in defence expenditure it is correlated with that spending decision and I therefore classify it as *endogenous, spending-driven*.

With regards to consumption taxes, “since the main objective of the Budget is to relieve our balance of payments difficulties I must pay particular attention to a scarce product which costs us foreign exchange<sup>106</sup>” duty on hydrocarbon oils was cut from 11<sup>th</sup> March 1952. Since the purpose of this is to restrain demand this is *endogenous, demand management*. However, it does not appear to be to offset demand at an aggregate level, only on goods pressing particularly heavily on the balance of payments. As a targeted measure I assume this is then uncorrelated with the other exogenous decisions in the Budget.

These changes account for over 90 per cent of the increases and nearly 100 per cent of the remissions.

## 1953 Budget 14<sup>th</sup> April 1953

*Chancellor:* Richard Butler; *Prime Minister:* Winston Churchill (Conservative)

### Context

By the 1953 Budget, the balance of payments problem had receded. Of economic policy in 1952, the 1953 Economic Survey commented “the drain on reserves was brought to a stop and has since been reversed”.<sup>107</sup> The UK saw a significant improvement in its terms of trade and the Survey also notes that “price changes were probably responsible for something like half of the improvement... in the visible trade balance”.<sup>108</sup> Dow (1964) notes that by the beginning of 1953 “the successive repercussions of the Korean boom had largely worked through”.<sup>109</sup> On disinflationary policy, Butler said in his 1953 speech “The developments of 1952 have vindicated the strategy of the last Budget. Employment has been maintained; inflation has been

<sup>104</sup> HC Deb 11 March 1952 vol 497 c1304

<sup>105</sup> HC Deb 11 March 1952 vol 497 c1289

<sup>106</sup> HC Deb 11 March 1952 vol 497 c1295

<sup>107</sup> Economic Survey for 1953, paragraph 2.

<sup>108</sup> Economic Survey for 1953, paragraph 14.

<sup>109</sup> Dow (1964) p.75.

checked; we have created room to expand exports and we have a surplus on the balance of payments". The backdrop to the 1953 Budget was thus a good deal more positive than the previous year.

### **Overall Budget Objectives**

In light of the current situation, the Chancellor seemed to believe that output would return to pre-crisis levels, though put rather pessimistically "we are unlikely to do much more than make good the decline in output of last year".<sup>110</sup> This was a budget to boost longer-term productivity, not offset a contemporaneous shock (which is reflected in the recovery of the economy through 1952). In conclusion the Chancellor declared: "I can now sum up my proposals in this incentive Budget".<sup>111</sup> The emphasis on productivity and the longer term can be seen in the Chancellor's statement: "Latterly our productive capacity has been increasing steadily; and with continuing investment it will go on increasing and is capable of giving us a much greater increase in output, in 1953, provided we take the right course now. We must look beyond the immediate export difficulties and, whatever happens, plan ahead to improve our competitive position."<sup>112</sup> The time and opportunities we now have must be used to re-equip and modernise our factories, to expand capacity in lines which command a ready market abroad, and to develop new lines and new techniques".<sup>113</sup> Again, given the blurring of longer-term supply-side reforms and the language of expansion and stimulus, classification is tricky. But in 1953 there appear much clearer grounds for classifying supply-side reforms as *exogenous, long-run*. Overall, this "incentive Budget" cut taxes by over £400 million (2.3 per cent of GDP) in a full year so as to "step out from the confines of restriction, to the almost forgotten but beckoning prospects of freer endeavour and greater reward for effort".<sup>114</sup> There is also allusion to the fact that monetary policy will take a stronger role in the regulation of demand "we shall continue to use the monetary weapon to assist in keeping this form of demand within reasonable bounds".<sup>115</sup>

### **Major Budget Tax Measures**

Income tax rates were cut by 6d. Motivating this cut, the Chancellor explained "I have already referred to the numbing effect of excessive direct taxation. We must banish the hopeless feeling that extra effort is not worthwhile. I have looked for a method which will relieve corporate industry and which will not forget the vital human element".<sup>116</sup> I therefore classify this cut as *exogenous, long-run*. However, accompanying this were two more minor measures

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<sup>110</sup> HC Deb 14 April 1953 vol 514 c49

<sup>111</sup> HC Deb 14 April 1953 vol 514 c60

<sup>112</sup> And Government was diagnosed as part of the problem: "The fact that we have not been getting the best out of our productive capacity springs in part from our terrible burden of taxation, which is about the highest in the world. Even after this Budget we shall not have "let up" to a level which can be called even moderate. All reliefs are carefully designed for the prime purpose of giving the incentive for greater production". (HC Deb 14 April 1953 vol 514 c61)

<sup>113</sup> HC Deb 14 April 1953 vol 514 c49

<sup>114</sup> HC Deb 14 April 1953 vol 514 c62

<sup>115</sup> Ibid.

<sup>116</sup> HC Deb 14 April 1953 vol 514 c59

“of more human interest”<sup>117</sup> – an increase in the income limit for age relief which “will bring some relief to certain older deserving sections of the community” and an increase in the dependent relative and housekeeper allowances: “these proposals will be in line with one of our most cherished traditions: they help those who maintain family unity by caring for the old and keeping a home together for the young”.<sup>118</sup> These latter two measures I therefore classify as *exogenous, ideological*. All income tax measures were implemented on 6<sup>th</sup> April 1953.

Turning to business taxation, following the discussion of productivity in industry (cited above) the Chancellor restored initial allowances for capital expenditure from 14<sup>th</sup> April 1953. Secondly, there was a cut in the Excess Profits Tax from 1<sup>st</sup> January 1954. In introducing this change the Chancellor said “It is clear that we should, in a great industrial society, look ahead for a period longer than one year. We must be in deadly earnest in this struggle for overseas markets; we must go into it as lightly burdened and as nimbly competitive as we can”.<sup>119</sup> It is also noted that the reasons for the levy no longer applied as before – excess profits on the basis of rearmament. The implication is that now the levy is an unnecessary burden and a date is thus fixed for removal of this “emergency tax”<sup>120</sup>. I classify both these measures as *exogenous, long-run*.

Finally, consumption taxes were cut. The Purchase Tax was reduced on 14<sup>th</sup> April 1953. In justification Butler notes: “With the return of more normal conditions the burden of Purchase Tax at very high rates now presses almost unbearably on trade and on the community as a whole”.<sup>121</sup> I therefore classify this measure as *exogenous, long-run*.

These changes account for nearly 100 per cent of the cuts. There were no increases in the 1953 Budget.

## 1954: Budget 6<sup>th</sup> April 1954

*Chancellor:* Richard Butler; *Prime Minister:* Winston Churchill (Conservative)

### Context

1953 was a year of growth. According to the 1954 Economic Survey, GDP was 4 per cent higher in real terms than in 1952. The tax cuts in the 1953 Budget aided the recovery of home demand and “raised output considerably”. As discussed above, it is unclear whether the remissions were designed to boost demand in response to conditions or whether a longer-term supply-side stimulus was desired – rhetoric in the 1953 Budget suggested the latter.<sup>122</sup> In assessing the outlook faced at the Budget, the Survey says “demand and activity should therefore be well maintained, and production should be higher in 1954 as a whole than in

<sup>117</sup> HC Deb 14 April 1953 vol 514 c57

<sup>118</sup> Ibid.

<sup>119</sup> HC Deb 14 April 1953 vol 514 c58

<sup>120</sup> HC Deb 14 April 1953 vol 514 c59

<sup>121</sup> HC Deb 14 April 1953 vol 514 c52

<sup>122</sup> And the 1954 Economic Survey sates “the 1953 Budget was accordingly directed towards stimulating... a further growth of production at home and providing incentives for higher productivity” (page 35).

1953".<sup>123</sup> There were, however, some concerns about recession in the United States "so far production in the U.S.A. has fallen about as far as it did during the recession of 1948-49; and we do not know whether it will fall further before it recovers".<sup>124</sup>

### **Overall Budget Objectives**

The objectives of the 1954 Budget are nicely summarised by the Chancellor: "the economy should be well able to respond to any increases in demand, in particular of overseas demand, which may occur. Thus, there is no cause for making this Budget especially tough or more disinflationary. We need not impose harsh new taxes, since an increase in the level of taxation on initiative and enterprise would hold down and impede, rather than stimulate and spur on, our drive for productivity and exports". On the other hand, he argued "I judge that it would be unwise at present to stimulate purchasing power by remissions of taxation designed to increase personal consumption". The changes "I am now going to describe are necessarily concentrated on granting certain special claims to relief and on increasing the incentive to productive investment".<sup>125</sup>

### **Budget Tax Measures**

In line with the Chancellor's "carry-on Budget"<sup>126</sup>, there were only four Budget tax measures with revenue consequences. In all these cost only £10 million in a full year (0.06 per cent of GDP). Capital taxes were cut on 30<sup>th</sup> July 1954. Butler had "examined a considerable number of anomalies, and alleged anomalies, in other parts of the Estate Duty field"<sup>127</sup> and some small consequential changes were made costing a quarter of a million pounds. More substantially, some extra reliefs were given on Estate Duty, as "I think that business assets are a type of property on which the Estate Duty can bear with special severity, particularly in the case of family businesses, whose traditional activities mean so much for the stability of our social and industrial life".<sup>128</sup> All these changes I classify as *exogenous, long-run*.

In the field of business taxation, the Chancellor returns to "our primary need: that is, to improve our competitive power. In my survey of last year I have already commented on the inadequate level of investment by private industry. Our rate of industrial modernisation is strikingly less than that of America, and it seems probable that the Germans are now moving ahead of us. We shall not long continue to compete successfully in the export field with these, our principal rivals, unless our plant and equipment is completely up-to-date".<sup>129</sup> Consequently, improvements were made to the capital allowances system – replacing the 'initial' allowances with an investment allowance as of 6<sup>th</sup> April 1954. I classify this change as *exogenous, long-run*.

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<sup>123</sup> Economic Survey for 1954, paragraph 100.

<sup>124</sup> HC Deb 06 April 1954 vol 526 c213

<sup>125</sup> HC Deb 06 April 1954 vol 526 cc217-8

<sup>126</sup> HC Deb 06 April 1954 vol 526 c227

<sup>127</sup> HC Deb 06 April 1954 vol 526 c223

<sup>128</sup> Ibid.

<sup>129</sup> HC Deb 06 April 1954 vol 526 c224

Finally there was a remission of Entertainments Duty on 30<sup>th</sup> May 1954. The Chancellor notes the need to modify duty, “I have been impressed by the difficulties which many cinemas have recently been experiencing as a result of increasing costs which are not matched by increasing receipts”.<sup>130</sup> This is a change to provide long-term support for a sector – accordingly I classify it as *exogenous, long-run*.

### **1955 (A): Budget 19<sup>th</sup> April 1955**

*Chancellor:* Richard Butler; *Prime Minister:* Anthony Eden (Conservative)

#### **Context**

The Economic Survey 1955 reports that 1954 was “a prosperous year”: GDP was estimated to have risen 4 per cent in real terms<sup>131</sup> and “the increase in production last year was the result of significant increases in both employment and output per man”.<sup>132</sup> In the event, the slowdown in the United States did not transmit over to the U.K. However, this boom had consequences for the balance of payments. Dow (1964) reports “expansion was soon to get badly out of hand”.<sup>133</sup> The Economic Survey reported that “late in 1954 and early 1955... imports were rising sharply in value, while exports lagged behind”.<sup>134</sup> Measures were taken in response to this. At the end of January the Bank Rate was raised, with a further increase a month later. Hire purchase restrictions – abolished in July, were reintroduced. These measures “were designed to moderate the expansion of home demand and thereby both to limit demand for imports and give added encouragement to exports”.<sup>135</sup>

#### **Overall Budget Objectives and Motivation**

The 1955 Economic Survey argued “at home the main objective of economic policy is to ensure that, while the level of purchasing power is not so high as to interfere with the growth of exports... adequate incentives are provided for long-run expansion”.<sup>136</sup> On the external situation, the Chancellor declared “the situation has been brought under control”, implying that little needed doing. It is noteworthy that the Chancellor favoured monetary policy over tax raising policies which entailed “cramping or distorting the natural vigour of the economy”.<sup>137</sup> It is against these comments that we must evaluate the £156 million (0.8 per cent of GDP) of tax cuts contained in the April 1955 Budget. In his Budget ‘judgement’ the Chancellor states: “If we are to achieve the full increase in production of which the economy is capable, we must continue to provide encouragement to the whole productive effort of the country. We must seek fresh incentives to the forces of growth by the stimulation of output and productivity”.<sup>138</sup>

<sup>130</sup> HC Deb 06 April 1954 vol 526 c221

<sup>131</sup> Economic Survey for 1955, paragraph 33.

<sup>132</sup> Economic Survey for 1955, paragraph 49.

<sup>133</sup> Dow (1964), page 78.

<sup>134</sup> Economic Survey for 1955, paragraph 71.

<sup>135</sup> Economic Survey for 1955, paragraph 73.

<sup>136</sup> Economic Survey for 1955, paragraph 97.

<sup>137</sup> HC Deb 19 April 1955 vol 540 c40

<sup>138</sup> HC Deb 19 April 1955 vol 540 c55

Given that a pure demand management approach would have called for tax rises, and given the tone of these statements, the overall approach appears one of supply-side reform and many measures below are thus classified as *exogenous, long-run*.

### Major Budget Tax Measures

The April 1955 Budget was an income tax cutting Budget, at a cost of £153 million in a ‘full year’. There was a 6d. cut in the standard rate and 3d. off the reduced rates of income tax from 6<sup>th</sup> April 1955. It is worth quoting the motivation in full: “some of these proposals would, on margin, make no vital difference to consumer demand, but would give much needed and much deserved encouragement to individual households. So, if my first task is to lighten the sheer burden on the economy, I can think of one measure only which would enable me to combine with these objectives the type of direct incentive which I am seeking — one measure only which would be regarded as the most positive and heartening encouragement to all, employers and workers alike, who can contribute energy and enterprise to the development of the economy. This is a simple orthodox reduction of 6d. in the standard rate of Income Tax, together with appropriate reductions in the lower rates...the reduction ...will be accompanied by 3d. off each of the reduced rates”.<sup>139</sup> I therefore classify these rate cuts as *exogenous, long-run*.

Income tax relief was also provided to particularly deserving groups. Increases in the personal allowance followed (“I have been impressed by the principles which lie behind its proposals for relief for the smaller incomes”<sup>140</sup>) and similar changes for small investment incomes (“a class very deserving of help”<sup>141</sup>). Note that I count investment income tax as a capital income tax. As “further evidence of my firm intention to do all I can to help parents of families” the child allowance was increased and “I propose to remove the special earnings limit applying to apprenticed children so that the same income limit will apply to all children”.<sup>142</sup> Based on these comments, I classify these measures as *exogenous, ideological*. All income tax measures were implemented on 6<sup>th</sup> April 1955.

These changes accounted for nearly 100 per cent of the remissions. There were no tax increases.

## 1955 (B): Supplementary Budget 26<sup>th</sup> October 1955

*Chancellor:* Richard Butler; *Prime Minister:* Anthony Eden (Conservative)

### Context

A supplementary and contractionary Budget was required just 6 months after April 1955. The Economic Survey 1956 notes that, although the world economic situation was favourable to the U.K., the balance of payments deteriorated significantly. It states: “this external weakness was the result of home demand rising to the point at which our productive capacity was

<sup>139</sup> HC Deb 19 April 1955 vol 540 c59

<sup>140</sup> Ibid.

<sup>141</sup> HC Deb 19 April 1955 vol 540 c60

<sup>142</sup> Ibid.

overstrained”.<sup>143</sup> Monetary policy had been the Chancellor’s weapon of choice in February but by the summer “monetary policy was not operating as rapidly as had been expected”.<sup>144</sup> That said, the sizable April income tax reductions could hardly have helped matters although it is notable that these preceded the May General Election. In July a set of restrictive measures were introduced, including requests to banks to make a reduction in advances, limiting the capital programmes of local authorities and nationalised industries and tighter hire-purchase controls.

### **Overall Budget Objectives**

The Chancellor put a gloss on matters in the Budget speech: “The fact that my speech will include budgetary matters may lead hon. Members to think that things are more difficult than they had imagined. Actually, there has been a distinct improvement during the past month”<sup>145</sup>, but this did not alter the fact that there were tax rises of over £110 million (0.6 per cent of GDP), largely reversing the April cuts. The Chancellor noted the excessive demand and conceded that this required action — action that could have been delayed until 1956, but “this Government are determined to restore the balance of the economy without delay”.<sup>146</sup> In introducing his measures, the Chancellor explained “the progressive operation of credit policy will now be reinforced by further, and more direct, measures, designed to restrain demand in both the public and the private sectors of the economy and to reduce expenditure on both investment and personal consumption”.<sup>147</sup> The overall policy was clearly *endogenous, demand management*.

### **Budget Tax Measures**

In addition to some reigning-in of government capital expenditure, and incentives given to National Savings to relieve the pressure on demand, the Chancellor decided that “some direct restraint on consumption is also required”.<sup>148</sup> For this purpose he singled out the Purchase Tax with a general increase in the rates, some widening of the base and a few other adjustments. The overall effect was to raise £75 million (0.4 per cent of GDP) in a ‘full year’. The measure was implemented on the 27<sup>th</sup> October 1955. There is little doubt that this was an *endogenous, demand management* measure.

The other major tax rise was a 5 per cent increase in the Profits Tax on distributed profits, effective from 1<sup>st</sup> November 1955. In justifying this increase the Chancellor argued: “at a time when our resources are overloaded and the demand for the products of industry exceeds the supply, the level of profits can contribute to this excess demand. It is, therefore, appropriate that profits should make some contribution to the effort of restraint which is required of all sections of the community”.<sup>149</sup> The tax was not applied to undistributed profits “since to do so

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<sup>143</sup> Economic Survey for 1956, paragraph 66.

<sup>144</sup> Economic Survey for 1956, paragraph 68.

<sup>145</sup> HC Deb 26 October 1955 vol 545 c202

<sup>146</sup> HC Deb 26 October 1955 vol 545 c203

<sup>147</sup> HC Deb 26 October 1955 vol 545 c210

<sup>148</sup> HC Deb 26 October 1955 vol 545 c221

<sup>149</sup> HC Deb 26 October 1955 vol 545 c225

would tend to impede the necessary replacement of capital assets and to discourage future investment rather than current consumption”.<sup>150</sup> This measure is also classified as *endogenous, demand management*<sup>151</sup>.

## 1956: Budget 17<sup>th</sup> April 1956

*Chancellor:* Harold Macmillan; *Prime Minister:* Anthony Eden (Conservative)

### Context

By the start of 1956 the U.K. was still in an inflationary position and during 1955 lost nearly £230 million (1.2 per cent of GDP) in gold and dollar reserves. In February 1956 the Government announced more measures to restrain domestic demand: the Bank Rate was raised, public capital expenditure was limited, hire purchase controls were tightened and subsidies on bread and milk were reduced.<sup>152</sup> There was one tax measure, the suspension of investment allowances and I deal with this below. However, by the time of the Budget, the Chancellor noted in his speech that the reserves had been improving – and as Dow (1964) notes, the atmosphere at the start of 1956 “was not one of crisis”. However, in describing the internal domestic situation the Chancellor still described the U.K. situation as exhibiting the symptoms of “severe inflation”.<sup>153</sup>

### Overall Budget Objectives

There is not one clear section of the Budget speech linking the economic situation to an overall tax strategy – sometimes called the “Budget judgement”. A theme running through the speech is, however, the need to tackle the excess demand and restore balance to the external situation. In typically Keynesian language “the object of present economic policy, whatever weapons are employed, must be to switch some labour and resources from less necessary to basic production — from production for home consumption to production for export”.<sup>154</sup> In other words: limit home demand, limit imports and boost exports. Boosting production, like previous Budgets, was also still seen as an important check on inflation: “the problem of inflation cannot be dealt with just by cutting down demand; the other side of the picture is the need for increasing production”.<sup>155</sup> The central judgement in restricting demand was on the size of the budget surplus: “today, we are mainly concerned with another instrument which I have in my hand—the Budget and the Budget policy. Is a surplus of £445 million enough? Is it too much?”<sup>156</sup> The required surplus was to be achieved by cuts in expenditure and some tax rises. Spending cuts appeared to come first: “if I had not been fortified by the willingness of my

<sup>150</sup> HC Deb 26 October 1955 vol 545 c226

<sup>151</sup> The Economic Survey for 1956 – in typically Keynesian language – notes “The object of raising the purchase tax was not simply to check home expenditure on the goods concerned but to limit consumer spending in general, so as to free resources for additional exports” (paragraph 70).

<sup>152</sup> Economic Survey for 1956, paragraph 81.

<sup>153</sup> HC Deb 17 April 1956 vol 551 c856

<sup>154</sup> HC Deb 17 April 1956 vol 551 c871

<sup>155</sup> HC Deb 17 April 1956 vol 551 c860

<sup>156</sup> HC Deb 17 April 1956 vol 551 c873



colleagues to co-operate in this task [to cut expenditure], I would have felt it my duty to propose very heavy increases in taxation”.<sup>157</sup> There was an acute focus on savings: “this is a savings Budget”<sup>158</sup>, however, it was the overall level of savings that mattered for demand: “what matters, of course — the only thing that matters — is whether the total amount of saving by the whole nation, whether compulsory or voluntary, is sufficient to meet the needs of investment, and what Budget surplus is required to make that certain”.<sup>159</sup> In seeking to achieve this, the Chancellor sought to stimulate private, as well as public savings. Tax cuts which favoured savings were therefore used as a method of reducing demand. Overall the measures in this Budget were therefore *endogenous, demand management*.

### Major Budget Tax Measures

The tax measures can be split into remissions designed to raise savings (and lower demand) and tax rises directly aimed at lowering consumption. In a sense it is then misleading to look at the overall balance of tax policy decisions which – including the £4 million saving from the suspension of investment allowances in February – only totalled just over £12 million (0.06 per cent of GDP). However, within this total both the tax cuts and rises were designed to reduce demand.

Before coming to these measures, I deal with the February measure to suspend investment allowances on the 18<sup>th</sup> February 1956. The Chancellor announced to Parliament: “there is general agreement that the combined demands of investment and consumption are growing too fast for our economic health. This has held back our exports, swollen our imports, forced us into balance of payments deficit, helped to reduce our reserves by a quarter, and driven up our domestic price level... We must make an even more determined attack on the roots of the trouble and enforce still further reductions in investment and consumption.”<sup>160</sup> Being a measure to reduce investment demand, I categorise it as *endogenous, demand management*.

In the Budget itself there were five remissions on capital (including capital income taxes) tax. In introducing his section on savings, Macmillan argues: “If we are to get our balance of payments ‘out of the red’ and restore an adequate margin on the right side; if we are to press on with investment in the means of production at home and overseas, our first and most urgent need is to restore, maintain and develop, among all classes of our people, the habit of saving”.<sup>161</sup> He subsequently goes on to announce “the new weapons”<sup>162</sup> for bringing this about. There were four income tax measures: exemption of the first £15 of Savings Bank interest, exemption of the capital element in purchases annuities, relief for premiums for retirement annuities and exemption of investment income of funds for retirement annuities and reassured superannuation funds. There was one measure on stamp duty: “There is no better

<sup>157</sup> HC Deb 17 April 1956 vol 551 c885

<sup>158</sup> HC Deb 17 April 1956 vol 551 c888

<sup>159</sup> HC Deb 17 April 1956 vol 551 c864

<sup>160</sup> HC Deb 17 February 1956 vol 548 cc2666-68

<sup>161</sup> HC Deb 17 April 1956 vol 551 c874

<sup>162</sup> HC Deb 17 April 1956 vol 551 c876

stimulus to saving than house ownership”.<sup>163</sup> The income tax measures came in on 6<sup>th</sup> April 1956 and the stamp duty remission was implemented 1<sup>st</sup> October 1956. All these measures were to stimulate savings *to reduce demand*. I therefore classify these as *endogenous, demand management*.

The tax increases totalled nearly £60 million (0.3 per cent of GDP) and were roughly equally divided between consumption and business taxes. These tax rises were introduced by arguing that, although the remissions should lower demand, the surplus must still be fortified: “Even in so good a cause I cannot allow my surplus to be reduced by this £20 million. Moreover, I want not merely to maintain the surplus but to increase it. I want to send a message which really will be understood that we are determined to protect the pound; determined to overcome our present difficulties”.<sup>164</sup> In achieving the higher surplus, from 1<sup>st</sup> April 1956 the Profits Tax on undistributed profits increased by 1 ½ per cent and distributed profits by 2 ½ per cent. In addition, tobacco duty was raised on the 18<sup>th</sup> April 1956 “I am sure that part of the additional revenue which I need at the present time can best be obtained from this source”.<sup>165</sup> These two measures were to reduce overall demand, so are classified as *endogenous, demand management*.

### **1957: Budget 9<sup>th</sup> April 1957**

*Chancellor:* Peter Thorneycroft; *Prime Minister:* Harold Macmillan (Conservative)

#### **Context**

The measures taken in 1956 had been designed to check the inflationary pressures. In summarising their effect, the 1957 Economic Survey was to state: “on the whole this policy was successful... the main features of the economy in 1956 were the progressive check to consumption, and the fact that exports expanded more than internal demand, while imports remained stable”.<sup>166</sup> The Survey attributed the check to consumer spending largely to Government policy. In December 1956, however, came the Suez crisis. This generated an oil shortage following the closure of the Suez Canal and the Iraq Petroleum Company pipeline. Petrol and oil consumption needed to be restrained and taxes were raised at the start of December – I deal with these measures below. Eden was to resign over Suez and Thorneycroft replaced Macmillan as Chancellor, having himself become Prime Minister. However, Thorneycroft was to state in his review of 1956-57 “these events [the Suez crisis] in fact affected our commercial position less than might have been expected”.<sup>167</sup>

<sup>163</sup> HC Deb 17 April 1956 vol 551 c879

<sup>164</sup> HC Deb 17 April 1956 vol 551 c886

<sup>165</sup> HC Deb 17 April 1956 vol 551 c887

<sup>166</sup> Economic Survey for 1957, paragraph 75.

<sup>167</sup> HC Deb 09 April 1957 vol 568 c966

### Overall Budget Objectives

The Chancellor was to explain “after making full allowance for the factors I have mentioned [in the review], I see some grounds for cheerfulness”.<sup>168</sup> Disinflationary policies of the last 18 months, he argued, had brought the temperature of the economy back to a more normal level and the Chancellor saw now as a good time “not for standing still, but for going forward. Expansion must be the theme”.<sup>169</sup> In summarising his “Budget Objectives”, Thorneycroft set out three goals: “greater industrial efficiency and competitiveness”; “the provision of better incentives and opportunities for initiative and effort”; and “the easing of the pressure of the tax system where this bears most heavily on individuals and families”.<sup>170</sup> He emphasised that room for manoeuvre was limited but it seems policy was to be directed towards supply-side reform, engendering a longer term expansion of the economy. Almost all the measures outlined below will therefore be *exogenous*.

### Budget Tax Measures

Taxes were cut by over £130 million (0.6 per cent of GDP) in a ‘full year’. About a quarter of these “will take the form of assistance to our important trading operations overseas”, a quarter “will take the form of additional incentives”, another quarter “will give some measure of relief from the burden of indirect taxation” and the remainder “is designed to give some general easement of the tax burden”.<sup>171</sup> Based on these statements, it appears the majority of measures in this Budget were *exogenous*.

On business taxation, exemptions were made for the profits of overseas trading corporations, from 6<sup>th</sup> April 1957. The Chancellor saw this as a “justifiable reform in our tax system and a legitimate help to companies that plough back their profits overseas in competition with those that operate under easier tax laws”.<sup>172</sup> The goal was improvement of the competitive position of companies and is classified as *exogenous, long-run*. Investment allowances were also reintroduced and increased specifically for ships from 10<sup>th</sup> April 1957. This act was to recognise the specific needs of the industry “faced with severe competition in a world market, often from ships sailing under flags of convenience with small tax liabilities”.<sup>173</sup> This appears an attempt to improve the competitiveness of the industry and so I classify it as *exogenous, long-run*.

Income tax allowances were cut from 6<sup>th</sup> April 1957. Exemption limits for the over 65’s were raised as “I am sufficiently impressed by the case of the old to feel that I should take some action this year”<sup>174</sup> and “as a second step, I propose an improvement in the “age relief” arrangements”.<sup>175</sup> Child allowances for older children were also increased as “children, particularly if they continue in full-time education, cost more as they grow older”.<sup>176</sup> Being

<sup>168</sup> HC Deb 09 April 1957 vol 568 c982

<sup>169</sup> Ibid.

<sup>170</sup> HC Deb 09 April 1957 vol 568 c988

<sup>171</sup> HC Deb 09 April 1957 vol 568 c1000

<sup>172</sup> HC Deb 09 April 1957 vol 568 c992

<sup>173</sup> HC Deb 09 April 1957 vol 568 c995

<sup>174</sup> HC Deb 09 April 1957 vol 568 c996

<sup>175</sup> Ibid.

<sup>176</sup> HC Deb 09 April 1957 vol 568 c997

targeted at social objectives, these three reliefs are classified as *exogenous, ideological*. A change in relation to Surtax “also stems from a recommendation of the Royal Commission. It, too, is based upon the proposition that the responsibilities of marriage can be costly”.<sup>177</sup> This is also classified as *exogenous, ideological* and was implemented retrospectively for the tax year starting 6<sup>th</sup> April 1956.

A final income tax measure relates to tax treatment of incomes above £2,000. The Chancellor argued “in few countries in the world is there less incentive to increased effort after the £2,000 figure has been passed”<sup>178</sup> and set about implementing a change to the Earned Income Relief: “we are determined that in the society which we seek to create there should always be room at the top. There must be rewards there, too”.<sup>179</sup> This measure is primarily to improve incentives and for long-run performance. I therefore classify this as *exogenous, long-run*.

Turning to consumption taxes, the previous year the then Chancellor had given assurances to undertake a comprehensive review of the whole structure of Entertainments Duty: “no one has pretended for some time that the present arrangements for the duty are logical or satisfactory”.<sup>180</sup> In response to this review various changes were made to reform the duty: concessions were given for living theatre, sports, cinemas and indoor entertainments in rural areas<sup>181</sup>. These changes were to modernise the duty by granting social concessions and I therefore classify these as *exogenous, ideological*. They were implemented on 1<sup>st</sup> August 1957. Duty changes to television and radio licences were also introduced from 5<sup>th</sup> May 1957 as “television has, in recent years, grown to be a powerful competitor with other entertainments and I have had to consider whether it is bearing a share of taxation comparable with its rivals”.<sup>182</sup> This being a reform of these licences in response to long-run changes in the industry, I classify it as *exogenous, long-run*.

Purchase Tax remissions were implemented on 10<sup>th</sup> April 1957 “designed to benefit the ordinary householder and, in particular, those families with low incomes who may fail to derive advantage from taxation relief in other fields”.<sup>183</sup> I therefore classify this as *exogenous, ideological*.

Finally, I deal with the hydrocarbon tax rise imposed the previous December. Fuel duty was increased on 4<sup>th</sup> December 1956. During the speech that day, the Chancellor stated: “the interruption of oil supplies from the Middle East and the dislocation caused by the Suez Canal crisis will add a fresh burden to our balance of payments. We must, therefore, increase our external income, and, at the same time, keep internal demand under restraint”. He went on “in present circumstances a commodity as precious as oil now is should effectively be guarded by taxation as well as by rationing”.<sup>184</sup> At the time it was made clear it would be temporary<sup>185</sup>

<sup>177</sup> HC Deb 09 April 1957 vol 568 c998

<sup>178</sup> HC Deb 09 April 1957 vol 568 c999

<sup>179</sup> HC Deb 09 April 1957 vol 568 c1000

<sup>180</sup> HC Deb 09 April 1957 vol 568 c989

<sup>181</sup> HC Deb 09 April 1957 vol 568 c990

<sup>182</sup> HC Deb 09 April 1957 vol 568 c989

<sup>183</sup> HC Deb 09 April 1957 vol 568 c993

<sup>184</sup> HC Deb 04 December 1956 vol 561 cc1054-55

and raised £30 million. The measure was reversed at Budget 1957 (with a one-off loss of £10 million estimated). I treat these changes as a single temporary measure raising £20 million, with an end date on 9<sup>th</sup> April 1957 (the day it was removed). The measure is clearly endogenous – as it correlated with the oil shortages and was aimed at limiting demand. I therefore classify it as *endogenous, demand management*.

## 1958: Budget 15th April 1958

*Chancellor:* Derick Heathcoat-Amory; *Prime Minister:* Harold Macmillan (Conservative)

### Context

1957 was marked by a sterling crisis. The Economic Survey 1958 notes “several promising developments in the United Kingdom economy during 1957”, but that “the year as a whole was dominated by the crisis of confidence in sterling which came to a head in August and September”.<sup>186</sup> The Survey attributed the beginnings of the crisis to rumours about world-wide readjustments in exchange rates triggered by devaluation of the franc in August. Although it also notes the uneasiness with sterling following speculation that wage inflation would lead to general price inflation. Thorneycroft appeared to share this latter view, stating in a House of Commons debate “the value of the pound at home and the value of the pound abroad is, in the last resort, the same thing”.<sup>187</sup> Thorneycroft introduced a series of measures on 19<sup>th</sup> September 1957: the Bank Rate was raised from 5 to 7 per cent, clearing banks agreed to restrict the level of bank advances, steps were taken to hold down public investment and the Government attempted to take the lead in offsetting any rise in wages of its own employees with economies elsewhere.<sup>188</sup> The September measures — both in the Economic Survey for 1958 and elsewhere<sup>189</sup> — were regarded as having worked, at least in restoring confidence in sterling. However, Thorneycroft resigned in January along with other Treasury ministers, in objection to increased government expenditure.

### Overall Budget Objectives

The new Chancellor’s summary of the situation was not one of crisis, nor did it stress the need for immediate corrective measures. The Chancellor’s forecast for 1958 was cautious; home demand should “on the whole, remain firm” but he noted some possible export difficulties and slowing of industrial production. However, he said “I do not believe that a sudden sharp recession in this country during the coming months is likely”.<sup>190</sup> In terms of overall Budget policy the Chancellor stated: “In the light of all this it is clear that it is too soon yet to

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<sup>185</sup> In the debate on the 10<sup>th</sup> December (HC Deb 10 December 1956 vol 562 c35) the Chancellor said: “This is a temporary Measure arising out of the present shortage of oil, and the increase will be applied no longer than is justified on that account. In any case, I shall review this temporary increase, like all other taxation, at the time of the Budget”

<sup>186</sup> Economic Survey for 1958, paragraph 1.

<sup>187</sup> HC Deb 29 October 1957 vol 575 c46

<sup>188</sup> Economic Survey for 1958, paragraph 2.

<sup>189</sup> See Dow (1964) page 102.

<sup>190</sup> HC Deb 15 April 1958 vol 586 c51

contemplate any general relaxation on the economic front”.<sup>191</sup> Keeping inflation at bay and maintaining the stability of the external situation clearly weighed heavily on the Budget judgement. However, in summarising his objectives, the Chancellor also mentioned the nation’s competitiveness as exporters, higher savings and investment, fair taxes and a reduction in the heavy burden of taxation.<sup>192</sup> In this sense the 1958 Budget followed a similar theme to previous Conservatives Budgets. In introducing his tax proposals the Chancellor said “I think that I can justifiably give up some small amount of revenue if, by so doing, I can strengthen our economy at one or two points, improve our tax system, and deal with several cases of special need”.<sup>193</sup> In conclusion the Chancellor notes “these measures taken together amount to a not inconsiderable step forward in simplification and reform”.<sup>194</sup> The overarching motivations therefore appear *exogenous*.

### Major Budget Tax Measures

Major tax remissions came in the business and consumption tax fields. The Purchase Tax was reduced on 16<sup>th</sup> April 1958. In response to long-running problems with the tax: “I have come to the conclusion that the most helpful thing that I can do is to simplify the tax and to adjust it to a more sensible pattern”.<sup>195</sup> I classify this change – as it is for the purposes of modernising and simplifying the tax system – as *exogenous, long-run*.

The Entertainments Duty was also lowered on 4<sup>th</sup> May 1958. This measure is endogenous as it responds to industry representations that “attendances at cinemas, which had been declining for some years, have in the last financial year fallen much more sharply”.<sup>196</sup> However, this is tricky to categorise as the tone taken by the Chancellor is not one of bolstering demand for cinemas “if people prefer to occupy more of their leisure time in other forms of entertainment and less in film-going, some reduction in the number of cinemas seems inevitable. However, I am satisfied that the present level of the duty is, in the changed circumstances, now too high and should be substantially reduced”.<sup>197</sup> Although couched in terms of reform and help for industry, the impetus for the measures is the change in the current environment. I therefore err on the side of caution and classify this as *endogenous, demand management*.

There were three changes in business taxes, totalling £37 million (0.2 per cent of GDP) in remissions. Laws relating to ‘dividend stripping’ were strengthened to protect revenue. They were implemented retrospectively on 26<sup>th</sup> October 1955, dating back to announcements “that the Government would not hesitate to legislate against subsequent attempts at dividend stripping”.<sup>198</sup> This is classified as *exogenous, long-run*. Initial allowances for investment were increased on 15<sup>th</sup> April 1958. Several references to the importance of

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<sup>191</sup> HC Deb 15 April 1958 vol 586 c54

<sup>192</sup> HC Deb 15 April 1958 vol 586 c59

<sup>193</sup> *Ibid.*

<sup>194</sup> HC Deb 15 April 1958 vol 586 c74

<sup>195</sup> HC Deb 15 April 1958 vol 586 c72

<sup>196</sup> HC Deb 15 April 1958 vol 586 c68

<sup>197</sup> HC Deb 15 April 1958 vol 586 c69

<sup>198</sup> HC Deb 15 April 1958 vol 586 c61

investment for competitiveness and exports can be found in the Budget; with specific reference to this measure the Chancellor notes: “when I used to work in industry I learnt the prudence of writing off the capital cost of new plant reasonably quickly, so as to be in a position to replace it by something still better when it turned up. I am sure that that is the right policy for British industry in general”.<sup>199</sup> This is therefore a measure for the long-run benefit of British industry and is classified as *exogenous, long-run*. The final business tax measure was a “considerable reform in company taxation”.<sup>200</sup> The split rates on distributed and undistributed profits were replaced by a single rate. The Chancellor explained that this is important for “modernising and expanding our industrial system”, listing various ways it will strengthen industry and remove distortions.<sup>201</sup> As a long-term tax reform, I classify this as *exogenous, long-run*. This change to profits tax was implemented on the 1<sup>st</sup> April 1958.

These changes account for nearly 85 per cent of the remissions. The tax increases raised very small amounts of revenue.

### **1959: Budget 7<sup>th</sup> April 1959**

*Chancellor:* Derick Heathcoat-Amory; *Prime Minister:* Harold Macmillan (Conservative)

#### **Context**

By the summer of 1958 the economy was turning down. Industrial production had fallen three percentage points compared with the year before and labour demand was lower than in the 1952 recession.<sup>202</sup> The 1959 Economic Survey notes “in the early part of the year the Government continued restraints... by about the middle of the year it became clear that some increase in home demand was needed to combat the down-turn... accordingly the Government took a series of steps designed to raise home demand”.<sup>203</sup> An increase in initial allowances (dealt with below) was added to the 1958 Finance Act; the limits on bank advances were lifted in July; public investment was increased from August; hire purchase restrictions were modified in September and removed in October; and the Bank Rate was reduced to 4 per cent by November. By the end of the year there were signs that these measures had produced a rise in demand.<sup>204</sup>

#### **Overall Budget Objectives**

The Chancellor notes the previous “steps to encourage some expansion of activity”<sup>205</sup>; the June announcement on initial allowances is mentioned in this context. In terms of the overall strategy for the 1959 Budget, the Chancellor notes that although demand and production had been rising as a result of last year’s measures “it might slow down in the second half of the

<sup>199</sup> HC Deb 15 April 1958 vol 586 c66

<sup>200</sup> HC Deb 15 April 1958 vol 586 c64

<sup>201</sup> HC Deb 15 April 1958 vol 586 c65

<sup>202</sup> Dow (1964) page 104.

<sup>203</sup> Economic Survey for 1959, paragraph 1.

<sup>204</sup> Dow (1964) page 105. Economic Survey for 1959, paragraph 2.

<sup>205</sup> HC Deb 07 April 1959 vol 603 cc30

year”<sup>206</sup>, furthermore “the prospect for home production as I have set it out does not represent a full enough use of the capital resources which have been created in recent years. Nor can we be content with the possibility that unemployment might continue at around the present levels allowing for seasonal changes”.<sup>207</sup> In summary, “I have come to the conclusion that it would be right for me to seek, through the Budget, to give a further limited but effective impetus to the expansion of our economic activity”.<sup>208</sup> Noting the slack in the economy, the rise in unemployment and strength of statements about the need for remissions to stimulate the economy, the tax cuts below are largely classified as *endogenous, demand management*.

### **Budget Tax Measures**

#### *Pre-Budget Measures*

I first deal with the increase in initial allowances added to the 1958 Finance Bill. The original April 1958 proposal was not explicitly argued as a measure to return economic activity to trend or to offset a shock — it was framed in terms of providing long-run incentives to industry. The Chancellor’s language in announcing the increased measures on the 17<sup>th</sup> of June — backdated to 15<sup>th</sup> April 1958 — is equally cagey “it is very desirable, as I said in my Budget speech, that plans for investment in industry should continue to be made with confidence if we are to be in a position to exploit the opportunities that lie ahead. Weighing the various factors which I have to take into account, I have come to the conclusion that it would be well to make some increase in the practical encouragement which I sought to give to industrial investment by improvement in the initial allowances”.<sup>209</sup> In the debate, it is clear that the Labour opposition regarded this as a stimulus to investment demand in the face of a deteriorating situation. In the debate Labour leader Harold Wilson asked the Chancellor to clarify whether this is an anti-recession measure but the Chancellor provided a suitably cryptic answer: “our policies are flexible and we shall change our policies whenever we feel that change is required in the light of changing circumstances”.<sup>210</sup> Based on this debate the measure seems endogenous, even if the original initial allowances measure in the Budget was not meant to be countercyclical. The question is whether this is a supply or demand stimulus. In hindsight, the 1959 Economic Survey notes “the Government took a series of steps [during 1958] designed to raise home demand and thus to encourage the resumption of economic growth”.<sup>211</sup> Initial allowances are then mentioned. I thus classify the measure as *endogenous, demand management*.

#### *Major Budget Tax Changes*

Three tax cuts made up over 90 per cent of the remissions in 1959 and, tellingly, there were no tax increases. Income taxes were cut from 6<sup>th</sup> April 1959: 9d. in the standard rate and 6d. in each of the reduced rates. This measure is described as a “stimulus”<sup>212</sup> but there is also

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<sup>206</sup> HC Deb 07 April 1959 vol 603 cc44

<sup>207</sup> HC Deb 07 April 1959 vol 603 cc44-45

<sup>208</sup> HC Deb 07 April 1959 vol 603 cc47-48

<sup>209</sup> HC Deb 17 June 1958 vol 589 c1001

<sup>210</sup> HC Deb 07 April 1959 vol 603 c1018

<sup>211</sup> Economic Survey for 1959, paragraph 1.

<sup>212</sup> HC Deb 07 April 1959 vol 603 c58



discussion of how income tax tends to “discourage effort and initiative” and being “glad this year to be able to do something to lessen those effects”.<sup>213</sup> This may suggest it is an endogenous, supply stimulus measure – however, given all the emphasis placed on demand in the budget analysis, and the motivating discussions for tax cuts, I classify this as a stimulus to demand – *endogenous, demand management*.<sup>214</sup>

A variety of consumption tax cuts were also used to stimulate demand. The Purchase Tax was reduced on the 8<sup>th</sup> April 1959; this will “give a material measure of relief to the consumer”.<sup>215</sup> For further reductions in the “cost of living” the Chancellor turned to alcohol taxes and reduced the duty on beer. Secondary objectives are given for why this was a good tax to cut, although the overall objective remains the delivery of sizable aggregate remissions. On these two measures the Chancellor notes “these reductions in the Purchase Tax and the Beer Duty will spread widely part of the benefits of the reduction in the burden of taxation which I am able to make in this Budget, and they will make a useful contribution in keeping down the cost of living”.<sup>216</sup> Given these are “major proposals”,<sup>217</sup> following the overall judgement and the comments about impacting the “cost of living” I classify these as *endogenous, demand management*. The cut in Beer Duty was implemented on 8<sup>th</sup> April 1959.

## 1960 Budget 4<sup>th</sup> April 1960

*Chancellor:* Derick Heathcoat-Amory; *Prime Minister:* Harold Macmillan (Conservative)

### Context

Total demand had turned down in 1957 and unemployment was to reach its peak in January 1959. At the beginning of 1959, it was estimated that there was still “considerable reserves of capacity” and the Budget of 1959 provided “a more powerful stimulus to the economy than any since the war”.<sup>218</sup> During 1959 GDP had risen by 3 to 4 per cent, industrial production was nearly 10 per cent higher in the last quarter of 1959 than a year earlier, employment rose and unemployment fell.<sup>219</sup> The Economic Survey for 1960 notes that “most of the increase in output was, however, achieved through the fuller use of existing capacity... with virtually no increase in prices as a whole”. However, the Survey also noted that by 1960 “there were signs... that if growth in total home demand were left altogether unchecked, too much strain might be put on productive resources and on the balance of payments”.<sup>220</sup> Recognising this, the Bank Rate had been raised in January.

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<sup>213</sup> Ibid.

<sup>214</sup> A clear indication of the demand-emphasis can be seen in this section of the speech: “How large an increase in demand can our economy safely absorb? And what action on my part will be necessary, allowing for direct and indirect effects, to produce an increase in demand of that order?” ( HC Deb 07 April 1959 vol 603 c48)

<sup>215</sup> HC Deb 07 April 1959 vol 603 c55

<sup>216</sup> HC Deb 07 April 1959 vol 603 c57

<sup>217</sup> HC Deb 07 April 1959 vol 603 c53

<sup>218</sup> Cairncross (1992), page 111.

<sup>219</sup> Economic Survey for 1960, part 2, paragraphs 7-9.

<sup>220</sup> Economic Survey for 1960 page 5, paragraph 3.

### Overall Budget Objectives

The Chancellor explained that “if we look at the economy as a whole there are some dangers that expansionary forces already in the economy could lead to overloading”.<sup>221</sup> Furthermore “My own judgment is that the prospective increase in demand arising from the factors I have mentioned is likely at least fully to absorb, and might even involve a danger of outrunning, the increase in production which can be expected”.<sup>222</sup> The Chancellor explained that there was a need “for a moderate amount of restraint on the economy and [I] have referred to the additional expenditure which we are likely to have to meet during this year”.<sup>223</sup> The conclusion was no net reduction in taxation, rather some “modest net increases”.<sup>224</sup> The tone of the speech also treats many of the remissions as exogenous but these had to be offset in the aggregate; I therefore include an alternative classification of *endogenous, demand management* for these measures.

### Major Budget Tax Measures

The overall strategy was modest *net* tax rises and “such a policy, in my judgment, is justified both by the present buoyant level of activity and the prospective expenditure with which I am confronted”.<sup>225</sup> The Chancellor set about describing his proposals to deliver a *net* increase in taxation.

The two (sizable) tax rises were an increase in the Profits Tax from 1<sup>st</sup> April 1960 and a rise in Tobacco Duty from 5<sup>th</sup> April 1960. Together these measures raised over £100 million (0.4 per cent of GDP) in a full year. In terms of the latter the Chancellor argued “I have decided that I must look to the Tobacco Duty for the additional revenue I need this year”.<sup>226</sup> And following this, “I have decided also to propose an increase in the Profits Tax”<sup>227</sup>, noting that although it “will not bring in any appreciable amount of revenue this year. But the knowledge that the higher tax in respect of current profits will have to be provided for will influence the decisions of managements, and will thus have an immediate effect on the economy”.<sup>228</sup> These two measures are clearly endogenous. It is tricky to decide whether they are spending-driven or for demand management. In the spirit of checking the growth in demand, and that spending decisions had already been taken separately from the decisions over these taxes, I classify these measures as *endogenous, demand management*.

There were, however, just over £30 million of remissions. Three changes to income tax allowances for the housekeeper, dependent relatives and widows and widowers were implemented on the 6<sup>th</sup> April 1960. These changes were for social objectives: “I have very little scope this year, but I am glad to be able to propose some useful alleviations for people

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<sup>221</sup> HC Deb 04 April 1960 vol 621 c44

<sup>222</sup> HC Deb 04 April 1960 vol 621 c45

<sup>223</sup> HC Deb 04 April 1960 vol 621 c52

<sup>224</sup> Ibid.

<sup>225</sup> HC Deb 04 April 1960 vol 621 c64; On Government spending the Chancellor also notes: “The things the nation wants — better education, more up-to-date hospitals, new roads, and so on — are all expensive. And if we demand them, then we must be ready to pay for them” (c47).

<sup>226</sup> HC Deb 04 April 1960 vol 621 c63

<sup>227</sup> Ibid.

<sup>228</sup> Ibid.

with responsibility for young children who have lost one or both of their parents, and for others who support old or infirm relatives”<sup>229</sup> and so are classified as *exogenous, ideological*. However, as these had to be offset to generate net tax increases, I provide an alternative classification in common with the tax rises, as *endogenous, demand management*. As an administrative change to deal with some difficulties in income tax and National Insurance collection: “I have come to the conclusion, after a good deal of study, that the only practicable solution is to have a flat-rate allowance for all adult employees”.<sup>230</sup> I classify this measure as *exogenous, long-run* (together with an alternative classification as above). It was also implemented on the 6<sup>th</sup> April 1960.

On capital taxes, changes on reliefs for Estate Duty on gifts were made and while “there can be no question this year of major changes, but I can propose two reforms which, I think, will make the incidence of the duty more equitable”.<sup>231</sup> Again, this is a social objective and I classify it as *exogenous, ideological* (with an alternative classification as above). The changes were implemented on 4<sup>th</sup> April 1960.

On consumption taxes, some modernisation and simplification was carried out to Alcohol Duty on wine from 5<sup>th</sup> April 1960 (“The duties on heavy wines are still out of line to some extent and the position is unsatisfactory, both for the trade and for the revenue. I now propose to complete this reform of the wine duty structure by reducing the rates for imported heavy wines” and “in conformity with the new structure, the excise duty on British wines will be reduced”<sup>232</sup>), playing cards from 4<sup>th</sup> April 1960 (“The duty of 3d. on a pack of playing cards is now outdated, playing cards being chargeable with Purchase Tax. I therefore propose to abolish this duty”<sup>233</sup>) and tobacco dealers’ licences from 1<sup>st</sup> October 1960 (“I propose to simplify the collection of tobacco retailers’ licences”). These measures are reforms to the tax system, so I classify them as *exogenous, long-run* (again with the above alternative classification).

Finally, Entertainments Duty (which was reduced in the previous year to help cinemas) was abolished on 10<sup>th</sup> April 1960 as “the steep decline in attendances has continued during the past year and many more cinemas have closed”.<sup>234</sup> This change would seem endogenous as it was to boost demand for cinemas as well as to help the industry. As it lowers the prices and is to deal with falling attendance I classify this measure *endogenous, demand management*. There were some changes to the repayments of Post-war Credits but, as discussed in the introduction, I exclude these.

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<sup>229</sup> HC Deb 04 April 1960 vol 621 c60

<sup>230</sup> Ibid.

<sup>231</sup> Ibid.

<sup>232</sup> HC Deb 04 April 1960 vol 621 c53

<sup>233</sup> HC Deb 04 April 1960 vol 621 c52

<sup>234</sup> HC Deb 04 April 1960 vol 621 c54

## 1961: Budget 17<sup>th</sup> April 1961

*Chancellor:* Selwyn Lloyd; *Prime Minister:* Harold Macmillan (Conservative)

### Context

The restrictive measures during 1960 were actually monetary: the Bank Rate rise in January then June, the April hire-purchase restrictions, and the use of special deposit requirements. The Economic Survey for 1961 was to argue that “largely as a result of these measures, the rise in home demand slowed down considerably after the first quarter of 1960”.<sup>235</sup> However, imports rose and exports fell, worsening the balance of payments. Heathcoat Amory retired in July to be replaced by Selwyn Lloyd. Mr Lloyd was to note in his speech “the other side of the medal was the dangerously high pressure of demand on productive resources, the signs of a return of increasing costs and prices, the failure of our exports to increase sufficiently, and the consequent serious weakness in our balance of payments”.<sup>236</sup>

### Overall Budget Objectives

In setting objectives the new Chancellor singled out “the first and obvious need is a marked improvement in our balance of payments”<sup>237</sup> and “we have a long way to go in fostering the growth of our exports. We must ensure that opportunities are not lost because there is an overload of domestic demand on our productive resources”.<sup>238</sup> Furthermore “the danger of chronic cost inflation from which we suffered up to 1958 has reappeared”.<sup>239</sup> In summing up his judgement, the Chancellor argued that the “broad effect of the Budget must be counter-inflationary”<sup>240</sup> but that encouragements to investment must continue and “I must also consider whether any additional incentive to effort and initiative can be provided”.<sup>241</sup> There appears to have been a dual focus on *endogenous, demand management* and some *exogenous* changes. However, the remissions led the Chancellor to seek offsetting revenue and so, as before, I will include an alternative classification for these seemingly exogenous measures of *endogenous, demand management*.

### Budget Tax Measures

The Chancellor first dealt with a number of concessions. Some alterations to the income tax allowances for National Insurance contributions were made from 6<sup>th</sup> April 1961. These were described as giving “relief for the taxpayer in the matter of the tax allowance for National Insurance contributions”<sup>242</sup> and so in an otherwise deflationary Budget I classify this as *exogenous, ideological*. However, as discussed above, I provide an alternative classification of *endogenous, demand management* (the classification of the increases).

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<sup>235</sup> Economic Survey for 1961, paragraph 1.

<sup>236</sup> HC Deb 17 April 1961 vol 638 c797

<sup>237</sup> Ibid.

<sup>238</sup> HC Deb 17 April 1961 vol 638 c798

<sup>239</sup> Ibid.

<sup>240</sup> HC Deb 17 April 1961 vol 638 c801

<sup>241</sup> Ibid.

<sup>242</sup> HC Deb 17 April 1961 vol 638 c810

Income tax relief was also granted in respect of payments by the German Government as compensation to victims of Nazi persecution. The Chancellor noted “there is undoubtedly considerable sympathy for the recipients of these payments and I have decided to put forward a clause in the Finance Bill to authorise relief because of the very special circumstances of these cases”.<sup>243</sup> I classify this as *exogenous, ideological* (and with the alternative classification). Implementation was backdated to the 6<sup>th</sup> April 1956.

Two measures were proposed for Surtax: “In the modern world, the work of the manager, the scientist, the technologist is of increasing importance, not only to himself but to the community. In other countries there are much higher rewards for individual effort and skill. Therefore, I want to do what I can to ensure that the present incidence of Surtax does not act as a disincentive to those who have positions of responsibility in our industries and elsewhere in our national life”.<sup>244</sup> The earned income relief allowance was raised and a further earnings allowance introduced. Both measures took effect from 6<sup>th</sup> April 1961. The purpose was to reward and stimulate effort and incentives; I classify these as *exogenous, long-run* (but with an alternative classification).

On capital taxes, a simplification was made to Stamp Duty on bills of exchange from 1<sup>st</sup> August 1961: “It has been represented to me that the complications in calculating this duty are an obstacle to trade, particularly the export trade. I have come to the conclusion that we ought to get rid of the ad valorem scale”.<sup>245</sup> This appears a long-run reform to aid exporters and I classify it as *exogenous, long-run* (again with the alternative classification).

As discussed above, the economic situation called for a deflationary stance. The Chancellor argued that all remissions had to be more than covered by increases, “having regard to the economic circumstances of which I have already spoken, I have decided that this surplus is not enough...I have, therefore, decided to raise an additional £80 million of tax”.<sup>246</sup> There was an increase in the Profits Tax: “in the circumstances of today, I propose to cover by far the greater part of the cost of the Surtax remission by increasing the Profits Tax by 2½ per cent with effect from 1st April, 1961”.<sup>247</sup> Consumption taxes were also increased: Television Advertising Duty was raised on 1<sup>st</sup> May 1961 (“I propose to look to expenditure on television advertising for a modest contribution to the Exchequer”<sup>248</sup>); motor vehicle duties were altered on 18<sup>th</sup> April 1961 (“Next, I have decided to turn to Vehicle Excise Duties, where the revenue has been very buoyant recently and where the rates have not been raised for some years”<sup>249</sup>); and finally Hydrocarbon Duty was increased on 17<sup>th</sup> April 1961 (“my third proposal for obtaining extra revenue relates to the hydrocarbon oil duty”<sup>250</sup>). Referring back to the overall objectives which frame this, I classify all these increases as *endogenous, demand management*.

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<sup>243</sup> HC Deb 17 April 1961 vol 638 c812

<sup>244</sup> HC Deb 17 April 1961 vol 638 c820

<sup>245</sup> HC Deb 17 April 1961 vol 638 c813

<sup>246</sup> HC Deb 17 April 1961 vol 638 c817

<sup>247</sup> HC Deb 17 April 1961 vol 638 c822

<sup>248</sup> Ibid.

<sup>249</sup> Ibid.

<sup>250</sup> HC Deb 17 April 1961 vol 638 c818

## 1962: Budget 9<sup>th</sup> April 1962

*Chancellor:* Selwyn Lloyd; *Prime Minister:* Harold Macmillan (Conservative)

### Context

Up to July 1961, expenditure (household and government) rose rapidly. By the middle of the year, the Economic Survey noted that there was excess pressure of home demand, inflationary pressures and a balance of payments deficit (which the previous 1961 Budget had seemingly not stemmed). The pound had been vulnerable to speculation, especially after the revaluation of German and Dutch currencies in March, and in July 1961 the Government announced measures designed to restore confidence. This included a 10 per cent surcharge on the customs and excise duties which I deal with below. Other measures included a check on the growth of expenditure, an increase in the Bank Rate, credit restrictions and calls for a pause to increases in wages, salaries and dividends. The Economic Survey for 1962 was to note “these measures rapidly restored confidence in sterling... At home the pressure of demand slackened between July and the end of the year”.<sup>251</sup>

### Overall Budget Objectives

Following the measures in 1961, the 1962 Budget outlook was cautiously optimistic. In reviewing the year the Chancellor said “we still have a considerable way to go to achieve a satisfactory surplus on our balance of payments... Nevertheless, the underlying position is now sounder; the movement of our costs is under better control, and the pressure of home demand is not excessive”.<sup>252</sup> What other measures could be taken? Incomes policies were seen as an important tool (“keeping the way clear for the growth of exports also means continuing and developing the incomes policy”<sup>253</sup>) but direct export incentives were ruled out. Changes in the Bank Rate were again viewed as important. But in terms of overall budgetary policy little is said, only statements such as “we should not, through the Budget, give such a further stimulus to home demand as would endanger the expansion of exports”.<sup>254</sup> Following a set of (relatively small) tax remissions the Chancellor evaluated his options: “I have come to the conclusion that this [the resulting] borrowing requirement is about right, and that I should not, at this stage, in the Budget, add to or withdraw purchasing power”.<sup>255</sup> However, in maintaining the tight fiscal stance, many of the changes will be categorised as *endogenous*, *demand management*. As before, to guard against the possibility that seemingly exogenous remissions are correlated with endogenous changes, I provide an alternative demand management classification for the exogenous changes.

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<sup>251</sup> Economic Survey for 1962, paragraphs 9 and 11.

<sup>252</sup> HC Deb 09 April 1962 vol 657 cc964-965

<sup>253</sup> HC Deb 09 April 1962 vol 657 c965

<sup>254</sup> HC Deb 09 April 1962 vol 657 c967

<sup>255</sup> HC Deb 09 April 1962 vol 657 cc984-985

### Major Budget Tax Measures

I first deal with the Customs and Excise surcharge which had been applied on 26<sup>th</sup> July 1961. This applied a 10 per cent surcharge to beer, spirits, wine, purchase tax, tobacco, hydrocarbons, television licences and betting duties. The purpose was to limit demand, curb inflation and deal with the balance of payments problems. On the 25<sup>th</sup> July 1961 the Chancellor argued: “home demand has continued to increase and is likely to increase even more than was then foreseen... Simultaneously with the increase of pressure on our domestic resources, we are faced with a critical external situation. This is the third successive year in which our overall balance of payments has been in deficit, and this is, clearly, not a situation which can be allowed to continue”.<sup>256</sup> Estimates were only given for the total revenue raised by this measure. I therefore estimate the relative contributions of each tax – given that it was a 10 per cent across the board rise – based on the shares of each tax type in overall Customs and Excise revenue from the 1962 FSBR.

By April 1962 the Chancellor had to decide what to do with the surcharge. Each year the power to impose a surcharge – the so called ‘Regulator’ had to be renewed and the Chancellor argued that it should be again. However, to avoid remitting the near £200 million (0.7 per cent of GDP) of purchasing power<sup>257</sup>: “I therefore propose... to impose rates of indirect taxation which will give in this financial year a yield broadly equivalent to that which would have resulted had the present surcharge remained in force for the whole year”.<sup>258</sup> I exclude the revenue loss estimates given in 1962 from ending the surcharge and set the 10<sup>th</sup> April 1962 as the end date for the temporary measure introduced in July 1961. I also make use of the original ‘full year’ estimate from July. Based on statements from the July speech, the surcharge was *endogenous*, and for *demand management* purposes.

Duty rates were therefore raised on the 10<sup>th</sup> April 1962 to consolidate the surcharge level. There were some adjustments in implementation such as limiting the rise in fuel duty. However, in the aggregate, these changes closely replicated the revenue from the surcharge and I thus continue to classify them as *endogenous*, *demand management* as the Chancellor clearly still deemed them necessary.

The consolidation of the Purchase Tax was more complicated as revenue was raised in a way which also reformed the tax: there was some broadening of the base and rates changes. The Chancellor argued that “it will be seen that I am not making these changes for the yield, but to make the tax more sensible and less discriminatory”<sup>259</sup> although the ultimate reason for raising the revenue was to avoid remissions of purchasing power – as stated in several places earlier in the speech. I therefore continue the original classification as *endogenous*, *demand management*. The additional revenue raised by the changes to the Purchase Tax, over and above the offsetting of the surcharge, was about £30 million. The Budget concessions, all minor changes, are justified by exogenous motives: they totalled £20 million. This means that the additional reforms to the Purchase Tax more than offset the minor concessions, reinforcing

<sup>256</sup> HC Deb 25 July 1961 vol 645 c219

<sup>257</sup> HC Deb 09 April 1962 vol 657 cc984-985

<sup>258</sup> HC Deb 09 April 1962 vol 657 cc985-986

<sup>259</sup> HC Deb 09 April 1962 vol 657 c992

the Chancellor's claims that there should be no overall remissions in 1962 for fear of overheating. As the increases offset the (minor) remissions, I also provide an alternative classification for the minor changes as *endogenous, demand management*.

These changes account for nearly 100 per cent of the increases. The remissions — other than the removal of the surcharge — were small.

### **1963: Budget 3<sup>rd</sup> April 1963**

*Chancellor:* Reginald Maudling; *Prime Minister:* Harold Macmillan (Conservative)

#### **Context**

Despite the previous Budget's about economic prospects in 1962, exports slowed and unemployment began to rise in the second half of the year. Cairncross (1994) argues that Maudling, the new Chancellor in July 1962, had been reluctant to make policy changes too soon "anxious to avoid giving the impression of a change in policy".<sup>260</sup> Monetary policy had, however, been eased even prior to the 1962 Budget. Expansionary measures finally followed in the autumn and are discussed below. A cold winter was to make conditions worse and check industrial activity; as the Chancellor notes "the severe winter after Christmas led to a very large addition to the total of unemployed".<sup>261</sup> In February 1963 unemployment hit its highest point since the war.<sup>262</sup>

#### **Overall Budget Objectives**

From the outset the Chancellor declares "the theme of this Budget is expansion: expansion without inflation, expansion that can be sustained".<sup>263</sup> In summarising the economic prospects Maudling argued "On the one hand, we have spare capacity and present trends of demand do not seem strong enough to ensure of themselves a full enough employment of our resources in the coming year".<sup>264</sup> In judging the appropriate overall stance "the conclusion I have reached is that tax concessions in the current year of the order of about £250 million (0.8 per cent of GDP) are required to stimulate the economy if we are to realise our target of vigorous expansion without a return to inflation".<sup>265</sup> The target growth the Chancellor set, however, was 4 per cent — which may have been over-optimistic given that the average growth rate between 1948 and 1962 was 2.6 per cent.<sup>266</sup> Despite this goal of raising longer-term growth, the Chancellor's statements reveal a desire to stimulate a flagging economy — especially given the comments about spare capacity and unemployment. To that extent many of the Budget

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<sup>260</sup> Cairncross (1992), page 147.

<sup>261</sup> HC Deb 03 April 1963 vol 675 c468

<sup>262</sup> Cairncross (1994), page 60.

<sup>263</sup> HC Deb 03 April 1963 vol 675 c454

<sup>264</sup> HC Deb 03 April 1963 vol 675 cc472-3

<sup>265</sup> *Ibid.*

<sup>266</sup> Office for National Statistics (2010); series ABMI: Gross Domestic Product, Chained Volume Measure.



measures will be classified as *endogenous, demand management*. In all, taxes were cut by nearly £600 million in a full year<sup>267</sup> (nearly 2 per cent of GDP).

### **Pre-Budget Tax Measures**

I first deal with Maudling's 1962 autumn stimulus. This included a repayment of post-war credits, a cut in the Purchase Tax for cars and an increase in investment allowances. Reflecting on the autumn measures in the 1963 Budget speech, Maudling explains "in the autumn and winter a number of measures were introduced both to relax restriction of credit and to stimulate the economy. Some of these measures, such as the release of post-war credits and the substantial Purchase Tax cuts, are already taking effect, as can be seen particularly in the demand for motor cars".<sup>268</sup> This sentiment reflects closely the statements at the time. I have already discussed why I exclude post-war credits. The investment allowance changes were to take until the 1963 Budget to arrange and are dealt with below. In relation to car manufacturing the Chancellor explained on 5<sup>th</sup> November 1962: "I am satisfied that this is a case where a stimulus to the home market by a reduction of Purchase Tax will both bring into use resources that at present are under-employed and provide the basis for an even more vigorous export drive... I propose, therefore, to make an immediate cut in the Purchase Tax on motor cars".<sup>269</sup> This took effect on 6<sup>th</sup> November 1962 and was *endogenous, demand management*.

### **Major 1963 Budget Tax Measures**

On the 5<sup>th</sup> November 1962 it had been announced (and debated) that investment allowances would be raised in the 1963 Budget. In November the Chancellor noted "we have more slack in the economy than we calculated on, and it justifies further measures to stimulate the economy" but "we need not so much a stimulus to demand generally as special encouragement to investment and to the exporting industries, and to employment in areas where unemployment is above the national average. The unused resources are not so much in the consumer goods industries as in the heavy industries and in sections of engineering, and it is these resources, human and material, that we must seek to bring into use.... I am satisfied that, from the point of view of encouraging investment, the investment allowance is a good deal more effective than the initial allowance".<sup>270</sup> The measures were implemented in the 1963 Finance Act but backdated to 5<sup>th</sup> November 1962. In addition, the 1963 Budget proposed some additional changes, also backdated: "in addition to these changes, which I announced last November, I propose now to make some further improvements".<sup>271</sup> This seems to be a stimulus to investment demand and to be *endogenous, demand management*.

A few other business tax measures were introduced. Allowance of free depreciation was introduced in regions of high unemployment: "no one can doubt the intense human reasons for making further efforts to cope with the problem of regional unemployment. At the

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<sup>267</sup> The £250 million figure given earlier was a target for the current year.

<sup>268</sup> HC Deb 03 April 1963 vol 675 c468

<sup>269</sup> HC Deb 05 November 1962 vol 666 c629

<sup>270</sup> HC Deb 05 November 1962 vol 666 cc623-625

<sup>271</sup> HC Deb 03 April 1963 vol 675 c487

same time, however, the need for progress here should not be underestimated in the context of economic growth”.<sup>272</sup> Dealing with the unemployment is an endogenous change and in the overall spirit of the Budget is classified as *endogenous, demand management*.

Finally I turn to the income tax measures. Schedule A of income tax – tax on income from land – was abolished. The reason cited was simplification: “In the various proposals I have to lay before the Committee I have borne in mind the need for tax simplification. Schedule A, I think, is a good example”.<sup>273</sup> I therefore classify this measure as *exogenous, long-run*. It was abolished from 6<sup>th</sup> April 1963. However, I provide an alternative classification of *endogenous, demand management* given this measure’s sizable contribution to meeting the Chancellor’s £250 million current year target.

Introducing the other income tax measures the Chancellor argued: “The cost of all the tax changes I have so far announced amounts to £83 million this year. On the Budget judgment that I explained to the Committee, this clearly leaves room for a further large impetus to demand this year to take up the existing slack in the economy.... this further relief in the field of direct taxation, as this is the method best calculated both to stimulate the economy and to encourage individual effort.... The reliefs will be concentrated on individuals”.<sup>274</sup> The Chancellor notes here the role of incomes policies in stimulating the expansion “without inflation” and also notes that his tax remissions will be “giving particular attention to those with family responsibilities or other special claims”.<sup>275</sup> Consequently, various allowances were raised: those relating to National Insurance contributions, single, married, child (three measures) allowances, the age exemption limit, the income limit for age relief and the income limit for small income relief (a capital income measure aimed at small investment incomes). All changes were enacted on 6<sup>th</sup> April 1963. Based on the overall statements about the stimulus, I classify these all as *endogenous, demand management*.

These changes account for over 90 per cent of the remissions and make up £232 million of the target £250 million.

## **1964 (A): Budget 14<sup>th</sup> April 1964**

*Chancellor:* Reginald Maudling; *Prime Minister:* Alec Douglas-Home (Conservative)

### **Context**

By April 1964 the Chancellor was able to report a 5 per cent rise in production and a fall in unemployment of over 150,000 since the previous Budget. Cairncross (1992) noted “the effect of this powerful fiscal stimulus was... a rapid expansion in production followed after a time by a relatively slow growth as capacity limits were approached”. However, while it is argued that the stimulus aided a strong recovery, the balance of payments was to deteriorate.<sup>276</sup> Cairncross

<sup>272</sup> HC Deb 03 April 1963 vol 675 c479

<sup>273</sup> HC Deb 03 April 1963 vol 675 c466

<sup>274</sup> HC Deb 03 April 1963 vol 675 c490

<sup>275</sup> Ibid.

<sup>276</sup> Woodward (2004), page 66.

(1994) explains that the expansion of demand was actually faster than appreciated at the time but some check to expansion was still appeared necessary by April 1964.<sup>277</sup>

### Overall Budget Objectives

From the opening of his speech Maudling reiterated the Government's goal as sustainable expansion, expansion without inflation. The Chancellor clearly saw some overheating: "the rate of growth of real output in recent months of around 6 per cent has been possible while we have been taking up slack in the economy, but, clearly, it cannot continue indefinitely. We must aim at transition to a growth rate which can be sustained of something like 4 per cent" and consequently "demand seems likely to be rising at substantially more than 4 per cent and, therefore, something must be done to reduce its growth".<sup>278</sup> Part of the problem came from increasing public expenditure (and the Government's "ambitious" expansion of expenditure programmes) not being matched by increasing tax revenues. If he was to avoid "what the economists call 'overheating' the economy", then the Budget would need to seek "to finance a larger proportion of this public expenditure out of taxation".<sup>279</sup> However, offsetting the public expenditure growth was not the only purpose of raising taxation: "there is also the fact that our current rate of expansion is one that cannot continue indefinitely without leading to the familiar difficulties internally and externally".<sup>280</sup> While some motivation for tax rises appears spending-driven, in other cases it seems to check various current demand pressures, and this is in keeping with historians' comments regarding the effects of the 1963 stimulus. Furthermore, the Chancellor's objectives were classic demand management, as can be seen in his final judgement "the effect of tax changes on this scale should be to moderate the present rate of expansion, and to make it possible for real growth to continue at the rate we all wish to see".<sup>281</sup> I will therefore classify many of the measures as *endogenous, demand management*.<sup>282</sup>

### Budget Tax Measures

The Chancellor set himself the task of raising £100 million (0.3 per cent of GDP) "to moderate the present rate of expansion".<sup>283</sup> And, having discussed the relative merits of direct versus indirect taxes, he concludes: "I have, therefore, decided to raise the additional money by increasing the duties on tobacco and alcoholic drinks by amounts broadly equivalent to 10 per cent".<sup>284</sup> Consumption taxes on tobacco, spirits, beer and wines therefore rose on 15<sup>th</sup> April 1964. This raised just over £100 million and I classify all these changes as *endogenous, demand management*.

<sup>277</sup> Cairncross (1994), page 73.

<sup>278</sup> HC Deb 14 April 1964 vol 693 c267

<sup>279</sup> Ibid.

<sup>280</sup> HC Deb 14 April 1964 vol 693 c268

<sup>281</sup> HC Deb 14 April 1964 vol 693 c269

<sup>282</sup> It is also worth noting the continued emphasis on incomes policies, the Chancellor argued that these are by far the most important element affecting costs and prices: sustained growth without inflation relied on an effective incomes policy.

<sup>283</sup> HC Deb 14 April 1964 vol 693 c269

<sup>284</sup> HC Deb 14 April 1964 vol 693 c271

There were some other changes in the Budget and these were covered before the Chancellor's discussion of demand management. They were introduced as "incidental matters, including certain tax changes which must be dealt with now, but which are extraneous to the main economic argument".<sup>285</sup> Numerically they are also over and above the required £100 million and for these reasons I will not provide an alternative classification of endogenous, demand management.

The first of these was on business taxation. The surpluses derived by companies from mutual trading were to be taxed from 6<sup>th</sup> April 1964 — this "matter is of greater importance now than it was when the Royal Commission reported because a recent legal decision has opened up the possibilities of abusing the present position for purposes of tax avoidance and this is already being exploited".<sup>286</sup> Being a tax reform this is classified as *exogenous, long-run*.

In the 1963 speech, the principle of relief for industrial use of light oils was accepted — the matter was considered and put into effect in the 1964 Budget, effective from 1<sup>st</sup> September 1964. This is a relief to industry and was set in motion a year earlier (although only confirmed at this Budget). As such, I classify it as *exogenous, long-run*.

Betting Duty was also reformed as "information published earlier this year as a result of the Customs' inquiry into gaming. I think that the whole picture is now a good deal clearer".<sup>287</sup> Reforms were designed to address various problems with the current tax, such as loopholes. These changes took effect from 3<sup>rd</sup> August 1964. These are clearly long-run reforms to the tax structure and are classified as *exogenous, long-run*.

Three changes were also foreshadowed. First, as part of obligations in the European Free Trade Association, certain hydrocarbon duties were abolished from 1<sup>st</sup> January 1965. Second, following the introduction of the Television Act 1963, additional rental payments became due from 30<sup>th</sup> July 1964. Finally, consequential to the new rental payments, Television Advertisement Duty was to be ended from 30<sup>th</sup> July 1964.<sup>288</sup> Again, these are exogenous to the current economic climate and are reforms to the tax system. The first I classify as *exogenous, external*, the other two as *exogenous, long-run*.

## **1964 (B): Budget 11<sup>th</sup> October 1964**

*Chancellor:* James Callaghan; *Prime Minister:* Harold Wilson (Labour)

### **Context**

The balance of payments was to worsen as 1964 progressed. The National Institute put the deficit for the next eighteen months at £375 million (1.1 per cent of GDP) in February and £300 million (0.9 per cent of GDP) in May but, by August 1964, this estimate had grown to £500 million (1.5 per cent of GDP). As Cairncross (1992) notes, the Treasury forecasts also showed a rise in the deficit every time they were revised during 1964. The Government, Cairncross argues, had put off the election of 1964 until the last possible minute to gain

<sup>285</sup> HC Deb 14 April 1964 vol 693 c240

<sup>286</sup> HC Deb 14 April 1964 vol 693 c243

<sup>287</sup> HC Deb 14 April 1964 vol 693 c246

<sup>288</sup> HC Deb 14 April 1964 vol 693 c240

maximum benefit from popular opinion of rising prosperity. By October, however, the growing crisis in the balance of payments was becoming clear. Cairncross (1994) argued the Conservative Government had sustained the pressure on demand rather than put a stop to expansion once the balance of payments problems emerged. By October the new Labour Government elected in October 1964 was facing a prospective overseas deficit of £800 million (2.4 per cent of GDP).<sup>289</sup>

### **Overall Budget Objectives**

The new Chancellor opened his Budget Statement stating: “The immediate object of this Budget Statement is to seek the authority of Parliament for the measures announced by the Government to improve the unsatisfactory balance of payments”.<sup>290</sup> These specific measures were import restrictions and export rebates. The Chancellor seemed aware that he should prevent undue pressure on demand but favoured these direct measures over general deflation. The next urgent matter discussed was the prospects for public expenditure. The Chancellor stated that they had inherited too much expenditure given the realised growth in tax revenues; however, little was said about reducing it, only that the composition would be under review.<sup>291</sup> Increases in expenditure were also announced to address “the condition of the elderly, the sick and the needy in this country”.<sup>292</sup> National Insurance contributions were to rise to accompany increased welfare payments. However a shortfall of £130 million from the increased social spending was identified. In light of the extra spending commitments and the balance of payments situation, the Chancellor decided that demand needed curtailing. Callaghan concludes: “I do not see how, taking together the effect of the action needed to correct our balance of payments deficit and the cost of increases in social benefits which I have announced, I can avoid asking the Committee for more taxation”.<sup>293</sup> In the debate, when asked why income tax needed to rise (see below) he responded “if I had increased the borrowing requirement [instead] I would, in my view, then have put such inflationary pressure on the economy”.<sup>294</sup>

### **Budget Tax Measures**

First I deal with direct import and export measures, announced on the 26<sup>th</sup> October and mentioned in the Budget speech. After explaining the external position the Chancellor argued “It was against this background that immediate action was required to correct the balance of

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<sup>289</sup> HC Deb 11 November 1964 vol 701 c1023

<sup>290</sup> Ibid.

<sup>291</sup> This section of the Chancellor’s speech reflects the new Government’s ambitious plans for fostering economic growth, both in freeing resources from government control and in helping the “modernisation of the economy and the improvement in the rate of technical progress” (HC Deb 11 November 1964 vol 701 c1030). The ambitious growth economic plan included a variety of structural and supply-side reforms with the focus on technological change, R&D, industrial policy, widening the tax base to lower marginal rates and regional policy (Woodward 2004, p.90).

<sup>292</sup> HC Deb 11 November 1964 vol 701 c1031

<sup>293</sup> HC Deb 11 November 1964 vol 701 c1036

<sup>294</sup> HC Deb 30 November 1964 vol 703 c109

payments”.<sup>295</sup> Consequently, a temporary charge of 15 per cent implemented on 27<sup>th</sup> October 1964 was imposed on virtually all imports (with some exceptions). The powers were to run until 20<sup>th</sup> November 1965 but could be renewed. However, the import charges were only temporary, there was a pressing need to “discover what were the obstacles to higher exports during the last nine or ten months”.<sup>296</sup> In the meantime, the Government took “steps to relieve exporters of certain handicaps in the form of indirect taxes which have so far fallen on export costs as well as home sales”.<sup>297</sup> These export rebates were effective from 26<sup>th</sup> October 1964. These were direct measures to deal with the balance of payments and so I classify them as *endogenous, (balance of payments) deficit reduction*.

Two other measures were taken. Firstly, fuel duty rose on 11<sup>th</sup> November 1964. The Chancellor explained: “this increase in duty will exercise an appreciable and immediate disinflationary effect and will make an important contribution towards my general objective of preventing an increase in the pressure of demand”.<sup>298</sup> I therefore classify it as *endogenous, demand management*.

Secondly, there was an increase of 6d. in the standard rate of income tax from 6<sup>th</sup> April 1965. There were offsetting changes at the bottom end of the income distribution and the Chancellor defended the choice of income tax on the grounds that it was fairer. In summary the Chancellor argued that “I hope that it will be recognised by all that they are making a contribution that will assist in the difficult task of climbing out of our balance of payments deficit and will help to ease the lot of the most needy in the community”.<sup>299</sup> The income tax measure appears to have been designed to offset the effect of the spending increases mentioned above. This can be more clearly seen throughout the debate in the House of Commons on the 30<sup>th</sup> November.<sup>300</sup> I therefore classify this measure as *endogenous, spending-driven*.

There is a question whether the fuel duty rise was also spending-driven. However, firstly I take the statement about fuel duty at face value: it was to limit demand. The balance of payments situation called for limits to demand anyway, irrespective of the spending increases. Secondly, by raising £122 million, the income tax rise essentially offsets the £130 million shortfall in spending and the rise in fuel duty would have been unnecessary. I therefore continue with the above classifications.

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<sup>295</sup> HC Deb 11 November 1964 vol 701 c1027

<sup>296</sup> HC Deb 11 November 1964 vol 701 c1028

<sup>297</sup> HC Deb 11 November 1964 vol 701 c1029

<sup>298</sup> HC Deb 11 November 1964 vol 701 c1037

<sup>299</sup> HC Deb 11 November 1964 vol 701 c1038

<sup>300</sup> HC Deb 30 November 1964 vol 703 cc37-117

## 1965: Budget 6<sup>th</sup> April 1965

*Chancellor: James Callaghan; Prime Minister: Harold Wilson (Labour)*

### Context

A general deflationary policy had been avoided the previous October and this seemed to concern the financial markets.<sup>301</sup> Some deemed the Budget expansionary due to the increases in expenditure,<sup>302</sup> even though the increases in tax more than offset the rise in expenditure. Indecision was to follow on whether to raise the Bank Rate; eventually this did occur – but only after negative market reactions – on the 23<sup>rd</sup> November 1964. Speculative pressure continuing, the Governor of the Bank of England was forced to seek financial assistance from other central banks.<sup>303</sup> The economy also continued to grow strongly but reflecting the view that expansion was still too great the growth rate in 1964 had been over 5 per cent.<sup>304</sup> In February 1965 it was announced that public expenditure would be allowed to grow at 4 ½ per cent a year in real terms.

### Overall Budget Objectives

Near the start of his 1965 speech, the Chancellor tacitly acknowledged the need for restraint: “First, I intend to reduce the net outflow of long-term capital from this country by at least £100 million a year. Secondly, I intend to decrease the pressure on our resources, through lower public expenditure and higher taxation, by £250 million”.<sup>305</sup> However, the Budget still struck an optimistic tone, claiming “we have already made considerable progress” in dealing with the balance of payments problems.<sup>306</sup> And in summing up his review of the outlook the Chancellor noted “Although there is some slack in some regions, industry generally is already working at high pressure. Unemployment is now below 1½ per cent and order books in many industries are long. I am confident that productive capacity will grow as new investment and new techniques bear their fruits. But we must ensure that the extra output can go to correct the foreign balance and is not all pre-empted by expanding home demand”.<sup>307</sup> The Budget also had other objectives: significant reforms introducing Capital Gains Tax and Corporation Tax.<sup>308</sup> Introducing his measures the Chancellor argued: “In limiting the demand pressure and hoping for an improvement in the balance of payments “I have concluded that we must act so as to reduce home demand in that period by £250 million at an annual rate”.<sup>309</sup> Many of the measures were therefore *endogenous, demand management*.

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<sup>301</sup> Cairncross (1994), page 74.

<sup>302</sup> Ibid.

<sup>303</sup> Cairncross (1992), page 153. Woodward (2004), page 262.

<sup>304</sup> Office for National Statistics (2010), series ABMI.

<sup>305</sup> HC Deb 06 April 1965 vol 710 c244

<sup>306</sup> Ibid.

<sup>307</sup> HC Deb 06 April 1965 vol 710 cc286-287

<sup>308</sup> The Corporation Tax reforms were designed not to affect the burden of taxation and so do not feature below.

<sup>309</sup> HC Deb 06 April 1965 vol 710 c287

### Budget Tax Measures

Expenditure measures raised nearly £67 million, leaving about £183 million left to find. The remainder of the Chancellor's speech was spent announcing measures which were to raise that revenue. There were increases in tobacco, alcohol and motor duties. These changes in consumption taxes account for £182 million of the tax increases in a 'full year' and £172 million in the current year. All these tax rises were implemented on 7<sup>th</sup> April 1965. In terms of alcohol taxes, very little is said specifically except for the technical details. In terms of motor duties the Chancellor argues "I believe that it is right, in these circumstances, to ask motorists to make increased contributions to general revenue".<sup>310</sup> In doing so, he also implemented some simplification of the tax. In light of all the above comments, I classify these measures as *endogenous, demand management*.

The remaining measures (with one exception) contributed to a minor remission in the current year. Part of this was due to them not generating revenue until later years. These will all (again, with one exception) be classified *exogenous* on the basis of their individual justifications. I do not provide an alternative classification for two reasons. First, the exogenous increases largely offset the exogenous remissions. Second, the consumption tax changes raise the required aggregate sum and the net increase from the exogenous measures was then more than required.

The Government introduced a Capital Gains Tax (CGT). On introducing a lengthy section on CGT, the Chancellor announced "the failure to tax capital gains is widely regarded, outside as well as inside the Labour Party, as the greatest blot on our existing system of direct taxation. There is little dispute nowadays that capital gains confer much the same kind of benefit on the recipient as taxed earnings more hardly won. Yet earnings pay tax in full while capital gains go free".<sup>311</sup> This was a long and complex reform, and not one which features in the Chancellor's estimates of revenue (or contributing to his £250 million figure). The FSBR 1965 reports the yield "will eventually build up to £125 million a year"<sup>312</sup>, raising £12 million in 1966-7 and £30 million in 1967-8. Given this, I classify the change as *exogenous, ideological*. It features as part of the Labour Government's long-term tax reform and is not included as a measure to raise revenue immediately. For the tax series, I make use of the £125 million as it more closely reflects the future liabilities implied by the new tax.

There were also reforms to the income tax and National Insurance system. Callaghan argued that the system of allowances for a person's own National Insurance contributions makes them "regressive" and should be abolished. However, "to withdraw the allowances completely without giving any alleviation elsewhere would be unreasonable"<sup>313</sup> and the measure was offset by a rise in the single and married allowances. Both measures were effective from 6<sup>th</sup> April 1965. These measures offset each other in terms of revenue and so do not contribute to the reduction in demand. I classify these as *exogenous, ideological* on the basis of their social objective.

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<sup>310</sup> HC Deb 06 April 1965 vol 710 c291

<sup>311</sup> HC Deb 06 April 1965 vol 710 c245

<sup>312</sup> HC Deb 06 April 1965 vol 710 c251

<sup>313</sup> HC Deb 06 April 1965 vol 710 c293



Two income tax remissions had been trailed in the November Budget: the increase of age exemption limits and the dependent relative's allowance. In November the Chancellor said "The nation will be called upon for fresh efforts and this will give our people tangible evidence that even in times of economic difficulty ours is a society where the weakest and neediest are cared for".<sup>314</sup> These are then social objectives; they are small remissions and were pre-announced. I therefore classify these as *exogenous, ideological*. These were implemented on 6<sup>th</sup> April 1965.

There were some measures designed to deal with tax avoidance – announced before the £250 million figure is discussed – and described as "another way of bringing greater fairness into our tax system".<sup>315</sup> Some changes were made to the tax treatment of business entertainment and business cars. Both measures were implemented on 6<sup>th</sup> April 1965. I classify these measures as *exogenous, ideological*.

Finally I should mention the import surcharge which had been imposed in November 1964 at 15 per cent. The rate was lowered to 10 per cent on 22<sup>nd</sup> February 1965, taking effect on 27<sup>th</sup> April 1965. The Chancellor argued that "we have now decided that enough progress is being made to enable us to reduce the charge after it has been in operation for six months".<sup>316</sup> However, historians<sup>317</sup> — and the Conservatives in the debate on the 22<sup>nd</sup> February<sup>318</sup> — suggested that this retreat was due to resistance from trading partners. I continue to follow the original categorisation and take the Chancellor's statement at face value, thereby erring on the side of caution that this change is *endogenous, deficit reduction*. Furthermore, for balance of payments reasons, the end date was also extended (and I now use this date for its reversal) on 29<sup>th</sup> November 1965 to 30<sup>th</sup> November 1966,<sup>319</sup> but on that date it was allowed to expire.<sup>320</sup>

These changes account for 90 per cent of the increases and all of the concessions.

## 1966: Budget 3<sup>rd</sup> May 1966

*Chancellor:* James Callaghan; *Prime Minister:* Harold Wilson (Labour)

### Context

According to Cairncross (1992), the 1965 Budget had failed to impress continental opinion and there was a widespread expectation that the pound would soon be devalued.<sup>321</sup> Woodward (2004) argues "the markets, which believed the balance of payments problems were the consequence of an overheating economy, took a dim view of the budget".<sup>322</sup> Devaluation was rejected, but a package of measures was put together on 27<sup>th</sup> July 1965 including public investment cuts – estimated at £200 million (0.6 per cent of GDP) together with stricter

<sup>314</sup> HC Deb 11 November 1964 vol 701 c1034

<sup>315</sup> HC Deb 06 April 1965 vol 710 c251

<sup>316</sup> HC Deb 22 February 1965 vol 707 c31

<sup>317</sup> See, for example, Woodward (2004), page 97 or Cairncross (1992), page 152.

<sup>318</sup> HC Deb 22 February 1965 vol 707 cc31-5

<sup>319</sup> HC Deb 29 November 1965 vol 721 c1008

<sup>320</sup> Announced in the May 1966 Budget: HC Deb 03 May 1966 vol 727 c1460

<sup>321</sup> Cairncross (1992), page 156.

<sup>322</sup> Woodward (2004), page 98.

exchange controls. The measures were put together hastily and speculation continued. Fresh international effort to support the pound led to agreements announced at the World Bank and I.M.F. on 10<sup>th</sup> September.<sup>323</sup> However, unemployment was still falling and output still expanding into 1966. The Government deemed the situation improved enough to call a General Election for March, which it was to win. That said, a look at the National Accounts for late 1965 and early 1966 reveals quite a slowdown in GDP growth from its faster rate in 1964.<sup>324</sup>

### **Overall Budget Objectives**

The Chancellor was typically upbeat about the economic situation, arguing that the Government's actions over the last 18 months had been a success: "the balance of payments deficit was halved; full employment was maintained".<sup>325</sup> Looking to the future, Callaghan acknowledged "on present prospects, the rate of increase in home demand is likely to rise again later in the year".<sup>326</sup> which raised the crucial question of "whether these prospects, with all the uncertainties surrounding them, are consistent with the improvement we need in the balance of payments".<sup>327</sup> The Chancellor concluded that further action was needed. This was to take the form "both directly and by inducing the redeployment of resources. I have looked first to the capital account".<sup>328</sup> This approach was not entirely relied upon; in summing up his judgement about prospective taxation the Chancellor stated "the improvement we made in 1965 must be sustained until we generate a surplus. It is my judgment that we shall not do this unless we take firm action at home to release more resources for exports and for the substitution of imports.... It is against this background that I have considered what additional taxation I should propose."<sup>329</sup> A number of the measures below were therefore for *endogenous, demand management* purposes.

### **Major Budget Tax Measures**

In raising the required revenue, the Chancellor closed down his options, ruling out income taxes, the Surtax, the Purchase Tax, Vehicle Licence Duty or the other Customs and Excise duties (including alcohol and tobacco). The Chancellor gave economic reasons for avoiding these although Woodward (2004) notes that his reluctance may have been a consequence of the recent election campaign.<sup>330</sup> The conclusion was that "having stripped myself of this valuable armoury I need a new source of taxation"<sup>331</sup> and a Selective Employment Tax was introduced on 5<sup>th</sup> September 1966. Primarily this appears to have been driven by the immediate need to raise revenue. However, the tax also introduced considerable changes to incentives between industries. In summary the Chancellor declared "it will prove in future years to be a

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<sup>323</sup> Cairncross (1992), page 157.

<sup>324</sup> Office for National Statistics (2010), series ABMI.

<sup>325</sup> HC Deb 03 May 1966 vol 727 c1431

<sup>326</sup> HC Deb 03 May 1966 vol 727 c1443

<sup>327</sup> HC Deb 03 May 1966 vol 727 cc1442-3

<sup>328</sup> HC Deb 03 May 1966 vol 727 c444

<sup>329</sup> HC Deb 03 May 1966 vol 727 cc1451-2

<sup>330</sup> Woodward (2004), p. 99.

<sup>331</sup> HC Deb 03 May 1966 vol 727 c1453

very valuable addition to the measures available, first, as a means of raising revenue, and also as an incentive for labour economies and manpower redeployment. The scheme will produce an easing in home demand this year, will open the way for a progressive strengthening of manufacturing industry, and will make more resources available for exports with a beneficial effect to our balance of payments”.<sup>332</sup> As the primary catalyst for its introduction is to deal with the balance of payments by reducing home demand, I classify this as *endogenous, demand management*.

There was also a change to business tax relief which “it has become apparent that in relation to groups of companies these concessions were drawn too generously, and that relief might be due in circumstances for which it was never meant”.<sup>333</sup> The total potential loss prevented is about £85 million and so I treat this as a one-year temporary measure and assign this value to the implementation date. The Chancellor notes “if we did not do this we should have to raise the equivalent amount of money elsewhere”.<sup>334</sup> The correction was implemented on 3<sup>rd</sup> May 1966. In the current circumstances this was designed to prevent having to raise more money elsewhere. I err on the side of caution and therefore classify this as *endogenous, demand management*.

These two changes accounted for over 90 per cent of the increases. The remissions were very small and are dealt with in the minor changes appendix.

## **1967: Budget 11<sup>th</sup> April 1967**

*Chancellor:* James Callaghan; *Prime Minister:* Harold Wilson (Labour)

### **Context**

The June 1966 trade figures were to show a large gap between imports and exports as a result of the seamen’s strike and this was to cause new pressures on sterling. On 14<sup>th</sup> July the Bank Rate was raised but the pressure continued. Eventually, deflationary measures were announced on 20<sup>th</sup> July to reduce domestic demand by £500 million (1.3 per cent of GDP) and raise unemployment to 2 per cent. The two tax measures were a 10 per cent surcharge on Surtax and full use of the duties regulator – both discussed below. There were also expenditure measures such as cuts in public investment. Cairncross (1992) was to argue that “in total it was impressive and had a powerful effect on domestic demand”.<sup>335</sup> Consumers’ real expenditure remained lower for a year and the balance of payments went into surplus. Real GDP growth slowed in Q3 1966 and was negative in Q4.<sup>336</sup> Unemployment was still at 2 per cent by April 1967, although some easing had begun with reductions in the Bank Rate between January and May.

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<sup>332</sup> HC Deb 03 May 1966 vol 727 cc1458-59

<sup>333</sup> HC Deb 03 May 1966 vol 727 c1450

<sup>334</sup> HC Deb 03 May 1966 vol 727 c1451

<sup>335</sup> Cairncross (1992), page 161.

<sup>336</sup> Office for National Statistics (2010), series ABMI and ABJR.

### Overall Budget Objectives

In reflecting on the check to output in 1966, the Chancellor argued “It is my judgment that activity is now likely to resume an upward movement. The problem for the Budget and for economic policy later in the year is to see that this movement is neither unnecessarily stunted nor unduly stimulated”.<sup>337</sup> The Chancellor noted “there will be two main expansionary forces at work — higher exports and higher public investment”.<sup>338</sup> He forecast output growth close to 3 per cent in 1967 and not much different from the economy’s perceived productive potential, “to put the matter another way, I expect demand to rise almost at the rate we can sustain in the medium term”.<sup>339</sup> Consequently, the Budget judgement was no “substantial action to influence demand just now”.<sup>340</sup> This is mirrored in the tax measures which were broadly neutral. However, taken with the increases in public expenditure, the Budget appeared more expansionary.<sup>341</sup>

### Budget Tax Measures

It is useful to consider the July 1966 measures together with their 1967 counterparts as the duty surcharges were consolidated into standard rates in the Budget. On 21<sup>st</sup> July a 10 per cent surcharge was imposed on the Purchase Tax, oil and alcohol duties. There was also a one-year 10 per cent surcharge on Surtax from 6<sup>th</sup> April 1965. In July 1966 these were introduced by saying “I will begin with the measures needed to restrain private demand at home”.<sup>342</sup> These are therefore *endogenous, demand management*.

As discussed, the overall tax stance in the 1967 Budget was neutral. However there was a question about what to do with these surcharges. The Surtax surcharge was set to end on 5<sup>th</sup> April 1966 and no action was taken to renew it. In relation to the duty surcharges the Chancellor argued “I cannot, in present circumstances, forgo the revenue of over £150 million a year which the 10 per cent surcharges yield”.<sup>343</sup> However, rather than maintaining the 10 per cent surcharge, it was to be consolidated into general duty rates and the regulator power renewed for another year. This consolidation shows up in the revenue tables with some minor changes (resulting from implementation). As the consolidation was to maintain the higher tax yield to limit demand, I classify these changes as *endogenous, demand management*. These changes took place on the 11<sup>th</sup> and 12<sup>th</sup> of April 1967.

There were no other increases to restrain demand and, being a previously implemented set of measures, I feel confident in classifying other Budget measures as *exogenous* based on their individual justifications.

Income tax allowances were modified for social objectives: while “I cannot improve personal standards of life this year by general tax reductions... I can make few concessions, I

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<sup>337</sup> HC Deb 11 April 1967 vol 744 c992

<sup>338</sup> Ibid.

<sup>339</sup> HC Deb 11 April 1967 vol 744 c994

<sup>340</sup> Ibid.

<sup>341</sup> Cairncross (1992) argues that the Government had considered higher taxation to offset the rise in expenditure but, with the rise in unemployment to 2 per cent, it was decided to be tax neutral (page 162).

<sup>342</sup> HC Deb 20 July 1966 vol 732 c629

<sup>343</sup> HC Deb 11 April 1967 vol 744 c1003

am acutely aware of the difficulties of many groups of our fellow citizens”.<sup>344</sup> The additional personal allowance and the dependent relative allowance were increased. Both took effect on 6<sup>th</sup> April 1947. I classify these as *exogenous, ideological* based on their social motive.

There were also three minor alterations to capital taxes. First, “I have a proposal to help some would-be house buyers”<sup>345</sup>, and certain rates of Stamp Duty were lowered. This I classify as *exogenous, long-run*. There was an extension of the duty on issue of loan capital and little motive is given other than “This will produce £6 million revenue in a full year”.<sup>346</sup> In addition “but I also propose to exempt local authorities from duty on both issue and transfer of loan capital, and this will cost £2 million in a full year”.<sup>347</sup> Nothing else is said of these measures, but they appear ideologically driven, so I classify them as *exogenous, ideological*. All these Stamp Duty measures were implemented on 1<sup>st</sup> August 1967.

Accompanying the changes in Alcohol Duty, certain requirements regarding liquor licences were abolished from 1<sup>st</sup> October 1967 as they “produce only £1 ¾ million a year and are expensive to collect”.<sup>348</sup> As a simplification measure I classify this as *exogenous, long-run*.

Finally, the Chancellor had undertaken to review the new Selective Employment Tax and a few reforms were proposed to deal with specific cases in certain industries. Refunds were made available for part-time workers (“The reports I have received show that there is a strong case for modifying the tax in this respect. I also recognise that a number of part-time workers are elderly people who can make a most useful contribution but who no longer wish to work full-time”<sup>349</sup>) which was noted to be of particular help to retail distribution, tourist and hotel trades. Refunds were also given for companies with employees abroad, of particular help to the construction industry. Being reforms to the tax’s operation and not correlated with economic conditions, I classify these as *exogenous, long-run*. They took effect on 4<sup>th</sup> September 1967.

## 1968: Budget 19<sup>th</sup> March 1968

*Chancellor: Roy Jenkins; Prime Minister: Harold Wilson (Labour)*

### Context

The economy grew strongly through the first half of 1967. However, as the year progressed GDP growth was slowing down.<sup>350</sup> Export growth, by contrast, had either been low or negative through 1967. In May the Government announced Britain’s intention to join the European Economic Community. Suspicion arose that joining may be accompanied by devaluation. The Six Day War in the Middle East, an oil embargo and the closure of the Suez Canal occurred in June. Interest rate relaxations were also reducing the incentive to hold sterling. By the end of the year the balance of payments was showing a significant deficit. Cairncross (1992) argues

<sup>344</sup> HC Deb 11 April 1967 vol 744 c1009

<sup>345</sup> HC Deb 11 April 1967 vol 744 c1007

<sup>346</sup> Ibid.

<sup>347</sup> Ibid.

<sup>348</sup> Ibid.

<sup>349</sup> HC Deb 11 April 1967 vol 744 c1008

<sup>350</sup> ONS (2010)

that at some stage in 1960, almost regardless of government policy, devaluation was perhaps inevitable. The U.K.'s competitive power had simply failed to keep up in the post war period.<sup>351</sup> Devaluation occurred on 18<sup>th</sup> November 1967 and Callaghan resigned on the 29<sup>th</sup>. A deflationary package of measures accompanied the devaluation (dealt with below). In January the new Chancellor Roy Jenkins announced large expenditure cuts of £500 million (1.1 per cent of GDP) in 1968-9 – reversing the trend of growth in public expenditure.<sup>352</sup> Still, in the first quarter of 1968, real household consumption was 7 per cent higher than it had been in the first quarter of 1967.<sup>353</sup> Speculative pressure on sterling was to continue all the way to March 1968.

### Overall Budget Objectives

The Chancellor set straight to work in the Budget speech: “this Budget is concerned with the structural changes in the pattern of economic demand and activity that are required to enable us to take full advantage of devaluation and establish a substantial and continuing balance of payments surplus... These measures are in themselves severe”.<sup>354</sup> On the external position the Chancellor was frank “we are still in a position of great difficulty”, although mediated by “but also of great opportunity”.<sup>355</sup> In his Budget judgement, Jenkins explained “we must check the growth of public expenditure and private consumption, which were the main expansionary forces last year, and release the resources necessary to sustain as large an increase in exports and industrial investment as possible”.<sup>356</sup> Succinctly, “the vital thing this year and next is to put the balance of payments into substantial surplus. This can only be done by sacrificing the normal claims of home demand on our resources.”<sup>357</sup> Jenkins decided he needed to raise a “very large sum of additional taxation”.<sup>358</sup> In total this amounted to £923 million (2.1 per cent of GDP) in a full year and was in addition to significant cuts in expenditure and a tough incomes policy. Blackaby (1978) described this as “perhaps the most formidable deflationary budget since the war”. All but two of the tax measures in the 1968 Budget were a tax rise and there can be no doubt that all of these were *endogenous, demand management*.

### Pre-Budget Measures

First I deal with the deflationary measures which accompanied the devaluation on the 18<sup>th</sup> November 1967. These were an increase in the Bank Rate, a limit on bank advances, an increase in hire purchase deposits on cars, an increase in Corporation Tax to 42.5 per cent (although this was justified in the 1968 Budget speech and FSBR), abolition of the export rebate and withdrawal of some of the Selective Employment Tax rebates. As these measures

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<sup>351</sup> Carincross (1992), p.164.

<sup>352</sup> Ibid.

<sup>353</sup> ONS (2010)

<sup>354</sup> HC Deb 19 March 1968 vol 761 c253

<sup>355</sup> HC Deb 19 March 1968 vol 761 c258

<sup>356</sup> HC Deb 19 March 1968 vol 761 c259

<sup>357</sup> HC Deb 19 March 1968 vol 761 c261

<sup>358</sup> HC Deb 19 March 1968 vol 761 c273

accompany the devaluation I classify them as *endogenous, demand management*. The removal of the export rebate and the changes to the S.E.T. appear in the data series.

### 1968 Budget Tax Measures

All the tax rises follow the Chancellor's statement about the need to raise a considerable sum of money. Income tax allowances were reduced from 6<sup>th</sup> April 1968. From 6<sup>th</sup> April 1969, a child's investment income was to be considered together with the parent. There were very heavy increases in consumption taxes having concluded "that I ought to look for obtaining the bulk of my additional revenue from indirect taxation, but that it should be levied in as selective and non-regressive a way as possible".<sup>359</sup> The Purchase Tax went up from 20<sup>th</sup> March 1968; duties on spirits and wine also went up on the same day. Hydrocarbon duties rose from 19<sup>th</sup> March 1968. Betting and gaming duties rose from 25<sup>th</sup> March 1968 and motor vehicle duties from 20<sup>th</sup> March 1968. In all, these duty increases raised £440 million in a full year (1 per cent of GDP).

On the business tax front, as announced in November, Corporation Tax rose to 42.5 per cent – raising nearly £100 million. This was applied retrospectively, as was typical, from 1<sup>st</sup> April 1967. There was also a significant rise in the Selective Employment Tax on 2<sup>nd</sup> September 1968, although accompanying rebates also rose leaving the net revenue increase at just over £150 million in a full year.

A significant amount of revenue was raised from the one-year 'special charge': "it is right, in the context of this uniquely rigorous Budget, to propose a special charge to be calculated and expressed as a charge upon investment income".<sup>360</sup> This was implemented on 6<sup>th</sup> April 1967 retrospectively and for one year only, raising £100 million (0.2 per cent of GDP). But there were also a number of other capital and capital income tax measures, together raising £13 million in a 'full year' and implemented on a variety of dates

Based on the overall objectives of the Budget I classify all these tax increases as *endogenous, demand management*.

There were two concessions. On income tax the age exemption limit was increased "I believe that when what I hope will be a relatively short-term stringency has to be applied the elderly are entitled to some special consideration".<sup>361</sup> Second, having ruled out an increase in Capital Gains Tax, the Chancellor announced "certain limited changes in the incidence of the tax which I propose. In making these proposals I have particularly in mind the need to simplify the tax wherever possible".<sup>362</sup> On face value these final two measures I classify as *exogenous* – the first as *ideological*, the second as *long-run*. These remissions were very small compared with the increases. However, to ensure that these were not sums needing to be offset by the increases, I assign an alternative justification of *endogenous, demand management*.

<sup>359</sup> HC Deb 19 March 1968 vol 761 c277

<sup>360</sup> HC Deb 19 March 1968 vol 761 c299

<sup>361</sup> HC Deb 19 March 1968 vol 761 c295

<sup>362</sup> HC Deb 19 March 1968 vol 761 c298

## 1969: Budget 15<sup>th</sup> April 1969

*Chancellor: Roy Jenkins; Prime Minister: Harold Wilson (Labour)*

### Context

Of the 1968 Budget, Cairncross notes it “slowed down the rapid expansion in progress but did not put an end to the pressure on sterling”.<sup>363</sup> The 1969 FSBR also noted that while the balance of payments was improving during 1968, the “results came more slowly than expected”<sup>364</sup> at the time of the 1968 Budget. Continuing speculative pressures forced extra tightening through 1968. Monetary policy was tightened in May and by November hire purchase and lending restrictions and import deposits were introduced. The Chancellor also made use of the regulator, raising consumption taxes by 10 per cent (covered below).<sup>365</sup> However, “the indicators for the months following the November [1968] measures suggest some slowdown in demand”.<sup>366</sup>

### Overall Budget Objectives

The Chancellor noted that, although previous measures achieved some progress, there is “clearly still a long way to go” in dealing with the balance of payments.<sup>367</sup> While not as stringent as in the previous year, more corrective measures would be needed. The Chancellor forecast that “output would grow slightly in excess of productive potential” and noted that “the balance of payments should cross the line from deficit into surplus fairly soon, but in the absence of further action it is unlikely that within the next year we would attain the substantial rate of surplus which is essential... I must therefore limit the growth of home demand”.<sup>368</sup> In short, the main purpose of the Budget “is to restrain current consumption”.<sup>369</sup> However, unlike in the previous year, a number of concessions were granted – and were typically focused on particular social groups. It is also worth noting the Chancellor’s interest in simplification “I am constantly urged to produce simplification. I am instinctively sympathetic to such pleas”.<sup>370</sup> In general, there were some reforms, some social concessions and a sizable number of revenue raisers. As a rule of thumb below, the tax rises were all to limit demand — and while no direct, explicit link is made in this speech between the overall objectives and the specific measures — comments about the need ‘to seek the required additional revenue’ this year are a useful indicator.

### Pre-Budget Measures

On 22<sup>nd</sup> November 1968, and effective from that date, it was announced that the regulator would be used to impose a 10 per cent surcharge on the Purchase Tax, tobacco, oil and alcohol

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<sup>363</sup> Cairncross (1992), page 167.

<sup>364</sup> FSBR 1969, page 5.

<sup>365</sup> Cairncross (1992), page 167.

<sup>366</sup> FSBR 1969, page 6

<sup>367</sup> HC Deb 15 April 1969 vol 781 c992

<sup>368</sup> HC Deb 15 April 1969 vol 781 cc1001-2

<sup>369</sup> HC Deb 15 April 1969 vol 781 c1034

<sup>370</sup> HC Deb 15 April 1969 vol 781 c1016



duties. Currency speculation had been rife but also “the speed of our movement into balance of payments surplus has been insufficient”.<sup>371</sup> In justifying use of the regulator, the Chancellor continued “Despite high exports, our trade figures, while improving, have not done so as fast as necessary. One reason is the continuing high level of consumer spending... In order to accelerate our progress, particularly in view of the international events of the past week, we need to take firmer action to curtail demand, especially demand for imports”.<sup>372</sup> I therefore classify the November measure as *endogenous, demand management*.

By the April 1969 Budget, the Chancellor had to decide whether to maintain this increased revenue. Though no specific motivation is given, the Chancellor consolidated the 10 per cent rise into main duty rates on 15<sup>th</sup> and 16<sup>th</sup> April 1969. Given the original motivation and the Chancellor’s overall Budget aims, discussed above, I continue to classify this 1969 measure as *endogenous, demand management*.

### Major Budget Tax Changes

In addition to maintaining the surcharge there were further increases in consumption taxes in the 1969 Budget. Fuel duties increased on 15<sup>th</sup> April 1969 as “I am not... able to avoid some further contribution from road users. Consumers' expenditure on motoring has been rising very sharply in recent years”.<sup>373</sup> Wine duties rose on 15<sup>th</sup> April as well: “very much against my own personal inclination, however, I have decided that these considerations against a further increase do not apply to wine. Consumption has grown at a remarkable rate”.<sup>374</sup> Having rejected a rise in Purchase Tax rates beyond the consolidation of the November surcharge, Jenkins states “I do not, however, believe that these considerations apply to some broadening of the base of Purchase Tax”<sup>375</sup> and more items were brought into the tax to raise revenue from 27<sup>th</sup> May 1969. There were also changes to betting and gaming duties from 1<sup>st</sup> October 1969. Again, having rejected increases in rates, “I nevertheless think it reasonable to seek more revenue from this source”.<sup>376</sup> Given the overall objectives of the budget – and all these changes being revenue raisers – I classify these as *endogenous, demand management*.

Corporation Tax was increased by 2.5 per cent to 45 per cent from 1<sup>st</sup> April 1968 as “after a very buoyant rise in company profits, I cannot exclude companies from some further contribution”.<sup>377</sup> The Selective Employment Tax was also increased from 7<sup>th</sup> July 1969 as “I need more than £100 million more, and I need it in a form with a substantial demand or resource releasing effect”.<sup>378</sup> This also increased the amount of refunds, so the net effect of the tax rise was £136 million (0.3 per cent of GDP) in a full year. As revenue raisers, faced with the overall objectives of the Budget I classify these as *endogenous, demand management*.

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<sup>371</sup> HC Deb 22 November 1968 vol 773 c1792

<sup>372</sup> Ibid.

<sup>373</sup> HC Deb 15 April 1969 vol 781 c1025

<sup>374</sup> HC Deb 15 April 1969 vol 781 c1022

<sup>375</sup> HC Deb 15 April 1969 vol 781 c1023

<sup>376</sup> HC Deb 15 April 1969 vol 781 c1020

<sup>377</sup> HC Deb 15 April 1969 vol 781 c1026

<sup>378</sup> HC Deb 15 April 1969 vol 781 c1028

On capital income taxes, relief for interest was removed for new loans from 15<sup>th</sup> April 1969. The concluding justification was “by attacking the problem of loans for personal expenditure at both ends, discouraging borrowers as well as lenders, I expect to secure a substantial reduction in consumer demand”.<sup>379</sup> I therefore classify this measure as *endogenous, demand management*.

However, there were some concessions given in the Budget. Five remissions were made on income tax allowances and bands from 6<sup>th</sup> April 1969 and “I must concentrate this year on more vulnerable sections of the community”.<sup>380</sup> There were increases in the single and married persons’ allowances together with a change in bands as “I believe that the level of income at which tax starts to be paid is too low”.<sup>381</sup> There were other “concessions” for those with single-handed care for children and on age relief “to help elderly people living on a fairly modest income from their savings”.<sup>382</sup> “Taken together, these concessions will have a significant effect on the living standards of people who are particularly vulnerable to increases in taxation and the cost of living”.<sup>383</sup> These measures I classify as *exogenous, ideological*. There were also some changes as a consequence of reducing the age of majority to 18 – namely consequences for the tax rules aggregating a child’s unearned income into that of the parent and “corresponding changes should be made [to this] new tax rule”.<sup>384</sup> I classify this as *exogenous, ideological*. However, given the strength of the overall objectives, I also provide an alternative classification of *endogenous, demand management*.

Two measures were introduced to help businesses. Some close companies are “the soil in which major industrial and commercial initiative may develop and I am persuaded that they have some legitimate grievances”.<sup>385</sup> Changes were made to restrict directors’ remuneration and to make some allowance for interest paid to directors. I classify these changes as *exogenous, long-run*. Some changes to the classifications within the Selective Employment Tax were altered as “there are bound to be hard cases at the borderline. Many of these have already been resolved administratively... There are certain other steps which we can take”.<sup>386</sup> I classify this measure as *exogenous, long-run* as it improves the tax. This change occurred with the other S.E.T. changes. Again, an alternative classification of *endogenous, demand management* is given.

On Estate Duty “I am anxious to find room for some lightening of the burden of duty in the smaller cases” and to introduce some reforms providing “a smoother progression, and, in particular, remove a difficulty of the present system in dealing with marginal cases”.<sup>387</sup> The motives here both appear exogenous – the first is more ideological and the second more long-run. Without a way of splitting these up I classify them as *exogenous, ideological* (and with the alternative classification). The changes came into effect on 16<sup>th</sup> April 1969.

<sup>379</sup> HC Deb 15 April 1969 vol 781 c1041

<sup>380</sup> HC Deb 15 April 1969 vol 781 c1031

<sup>381</sup> HC Deb 15 April 1969 vol 781 c1032

<sup>382</sup> HC Deb 15 April 1969 vol 781 c1033

<sup>383</sup> Ibid.

<sup>384</sup> HC Deb 15 April 1969 vol 781 c1010

<sup>385</sup> HC Deb 15 April 1969 vol 781 c1027

<sup>386</sup> HC Deb 15 April 1969 vol 781 c1030

<sup>387</sup> HC Deb 15 April 1969 vol 781 c1019

Finally, gilt-edged securities were also exempted from Capital Gains Tax from 15<sup>th</sup> April 1969 which “should make gilt-edged more attractive to investors and will encourage a more active market in gilts — a necessary condition for a successful selling policy”.<sup>388</sup> As this measure is listed under monetary policy and related to sterling to deal directly with the balance of payments, I classify the change as *endogenous, deficit reduction*. Finally, relief was given for capital gains arising from devaluation and was effective from 19<sup>th</sup> November 1967.

## **1970 (A): Budget 14<sup>th</sup> April 1970**

*Chancellor: Roy Jenkins; Prime Minister: Harold Wilson (Labour)*

### **Context**

The fiscal policy tightening led to a negative Public Sector Borrowing Requirement in 1969 and 1970. This was further reinforced by June 1969 measures to control the growth of expenditure. These domestic restrictions, combined with a rapid growth in world trade, helped the balance of payments record a surplus in 1969. The Chancellor in his 1970 Budget speech declared “the improvement in the balance of payments has been dramatic... Today, it is one of the strongest in the world”.<sup>389</sup> However, domestic unemployment still remained relatively high in the run up to the April 1970 Budget.

### **Overall Budget Objectives**

Facing a better situation than in previous years, the Chancellor argued “I believe that we now have an opportunity, such as has not occurred for a good many years past, to set the economy on a path of sustained and accelerating growth”.<sup>390</sup> However, he was keenly aware that “the growth of total demand must be kept in line with the increase in our productive potential”.<sup>391</sup> A second requirement for growth was “an improved and sustained growth of industrial investment”, and thirdly “that we preserve our competitive position”.<sup>392</sup> However, the forecast increase in private consumption “necessarily imposes caution on me in my Budget judgment”.<sup>393</sup> The Chancellor summed up his judgement as “it is right to give a moderate stimulus to the economy, but to spread this between monetary and fiscal measures. On both, I intend to proceed fairly cautiously”.<sup>394</sup> The fiscal stimulus was to cost just over £200 million in a ‘full year’ (0.4 per cent of GDP).

### **Budget Tax Measures**

Income tax cuts made up most of the stimulus — about £185 million. From 6<sup>th</sup> April 1970 the single and married persons’ allowances, the additional personal allowance for single women

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<sup>388</sup> HC Deb 15 April 1969 vol 781 c1009

<sup>389</sup> HC Deb 14 April 1970 vol 799 c1215

<sup>390</sup> HC Deb 14 April 1970 vol 799 c1223

<sup>391</sup> Ibid.

<sup>392</sup> HC Deb 14 April 1970 vol 799 c1224

<sup>393</sup> HC Deb 14 April 1970 vol 799 c1229

<sup>394</sup> HC Deb 14 April 1970 vol 799 c1230

with sole responsibility for a young child and the age exemption limits all increased and the reduced rate of tax was abolished. Some of these are discussed in terms of social objectives; however in the aggregate they are stated as contributing to the £200 million figure. As such I classify these as *endogenous, demand management*.

There was also “a short-term stimulus to investment in industrial buildings” as “investment in industrial buildings shows signs of increasing less rapidly in the immediate future”.<sup>395</sup> This measure was temporary, for the period 6<sup>th</sup> April 1970 to 5<sup>th</sup> April 1972. I classify it as *endogenous, demand management*.

The tax increases were all small. Firstly, on business taxation, an anti-avoidance measure was introduced relating to building sub-contractors from 6<sup>th</sup> April 1971 as “the uncontrolled spread of sub-contracting has led to evasion of income tax”.<sup>396</sup> As a major revenue raiser, this offsets some of the demand effect of the stimulus. I therefore classify this as *endogenous, demand management*. Secondly, there was an increase in the rate of interest on unpaid Estate Duty that was implemented on 29<sup>th</sup> May 1970. Little is said to justify this measure, only that “in present-day conditions, I think that an increase is appropriate”.<sup>397</sup> As such it appears to be designed to raise revenue. Thirdly, on betting and gaming duty the Chancellor argued “that the duty should in future be paid twice yearly on six-monthly licences, instead of in one annual lump sum”.<sup>398</sup> No other motivation is given, it raises a very small amount of revenue and is listed under minor changes. These measures, as small revenue raisers, can only be to offset other remissions and I therefore classify this as part of the overall package and as *endogenous, demand management*.

## **1970 (B): Extra measures 27<sup>th</sup> October 1970**

*Chancellor:* Anthony Barber; *Prime Minister:* Edward Heath (Conservative)

### **Context**

The Heath government came to power in June 1970. Through 1970 and beyond, inflation was beginning to rise sharply along with unemployment – the beginnings of the 1970s ‘stagflation’. However, the incoming Government also had a new philosophy which Cairncross called “less but better government”.<sup>399</sup>

### **Overall Objectives and Motivation**

In his October 27<sup>th</sup> speech, the Chancellor explained the Government’s new objectives: “our object is to concentrate their activities and their expenditure on those tasks that they alone can perform; and to enable the individual citizen to keep more of the money he earns, have greater incentive to increase his earnings, and to have greater freedom in how he spends or saves his

<sup>395</sup> HC Deb 14 April 1970 vol 799 c1245

<sup>396</sup> HC Deb 14 April 1970 vol 799 c1237

<sup>397</sup> HC Deb 14 April 1970 vol 799 c1239

<sup>398</sup> HC Deb 14 April 1970 vol 799 c1241

<sup>399</sup> Cairncross (1992), page 189.

income”.<sup>400</sup> The Chancellor announced net expenditure reductions of £330 million (0.6 per cent of GDP) for 1971-72. Furthermore, the accompanying *Investment Incentives* White Paper explained “it is the Government’s objective to secure an improvement in the long-term rate of growth of the economy”.<sup>401</sup> The overall theme of these measures was therefore to free up the private sector and foster long-run growth. In the speech the Chancellor said “I believe that the whole House will agree that it is right to take action to break out of the depressing cycle of high taxation and low growth which has bedevilled our country in recent years”.<sup>402</sup>

### Budget Tax Measures

The centrepiece of the *Investment Incentives* White Paper was the abolition of the investment grants scheme (recorded as expenditure) and the introduction of a new system of capital allowances. These capital allowances were implemented on 27<sup>th</sup> October 1970. Based on the statement above regarding long-run growth, and the tone of the White Paper itself, I classify this change as *exogenous, long-run*. The cost of this measure is given in the White Paper, building up over several years. I take estimates from the final year given as a proxy for the ‘full year’ cost — £470 million (0.9 per cent of GDP).

Corporation Tax was also reduced by 2.5 percentage points from 6<sup>th</sup> April 1969. The White Paper makes it clear that the Government wanted to offset cash flow problems introduced by ending the investment grants. However, this cut was also motivated by the need to increase cash flow in general, in his speech the Chancellor notes “both the C.B.I. and the T.U.C. have expressed to me their concern about the prospective level of investment; and it is the case that the trend of company profits has been downwards, and that in some sectors there is an inadequate cash flow”.<sup>403</sup> This measure therefore appears endogenous. However, it partly reflects a spending-driven change and partly the low profitability, investment and cash flow of firms at the time. As the objective appears to be a stimulus to productive capacity I classify this as *endogenous, supply stimulus*.

The final tax measure was a cut in income tax from 6<sup>th</sup> April 1971. The Chancellor notes “I am very conscious that it is now 11 years since there was a cut in the standard rate of Income Tax”.<sup>404</sup> It is explained that reductions in expenditure allowed for this reduction. However, the ultimate reason for the spending reduction was ideological (on the strength of the statements above about reducing the State). Again, on the basis of statements about incentives and citizens keeping more of their own money, I classify this measure as *exogenous, long-run*.

In all, these tax reductions were sizable (£925 million or 1.8 per cent of GDP) although offset by the expenditure reductions. Cairncross (1992) notes that the October measures were “designed to be neutral in its effect on demand but made many changes in keeping with the Government’s philosophy of less but better government”.<sup>405</sup> This seems to reinforce the classifications chosen above.

<sup>400</sup> HC Deb 27 October 1970 vol 805 c37

<sup>401</sup> Cmnd. 4516, paragraph 1.

<sup>402</sup> HC Deb 27 October 1970 vol 805 c51

<sup>403</sup> HC Deb 27 October 1970 vol 805 c50

<sup>404</sup> Ibid.

<sup>405</sup> Cairncross (1992), page 189.

## 1971 (A): Budget 30<sup>th</sup> March 1971

*Chancellor:* Anthony Barber; *Prime Minister:* Edward Heath (Conservative)

### Context

Reviewing the previous year, the FSBR 1971 notes “the relatively slow growth of output in 1969 continued in 1970... this rate of increase was below the rate of growth of productive potential”.<sup>406</sup> Partly as a result of this slowdown in growth, Cairncross (1992) reports that unemployment, which had been creeping up, began to rise at a much faster rate. In addition, wages were rising at over 10 per cent per annum and prices at about 7 per cent.<sup>407</sup> Woodward (2004) notes: “when it came to power in June 1970 the Heath government faced the simultaneous problem of rising inflation and rising unemployment – stagflation. The former was due to the combined influence of the rise in world inflation and the wage explosion. The latter was partly due to the deflationary policies introduced by Chancellor Jenkins”.<sup>408</sup>

### Overall Budget Objectives

The 1971 Budget began with an analysis that “for many years, under one Government and another, the economic performance of our country has been poor”.<sup>409</sup> On the tax system the Chancellor explained that it “too often it stultifies enterprise. Too often it discourages the pursuit of profit. Too often it penalises savings, on which the nation's wealth and the growth of our economy so largely depend. Moreover, the difficulty of understanding it adds to the feeling of the oppressive and ever-growing burden of taxation... What is needed is a plan for radical reform over the next few years. And these must be our aims”.<sup>410</sup> These aims were therefore to reduce the “excessive burden” of taxation; simplify the system; encourage “initiative, enterprise and effort”; and encourage savings.<sup>411</sup> However with regard to demand management, demand inflation was regarded as different from cost inflation, and required different treatments.<sup>412</sup> The central judgement was that “it is much more probable that, in the absence of any change in policy, the pressure of demand would fall, and I do not believe that the fight against inflation would be aided at present by any further lowering of the pressure of demand”.<sup>413</sup> The Chancellor decided he should “provide some addition to demand”<sup>414</sup> and this should be adequate to raise the rate of expansion of output to the rate of growth of productive

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<sup>406</sup> FSBR 1971, page 6.

<sup>407</sup> Cairncross (1992), page 189.

<sup>408</sup> Woodward (2004), page 135.

<sup>409</sup> HC Deb 30 March 1971 vol 814 c1358

<sup>410</sup> HC Deb 30 March 1971 vol 814 c1360

<sup>411</sup> Ibid.

<sup>412</sup> In an interesting passage about the money supply the Chancellor states: “I think it is now well understood that, important as monetary policy is as a means of influencing demand generally, it has no special magic for dealing with cost inflation, and it would be inconsistent with my Budget judgment to restrict the growth of money supply so as to reduce demand below the level needed to achieve a growth of output in line with the growth of productive potential. But, equally, the supply of money must not be so plentiful as to produce an additional boost to demand beyond that intention. Nor must it accommodate any further impetus to the rise in costs and prices”. (c1371)

<sup>413</sup> HC Deb 30 March 1971 vol 814 c1369

<sup>414</sup> HC Deb 30 March 1971 vol 814 c1370

potential – estimated at 3 per cent. Furthermore, linking together supply-side reforms and this demand stimulus, the Chancellor explained: “The need for this degree of addition to demand this year provides the opportunity to do certain things which are in themselves highly desirable... my aim is that this Budget should not only maintain an adequate rate of expansion of output in the year ahead but that it should also make some contribution to our capacity to grow in the longer term”.<sup>415</sup> These statements suggest that policy was being designed both to return growth to trend and to raise growth capacity over the longer term. However, although these were supply-side reforms, many of the major changes appear endogenous. I discuss this below.

### Major Budget Tax Measures

Income tax allowances were increased. Both “are highly desirable in themselves and in line with the immediate need, which I have already explained to the House, to give some additional stimulus to the economy”.<sup>416</sup> Child allowances were raised and the earned income relief was also increased. Both took effect from 6<sup>th</sup> April 1971 and I classify these as *endogenous, demand management*.

The major business tax reduction was a further reduction in the Corporation Tax rate of 2.5 per cent, effective for the financial year starting 6<sup>th</sup> April 1969. In the Budget speech the Chancellor made clear his objections to the current system of Corporation Tax and the need for future reform. However, “we need not only to reform the structure but also to reduce the burden of the tax”.<sup>417</sup> Motivating the cut, the Chancellor continued “I have already referred to the marked fall of the share of company profits in the total of domestic incomes, and this in turn has contributed to a slow-down of industrial investment. Sustained growth can only be based on an adequate level of profitability not only before tax but after tax as well”.<sup>418</sup> I therefore classify this measure as *endogenous, supply stimulus*.

In the Government’s election manifesto they had pledged to abolish the Selective Employment Tax. “We have frequently explained why we consider S.E.T. to be a thoroughly bad tax. It is unfair and it is arbitrary. It discriminates between one employment and another in a way which is quite indefensible”.<sup>419</sup> It was decided that total abolishment was not possible in the current year but from 5<sup>th</sup> July 1971 it would be cut by half. In justifying this cut the Chancellor said “this reduction... will help in the fight against inflation... it will strengthen the liquidity of companies in manufacturing as well as in service industries and so help with the financing of working capital and investment”.<sup>420</sup> This reform is stated as being one step towards abolishing both the S.E.T. and the Purchase Tax in favour of a Value Added Tax (V.A.T.). This measure seems to have a short-term and long-term justification and as such it is difficult to classify concisely. However, I opt for *endogenous, supply stimulus*, it being directed at business and seemingly influenced by contemporaneous factors.

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<sup>415</sup> Ibid.

<sup>416</sup> HC Deb 30 March 1971 vol 814 c1389

<sup>417</sup> HC Deb 30 March 1971 vol 814 c1385

<sup>418</sup> Ibid.

<sup>419</sup> HC Deb 30 March 1971 vol 814 c1393

<sup>420</sup> HC Deb 30 March 1971 vol 814 c1396

The one major increase (although the increases in tax income were very small) was, from 6<sup>th</sup> April 1972, the introduction of a scheme to collect tax by deduction from payments made to certain sub-contractors in the construction industry. This followed “concern about the extent to which some sub-contractors... have been evading the payment of income tax”.<sup>421</sup> As an anti-avoidance measure, I classify this as *exogenous, ideological*. No specific target for the stimulus package was stated and there was a very small increase in revenue. I therefore do not assign an alternative classification.

These changes account for nearly 90 per cent of the remissions and over 90 per cent of the increases.

### **1971 (B): Extra measures 19<sup>th</sup> July 1971**

*Chancellor:* Anthony Barber; *Prime Minister:* Edward Heath (Conservative)

#### **Context**

During the months following the March Budget, unemployment and inflation continued to rise. The Chancellor noted in his statement that, without any policy action, unemployment would be higher next year than was expected at Budget time.<sup>422</sup>

#### **Overall Objectives**

While the need to reduce inflation “remains paramount”<sup>423</sup>, Barber noted a levelling off of the rate of increase of money earnings since the beginning of the year. An informal deal was also struck with the C.B.I to limit or avoid rises in prices over the next 12 months. Consequently, the Chancellor felt able to announce a stimulus: “as a result of my review of the economic situation and after taking into account all the relevant factors, including the new situation created by the C.B.I. proposals, the conclusion that I have reached is that it is now right to take action to provide some further stimulus to demand”.<sup>424</sup>

#### **Tax Measures**

Two tax measures were announced immediately following the above comments. Firstly, the rate of first year capital allowance was increased as “in the absence of new action, industrial investment would be likely to continue on a downward trend for a time”.<sup>425</sup> As a deliberate incentive to speed up this investment, the action was temporary from 20<sup>th</sup> July to 1<sup>st</sup> August 1971. Free depreciation rules were also altered from 20<sup>th</sup> July 1971. Being unable to separate the revenue effects of the two changes, I exclude the end date and simply assign the total full year cost estimate to the 20<sup>th</sup> July.

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<sup>421</sup> HC Deb 30 March 1971 vol 814 c1380

<sup>422</sup> HC Deb 19 July 1971 vol 821 c1036

<sup>423</sup> HC Deb 19 July 1971 vol 821 c1037

<sup>424</sup> HC Deb 19 July 1971 vol 821 c1038

<sup>425</sup> HC Deb 19 July 1971 vol 821 cc1038-9



The second stimulus measure was a cut in Purchase Tax rates. This cut was sizable, the rates were “reduced by almost twice the amount permitted by the regulator”.<sup>426</sup> Again, this was implemented on 20<sup>th</sup> July 1971.

Both these measures were aimed at stimulating demand and so I classify these as *endogenous, demand management*.

## **1972: Budget 21st March 1972**

*Chancellor: Anthony Barber; Prime Minister: Edward Heath (Conservative)*

### **Context**

By December 1971 the number wholly unemployed was nearly 260,000 more than a year earlier.<sup>427</sup> Inflation policy had begun to turn towards incomes policies despite rejecting them in the 1970 election. By the second half of 1971 the Government sought to influence the level of wage settlements in the public sector, a policy which became known as ‘N-1’ and resulted in several industrial disputes. The FSBR 1972 reports that the monthly index of earnings showed a smaller increase, 9.5 per cent, in 1971 than in 1970 when it had been 14 per cent.<sup>428</sup> The rate of increase of retail prices over the first 6 months of 1971 had been 11 per cent but also fell back, to 5.75 per cent, by December (and to a similar figure in January). However, a glance at the retail price index over the whole of the 1970s shows that this easing around 1971/72 was the calm before the storm.

### **Overall Budget Objectives**

The Chancellor set out three objectives: giving industry the encouragement to be efficient and forward- looking; to achieve growth at a sustained and faster rate leading to a permanent improvement in employment and living standards; and to make progress with tax reform: “taxation reform is an essential element of our strategy for increasing our rate of economic growth”.<sup>429</sup> The Chancellor was, however, concerned about a prospective slowdown over the coming year: public investment and private consumption – having been stimulated by previous tax cuts – were believed to be slowing down. In summing up, Barber concludes “the implications of such a slowing down in the growth of output for the general prosperity of the nation and for the level of unemployment in particular are obvious. Such a situation would not be acceptable. I have therefore come to the conclusion that a further boost to demand is required”.<sup>430</sup> The stimulus was aimed at raising output “in the first half of next year”<sup>431</sup> by about 2 per cent. The measures were to “ensure a growth of output at an annual rate of 5 per cent”.<sup>432</sup> In terms of the inflationary effect, Barber seemed relaxed: “I do not believe that a stimulus to demand of the order I propose will be inimical to the fight against inflation. On the

<sup>426</sup> HC Deb 19 July 1971 vol 821 c1040

<sup>427</sup> FSBR 1972, paragraph 3.

<sup>428</sup> FSBR 1972, paragraph 6.

<sup>429</sup> HC Deb 21 March 1972 vol 833 c1344

<sup>430</sup> HC Deb 21 March 1972 vol 833 c1352

<sup>431</sup> HC Deb 21 March 1972 vol 833 c1353

<sup>432</sup> Ibid.

contrary, the business community has repeatedly said that the increase in productivity and profitability resulting from a faster growth of output is one of the most effective means of restraining price increases”.<sup>433</sup> These statements reinforce common beliefs about the understanding of macroeconomic policy in the 1970s. For all the earlier discussion about sustained, long-term growth, the overall judgement is quintessentially one of demand management. It is worth noting the target of “first half of next year” as many of the tax reforms, which were significant remissions, did not take effect until April 1973. This provides help in unpicking the immediate stimulus measures from the longer-term tax reforms. I will classify the major, immediate measures as *endogenous* with the 1973 reforms being *exogenous*. Below I discuss this for each change.

### Budget Tax Measures

#### *1972 Major Changes*

Increases in income tax personal allowances take the lion’s share of the stimulus measures. Introducing these, Barber argued that the other tax changes (covered below) “would raise output in the first half of next year by under ½ per cent. But the House will recall that my Budget judgment was that output should be raised in that period by around 2 per cent in order to increase our rate of economic growth to 5 per cent”.<sup>434</sup> Following this, Barber announced increases in the married and single persons’ allowances and the income limits for age exemption from 6<sup>th</sup> April 1972. These two changes alone made up £1200 million (2 per cent of GDP) of the £1800 million (3 per cent of GDP) 1972 tax cuts. I classify these as *endogenous, demand management*.

On business taxation, there were increases in the allowances for expenditure on plant and machinery and on industrial buildings from 22<sup>nd</sup> March 1972. The stated objective of these measures was “to help British industry to expand and modernise and to improve its efficiency...The hard fact is that for years now the level of productive investment in this country has been low by comparison with that of our main trade competitors”.<sup>435</sup> At face value, these changes appear to be exogenous, long-run. But given the Budget’s emphasis on immediate stimulus and the need to raise growth, some part of these cuts are likely to be correlated with output. I therefore opt for *endogenous, supply stimulus* as the classification.

Finally, cuts in the Purchase Tax were directly mentioned as a means to raise growth the following year “I have said that the stimulus to demand needed in this Budget should be sufficient to raise output in the first half of next year by about 2 per cent. As one means to this end—and to help to keep down prices—I have decided to take some further action on Purchase Tax now”.<sup>436</sup> They took effect on 21<sup>st</sup> March 1972. Based on this motivation, I classify the changes as *endogenous, demand management*.

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<sup>433</sup> Ibid.

<sup>434</sup> HC Deb 21 March 1972 vol 833 c1388

<sup>435</sup> HC Deb 21 March 1972 vol 833 c1365

<sup>436</sup> HC Deb 21 March 1972 vol 833 c1378

*1973 Reforms to the Taxation System*

Corporation Tax was to be reformed from 1<sup>st</sup> April 1973: “In last year's Budget speech I announced my intention to reform the structure of Corporation Tax in order to remove the present discrimination between retained and distributed profits. I explained that this discrimination distorts the capital market, tends to misallocate scarce investment resources, impedes companies that need to raise equity capital, and lessens the pressure for efficiency”.<sup>437</sup> The form of the reform was announced in this speech, so I take the announcement date to be Budget day 1972. The new system was also to include a special rate for small companies as “small companies comprise a sector which is of crucial importance to the economy, and they must have every reasonable incentive to expand and develop”.<sup>438</sup> There were also announcements about how these reforms would affect special cases such as building societies. In addition, the Chancellor announced some simplification of the rules governing close companies — the new Corporation Tax system enables some simplification as it is but “it is right that the simplification of the system should go well beyond this”.<sup>439</sup> The final change mentioned in relation to the Corporation Tax reforms is how to treat capital gains under the new regime. All these changes began on 1<sup>st</sup> April 1973 and are related to the Corporation Tax reforms, which are *exogenous, long-run* changes.

The Selective Employment Tax and Purchase Tax were to be replaced by a Value Added Tax as of 1<sup>st</sup> April 1973. This was announced in the 1971 Budget and, as it was specific, I take the announcement date to be 30<sup>th</sup> March 1971. The reasons for reform were set out in the 1971 Budget speech. On the S.E.T.: “We have frequently explained why we consider S.E.T. to be a thoroughly bad tax. It is unfair and it is arbitrary. It discriminates between one employment and another in a way which is quite indefensible — both in general and in detail”.<sup>440</sup> Reform of the Purchase Tax was also desirable: “Purchase tax has some obvious advantages, but it also has one major disadvantage, and that is that it bears particularly heavily on a limited number of goods and not at all on services. The desire to broaden the base of indirect taxation was, I believe, one of the reasons why the previous Government decided to raise additional revenue from the S.E.T.”.<sup>441</sup> For these reasons V.A.T. was preferred. I classify all these changes *exogenous, long-run*; they are meant to be long-term improvements to the tax system and did not take effect until April 1973.

Special consideration was given to V.A.T. on cars, “motor cars represent a major source of revenue from Purchase Tax — at present more than £300 million a year. To forgo a substantial proportion of this revenue would inevitably mean a significant increase in the rate of V.A.T. on all other goods and services”.<sup>442</sup> As this is part of the overall package of V.A.T. changes, I classify it the same way, as *exogenous, long-run* — but assume an announcement date of Budget day 1972.

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<sup>437</sup> HC Deb 21 March 1972 vol 833 cc1357

<sup>438</sup> HC Deb 21 March 1972 vol 833 c1361

<sup>439</sup> HC Deb 21 March 1972 vol 833 c1362

<sup>440</sup> HC Deb 30 March 1971 vol 814 c1393

<sup>441</sup> HC Deb 30 March 1971 vol 814 c1393

<sup>442</sup> HC Deb 21 March 1972 vol 833 c1374

Income taxes were also reformed from 6<sup>th</sup> April 1973. The previous year the Government legislated for a unified tax structure for income tax, doing away with taxes such as the Surtax. In the 1971 Budget the Chancellor had noted that “Few people would deny that our existing system is too cumbersome, too complex, and in many respects absurd... I am convinced that, despite the difficulties, nothing but a root and branch reform will meet the need for a more sensible and intelligible system of personal direct taxation”.<sup>443</sup> The Chancellor postponed setting the new rates until 1972 (although a provisional rate was included in the legislation). I therefore take the announcement date to be when the new rates were announced. This differs from my decision on Corporation Tax, where I took the announcement date to be when the implementation date was announced. This is because Corporation Tax rates were normally set for the year just ended whereas income tax rates were set for the year ahead. These reforms were to aid the long-run workings of the tax system. In keeping with the Government’s desire to simplify the tax system to improve economic performance, I classify the reforms as *exogenous, long-run*.

There are two changes for 1972 which are consequential to the 1973 tax reforms. The first relates to the running down of the Surtax office. To limit the administrative costs, the exemption limit for Surtax was raised for 1972-73. Second, “because the Inland Revenue is so heavily committed to work in preparation for the unification of personal taxation”<sup>444</sup>, the increase in pensions payable in 1972-73 was tax-free. These changes directly follow from the tax reforms. As both relevant triggers were classified as *exogenous, long-run* reforms, I classify these two measures the same.

### **1973 (A): Budget 6<sup>th</sup> March 1973**

*Chancellor:* Anthony Barber; *Prime Minister:* Edward Heath (Conservative)

#### **Context**

Through 1972, growth performance was generally strong. The FSNR 1973 noted that unemployment had fallen by 200,000 during 1972 and the period of expansion between 1971 and 1973 was to become known as the Heath-Barber boom as the Government went for 5 per cent growth. A consequence, however, was a deterioration in the balance of payments which, under heavy pressure in June 1972, had led to the floating of sterling (following a record drain in reserves). Inflation also remained high, although it was not until 1974 and 1975 that it was to rocket. Coopey and Woodward (1996) noted that the expansion, coupled with the fact that “the Treasury had overestimated the degree of spare capacity in the economy, led to an unsustainable rate of expansion”.<sup>445</sup> Monetary policy had also become expansionary over the period and, combined with the “temporary” flotation, the boom was allowed to proceed.

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<sup>443</sup> HC Deb 30 March 1971 vol 814 cc1386-7

<sup>444</sup> HC Deb 21 March 1972 vol 833 c1356

<sup>445</sup> Coopey and Woodward (1993), page 11.

### Overall Budget Objectives

There is a slight change of tone in the 1973 Budget speech, with dual objectives of expansion but also “the attack on inflation”.<sup>446</sup> The Chancellor noted his achievement in boosting the rate of growth and lowering unemployment. The next objective was to sustain the higher rate of growth and the Chancellor mentioned three conditions: a higher level of industrial investment to grow productivity; not halting growth to tackle difficulties which ought to be tackled in other ways; and conquering inflation. The overall growth objective was to “keep the economy growing, and to keep it growing over the next year or so at a rate comparable with that we have now achieved”<sup>447</sup>, so there is no admission that 5 per cent was overly ambitious. However, the section of the speech on inflation largely deals with incomes policies. On encouraging investment, the Chancellor — as in the previous year — emphasised the importance of providing the certainty of a sustained rate of demand “this means aiming at a growth of demand over the next year or 18 months which is sufficiently high to maintain a steady movement towards the full use of our productive capacity”.<sup>448</sup> This statement seems to reflect Coopey and Woodward’s claim that the Treasury had overestimated the degree of spare capacity. The Chancellor’s final judgement was that “the Budget should on this occasion be broadly neutral” as “I believe that on this basis the economy will continue to grow at an annual rate of around 5 per cent over the 18 months from the second half of 1972 to the first half of 1974”.<sup>449</sup> This implies no discretionary stimulus or slowdown and the individual justifications below back up the *exogenous* nature of the tax changes.

### Major Budget Tax Measures

The two bigger changes in taxation were to V.A.T. and Corporation Tax. These accounted for over 90 per cent of the remissions and 80 per cent of the increases. There were some changes in the coverage of V.A.T. from 1<sup>st</sup> April 1973, although the provisional rate announced the previous year was confirmed. Young children’s clothing and footwear was zero rated. The footwear change comes from a report commissioned to “consider to what extent the price of children’s footwear contributes to the incidence of foot abnormalities”<sup>450</sup> and the changes to V.A.T. follow from recommendations in the report. The clothing change follows an admission: “I can sum up my decision by saying on Shrove Tuesday, the traditional day of repentance: “I was wrong”. It will be zero-rated”.<sup>451</sup> In addition, there were changes to food, currently charged to Purchase Tax. This tax, “falls heavily on families with children” and “The day has passed when these items can seriously be regarded as luxuries in the old sense of the word”.<sup>452</sup> The Chancellor announced they were to be relieved of V.A.T. All these changes appear social objectives, so I classify them as *exogenous, ideological*.

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<sup>446</sup> HC Deb 06 March 1973 vol 852 c235

<sup>447</sup> HC Deb 06 March 1973 vol 852 c238

<sup>448</sup> HC Deb 06 March 1973 vol 852 c248

<sup>449</sup> HC Deb 06 March 1973 vol 852 c249

<sup>450</sup> HC Deb 06 March 1973 vol 852 c275

<sup>451</sup> Ibid.

<sup>452</sup> HC Deb 06 March 1973 vol 852 c276

The V.A.T. concessions are offset to a significant degree by the closing of some loopholes in the structure of Corporation Tax and, for this reason it would make sense to classify both as *exogenous*. In the past the Chancellor had been unable to consider further relaxation of the treatment of groups “unless I could also take action to counter certain artificial manipulations of the group relief provisions involving in effect the sale of capital and other allowances at a discount. This abuse was spreading rapidly and there was reason to fear a possible loss of tax of the order of £100 million a year”.<sup>453</sup> A solution was found to this loss and implemented on 6<sup>th</sup> April 1973. I classify this as *exogenous, ideological* as it offsets the V.A.T. measure and because it plugs tax loopholes.

There were also some increases in the income limits for the age exemption. The Chancellor explained “The purpose of this exemption is to recognise the special position of the elderly. The limits will be raised so that no married couple, where either spouse is aged 65 or over, will pay any tax on an income of £1,000 or less”.<sup>454</sup> I therefore classify this as *exogenous, ideological*.

### **1973 (B): Extra measures 17<sup>th</sup> December 1973**

*Chancellor:* Anthony Barber; *Prime Minister:* Edward Heath (Conservative)

#### **Context**

Over the previous couple of years the Government did, not only, “engineer a major boom, but the stimulus was applied over a relatively short period”.<sup>455</sup> Cairncross argues that as 1973 progressed there were good grounds to check demand.<sup>456</sup> Indeed, in May cuts were announced to government expenditure of £100 million in the current year and £500 million (0.7 per cent of GDP) for 1974-75. The FSBR 1974 explains “the purpose of this [the cuts] was to ensure that adequate resources would be available in that year for exports, industrial investment and a reasonable growth of personal consumption”, indirectly acknowledging that demand was now too high. Monetary policy also became stricter: by November the Bank Rate stood at 13 per cent, a level never previously reached and more public expenditure cuts followed on 9<sup>th</sup> October 1973. On 7<sup>th</sup> October oil production was cut by Arab oil ministers, precipitating an international oil crisis and a sharp rise in oil prices. In November mineworkers and electric power engineers began industrial action.<sup>457</sup> A state of emergency was declared on 13<sup>th</sup> November. A three-day week was imposed on 13<sup>th</sup> December, to begin from 1<sup>st</sup> January to conserve energy as well as other measures.

#### **Overall Objectives**

The December outlook was that “although the supply situation in 1974 is unpredictable, it is now only too probable that there will be an energy shortage in all the oil-importing countries

<sup>453</sup> HC Deb 06 March 1973 vol 852 c262

<sup>454</sup> HC Deb 06 March 1973 vol 852 c266

<sup>455</sup> Woodward (2004), page 141.

<sup>456</sup> Cairncross (1992), page 192.

<sup>457</sup> Blackaby (1978), page 384.

leading to stagnant, if not falling, output accompanied by rising unemployment”.<sup>458</sup> And “in the case of our own country these problems have been compounded by another factor, specific to the United Kingdom — the industrial action in the coal and electricity industries and on the railways”.<sup>459</sup> The Chancellor explained the need for fiscal action: “the fall in output will be greater than the fall in demand... If nothing is done there will be pressure of excess demand which will draw down stocks and hold back exports... In this situation the Government have decided to take steps now to reduce demand by some £1,200 million in the coming year”.<sup>460</sup>

### **Tax Measures**

The Chancellor ruled out action using direct tax measures as “any increase in the basic rate of income tax is bound to hit millions of ordinary people”.<sup>461</sup> The Chancellor decided that “those on higher incomes will, in general, obviously be better able to cope with the situation we face”.<sup>462</sup> Consequently a 10 per cent surcharge was to be levied in Surtax for the year 1972-73. Following the overall objectives, I classify this as *endogenous, demand management*. The measure actually only raised £35 million (0.04 per cent of GDP) in the current year. The vast majority of the £1200 million (1.6 per cent of GDP) reduction in demand came from cuts to public expenditure: “I am sure that it is right that the main weight of the action I am taking should lie not on persons or private sector industry but on public expenditure”.<sup>463</sup>

## **1974: Budget 26th March 1974**

*Chancellor:* Denis Healey; *Prime Minister:* Harold Wilson (Labour)

### **Context**

Following the December measures the situation remained dire. In February a coal strike was called and Heath called a General Election which he was to lose. The incoming Labour Government faced quickly rising prices and wages, falling output and a record balance of payments deficit.<sup>464</sup> In his speech the new Chancellor quoted the National Institute Economic Review for February 1974, prior to the General Election: “It is not often that a Government finds itself confronted with the possibility of a simultaneous failure to achieve all four main policy objectives — of adequate economic growth, full employment, a satisfactory balance of payments, and reasonably stable prices”.<sup>465</sup>

### **Overall Budget Objectives**

Unsurprisingly the tone of the March 1974 speech was one of urgency. However, the Budget judgement itself remained fairly mild. In terms of reflation, Chancellor Healey argued “At this

<sup>458</sup> HC Deb 17 December 1973 vol 866 c952

<sup>459</sup> HC Deb 17 December 1973 vol 866 c953

<sup>460</sup> HC Deb 17 December 1973 vol 866 c955

<sup>461</sup> HC Deb 17 December 1973 vol 866 c962

<sup>462</sup> Ibid.

<sup>463</sup> HC Deb 17 December 1973 vol 866 c963

<sup>464</sup> Cairncross (1994), page 80.

<sup>465</sup> HC Deb 26 March 1974 vol 871 c282

moment, if I were concerned only with managing the domestic aspects of our economy, I should prefer to risk having a bit too much demand rather than too little... But we cannot shut our eyes to external economic problems, as the previous Government discovered to their cost”.<sup>466</sup> The Chancellor explains “Everyone is agreed at least that in the immediate situation there is excess demand”.<sup>467</sup> However, views about the future prospects were more uncertain which led the Chancellor to argue for a Budget “broadly neutral on demand, with the bias, if any, on the side of caution”.<sup>468</sup> That said, the Chancellor continues — interestingly — to conclude that public borrowing was part of the excessive monetary expansion and therefore aimed “at a massive reduction in the public sector's borrowing requirement, a reduction of about £1,500 million compared with 1973–74”.<sup>469</sup> The Chancellor also sought to redistribute the fiscal burden and Britton (1991) argues “the main effect of the changes was to redistribute to the relatively poor from companies and from the relatively well off”.<sup>470</sup>

### **Budget Tax Measures**

A considerable expenditure measure was introduced in March 1974: food subsidies. This was an important part of the Government’s redistributive objectives arguing that he and Labour colleagues “have felt for some time that in the current situation the most immediate and effective way of helping the family budget is to hold down and even, if possible, to reduce the prices of essential foods”.<sup>471</sup> To fund this expenditure consumption taxes were increased: “I deal first with indirect taxation. Here my aim is to help pay the cost of reducing the price of the more essential goods by increasing the tax on the less essential”.<sup>472</sup> The total £680 million raised in a full year “goes a long way to cover the demand effects of the increases in food subsidies and represents a shift of price from essential to less essential goods which I hope the House will approve”.<sup>473</sup> In making up this £680 million, tobacco and alcohol duties were increased from 27<sup>th</sup> March 1974 (with consequential V.A.T changes). Changes to the coverage of V.A.T. took effect on 1<sup>st</sup> April 1974. General Betting Duty and Pool Betting Duty increased on 31<sup>st</sup> March and 1<sup>st</sup> April 1974 respectively. Given the objective to cover the food subsidies, I categorise these as *endogenous, spending-driven*.

The FSBR 1974 shows that, as a result of the Budget changes, the increased expenditure almost exactly matches the increased tax receipts.<sup>474</sup> Whilst the numbers are not explicitly stated in the Budget speech, this objective is reflected in the Chancellor’s statement on introducing his tax measures “I now turn to the only method by which I can cover the remaining cost of our expenditure proposals”.<sup>475</sup> As such, even though other measures are

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<sup>466</sup> HC Deb 26 March 1974 vol 871 c293

<sup>467</sup> HC Deb 26 March 1974 vol 871 c294

<sup>468</sup> Ibid.

<sup>469</sup> Ibid.

<sup>470</sup> Britton (1991), page 21.

<sup>471</sup> HC Deb 26 March 1974 vol 871 c297

<sup>472</sup> HC Deb 26 March 1974 vol 871 c308

<sup>473</sup> HC Deb 26 March 1974 vol 871 c311

<sup>474</sup> FSBR 1974, pages 14 and 15.

<sup>475</sup> HC Deb 26 March 1974 vol 871 c305



justified for – sometimes seemingly – exogenous reasons, I will classify all tax rises in this budget as *endogenous, spending-driven*.

The largest of the remaining revenue raisers was an increase in Corporation Tax to 52 per cent: “Companies have in general been doing rather better in the last year or two...In these circumstances, it is only right that companies should bear their share of the cost of putting the economy back on course”.<sup>476</sup> This measure was implemented for the tax year 1973-74. The rate of stamp duty on conveyances and transfers and similar duties was also doubled on 1<sup>st</sup> May 1974, raising £67 million in a full year.

On income tax, “as I have already made clear, I require to raise from the taxpayer a substantial amount of additional revenue for the coming year”<sup>477</sup> and consequently 3p was added to the basic rate of income tax and 8p to the top rate. This also had the knock-on effect of “an increase in the rate of Advance Corporation Tax, which will be adjusted to keep in step”<sup>478</sup>; however, this does not alter liabilities in a full year as it is set off against Corporation Tax and I therefore exclude it. A new higher band was also introduced at 5p above the basic rate. These changes occurred on 6<sup>th</sup> April 1974, raising nearly £1000 million (1.2 per cent of GDP).

Interest relief was once again withdrawn on 27<sup>th</sup> March 1974 – having been reinstated in 1972 – “it is obvious nonsense for the Exchequer to subsidise inessential borrowing at any time, let alone in the current state of the economy”.<sup>479</sup> This clearly could be classified as demand management; however, in the spirit of the overall strategy discussed above – and that it raises £100 million of the funds required, I classify this, as with the previous measures, as *endogenous, spending-driven*.

There were two anti-avoidance measures “which are designed to prevent individuals or groups from escaping taxation which the community as a whole undoubtedly believes should be paid”.<sup>480</sup> The first relates to the taxation of foreign income “it is clearly imperative that we should put a stop to the avoidance of tax by artificial devices”.<sup>481</sup> The measures were implemented on 6<sup>th</sup> April 1974. Secondly, the Chancellor announced his intention to go ahead with the measures announced by the previous Government on the 17<sup>th</sup> December 1973 defining charges of certain capital gains as income. This measure was backdated to 18<sup>th</sup> December as originally intended. These measures were to protect revenues and, in the spirit of this Budget, I also classify them as *endogenous, spending-driven*.

I exclude three measures from the tax series. The first, mentioned above, is the consequential changes in Advance Corporation Tax which are offset against Corporation Tax liabilities. This is also the case with a second A.C.T. measure. Finally, the lowering of the Investment Income Surcharge was rejected in the Finance Bill debate and reintroduced in the November 1974 budget.

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<sup>476</sup> HC Deb 26 March 1974 vol 871 c319

<sup>477</sup> HC Deb 26 March 1974 vol 871 c325

<sup>478</sup> Ibid.

<sup>479</sup> HC Deb 26 March 1974 vol 871 c324

<sup>480</sup> HC Deb 26 March 1974 vol 871 c314

<sup>481</sup> HC Deb 26 March 1974 vol 871 c315

I now turn to the remissions. “To relieve those at the bottom of the scale”<sup>482</sup> the main income tax allowances were increased from 6<sup>th</sup> April 1974. The child allowance was increased from the same date as “this is the only way open to me of giving early help to the great majority of families”.<sup>483</sup> As another concession, “I propose to give further help to the worse off in relation to age exemption”<sup>484</sup> and the income limits for these allowances were raised, again from the 6<sup>th</sup> April. I classify these changes as *exogenous, ideological*. To guard against the possibility that the revenue raisers had to offset these remissions, I assign these remissions an alternative *endogenous, spending-driven* classification.

### **1974 (B): Extra measures 22<sup>nd</sup> July 1974**

*Chancellor:* Denis Healey; *Prime Minister:* Harold Wilson (Labour)

#### **Overall Objectives**

The second budget of 1974 came only four months later. The Chancellor had made it clear in March that “I would make fresh proposals at any time if they were required. I consider that the time has come to take some further action”.<sup>485</sup> The “first and main objective” was to attack inflation “at its source” as “retail prices have risen 16 to 17 per cent. in the past year”.<sup>486</sup>

#### **Tax Measures**

Inflation was the target of the emergency policy measures. Firstly, V.A.T. was cut from 10 to 8 per cent from 29<sup>th</sup> July 1974. This measure will “enable manufacturers and retailers to reduce prices of a very wide range of goods and services. It should initially cut the cost of living by about 1 per cent”.<sup>487</sup> Secondly, the Government sought to provide relief from domestic rates (local taxation), “we shall introduce an immediate relief for those domestic ratepayers whose rates go up by more than 20 per cent. this year”.<sup>488</sup> There were also some changes in expenditure, food subsidies were increased, there was a rise in the regional employment premium and the needs allowance.

In summarising the purpose of these measures the Chancellor explained “the measures I have announced so far will not only help to cut the cost of living and to increase employment. They will also help industry both in their effect on demand and by reducing labour costs through their effect on thresholds, and through the REP”.<sup>489</sup> I therefore classify these measures as endogenous. Interestingly they are direct attempts to deal with inflation as well as to stimulate the economy. These measures essentially tackle firms’ costs (although there is a strong element of demand management here too) and so in my categorisation these are closest to supply stimulus measures. I therefore classify them all as *endogenous, supply stimulus*.

<sup>482</sup> HC Deb 26 March 1974 vol 871 c322

<sup>483</sup> Ibid.

<sup>484</sup> Ibid.

<sup>485</sup> HC Deb 22 July 1974 vol 877 c1048

<sup>486</sup> Ibid.

<sup>487</sup> HC Deb 22 July 1974 vol 877 c1050

<sup>488</sup> HC Deb 22 July 1974 vol 877 c1051

<sup>489</sup> HC Deb 22 July 1974 vol 877 c1052

## 1974 (C): Budget 12<sup>th</sup> November 1974

*Chancellor: Denis Healey; Prime Minister: Harold Wilson (Labour)*

### Context

On reflection, the FSBR November 1974 noted “the losses in the early part of the year had been over-estimated and that the pressure of demand was easing a little...the measures of 22 July were designed primarily to cut into the rate of increase of prices. They were intended also to help industry and employment by taking up some slack”.<sup>490</sup> But the economic situation in the autumn was “extremely worrying” according to Britton (1991), even though the depth of the forthcoming recession was not foreseen. Inflation was now running at over 15 per cent, the balance of payments was in severe deficit and unemployment had risen.<sup>491</sup> Unemployment rose by over 30,000 from July to November and was to hit nearly 1 million within the next year.<sup>492</sup> In all, GDP fell during 1974 and 1975. Inflation was also causing particular problems for industry and oil prices had risen fivefold in just over a year.<sup>493</sup> In nominal terms it seemed profits were relatively high — and this was the motivation for raising Corporation Tax the previous March — but inflation-adjusted profits were falling rapidly, with companies in an increasingly illiquid position.<sup>494</sup>

### Overall Budget Objectives

Regarding the balance of payments the Chancellor argued: “consumer countries must therefore accept the inevitability of massive payments deficits on oil account for the time being, and finance these deficits by equally massive borrowing”.<sup>495</sup> There was a belief that this could be achieved by recycling “petrodollar surpluses” from producer countries. A widespread deflation was also rejected “there is no real evidence that in this situation the adoption of deflationary policies will produce a worthwhile impact on the rate of inflation” although interestingly Healey continues “at any rate within a timescale that democracy will tolerate”.<sup>496</sup> There was some optimism about the domestic prospects for growth, and so “I expect the House is as puzzled as I am by some aspects of the unemployment figures”.<sup>497</sup> In introducing his tax changes, Healey explains “I believe that the action I took in July and the further measures I will announce this afternoon will ensure that the overall level of demand in the economy will be sufficient to prevent any danger of mass unemployment in the coming year”.<sup>498</sup> However, he also notes the major problem that inflation poses for the company sector and “I intend to take steps to reduce the financial pressures now bearing heavily on these firms so as to avert

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<sup>490</sup> FSBR November 1974, paragraph 2.

<sup>491</sup> Britton (1991), page 23.

<sup>492</sup> Claimant Count, ELMR. ONS (2010)

<sup>493</sup> HC Deb 12 November 1974 vol 881 c242

<sup>494</sup> Cairncross (1992), page 204.

<sup>495</sup> HC Deb 12 November 1974 vol 881 c243

<sup>496</sup> HC Deb 12 November 1974 vol 881 c244

<sup>497</sup> HC Deb 12 November 1974 vol 881 c246

<sup>498</sup> HC Deb 12 November 1974 vol 881 c258

the real and immediate danger of cuts in investment, stock building or employment”.<sup>499</sup> In all, November 1974 was a modest tax cutting Budget – and certainly not deflationary. In fact, the 1975 Budget speech was to note that July and November 1974 measures had introduced “compensating measures to increase demand”.<sup>500</sup> Based on the above comments, the November Budget had a mix of *endogenous demand management* measures and some to stimulate production.

### **Budget Tax Measures**

On the business tax side, the Chancellor first dealt with “the burden thrown on to industry by the effect of inflation on the operation of Corporation Tax”.<sup>501</sup> The problem, the Chancellor explained, was that the cost value of the closing stock – in times of high inflation – is much larger than the opening stock and this causes “acute liquidity problems”.<sup>502</sup> Healey decided that there should be some deferment of tax on “that part of the profit which corresponds to the abnormal increase in the value of stock and work in progress”.<sup>503</sup> This relief was for the financial year ending 1973-74. I classify this measure as *endogenous* – relating to inflation – and as a *supply stimulus* as it addressed the way inflation interfered with the incentives and costs of industry, and hence production. As “another, but minor, relief for industry” and which will hopefully be “some encouragement to companies to modernise their buildings and will be of some assistance to the construction industry”,<sup>504</sup> the initial capital allowance was increased from 40 to 50 per cent. This was implemented on 13<sup>th</sup> November 1974. I classify this as *endogenous, supply stimulus*.

A number of capital tax reforms were undertaken, “to ensure that the estate duty fulfilled the function first laid down for it 80 years ago, and to introduce an annual tax on large concentrations of personal wealth”.<sup>505</sup> The Chancellor introduced a new capital transfer tax applying to all lifetime gifts from 26<sup>th</sup> March 1974. As accompanying changes, the new rates were applied to Estate Duty but there was an exemption for transfers between husband and wife and there was a reform of some special reliefs after 13<sup>th</sup> November 1974. These are clearly redistributive and social objectives and had been in the pipeline since Labour took office. I classify these as *exogenous, ideological*. As their implementation was only announced in this Budget, I take the announcement date to be the 12<sup>th</sup> November 1974.

V.A.T. on petrol was increased under a section of the speech entitled “energy conservation”. The Chancellor explained “the price of petrol in Britain, though it has already risen sharply in the last twelve months, is nevertheless below that in other European countries. I believe it is right to consider the price of petrol as a means of discouraging its wasteful

<sup>499</sup> HC Deb 12 November 1974 vol 881 c260

<sup>500</sup> HC Deb 15 April 1975 vol 890 c275

<sup>501</sup> HC Deb 12 November 1974 vol 881 c263

<sup>502</sup> HC Deb 12 November 1974 vol 881 cc263-4

<sup>503</sup> HC Deb 12 November 1974 vol 881 c264

<sup>504</sup> HC Deb 12 November 1974 vol 881 c265

<sup>505</sup> HC Deb 12 November 1974 vol 881 c276

use”.<sup>506</sup> I classify this as *endogenous, demand management* as it is to affect the demand for oil. The change occurred on 18<sup>th</sup> November 1974.

There were also some redistributive actions on income tax. The proposal to lower the threshold for the Investment Income Surcharge was reintroduced as of 6<sup>th</sup> April 1974 (having previously been rejected). To give priority to investment and exports while public expenditure is rising, “private consumption [must be] held at existing levels for the great mass of the population...I believe that [the House] will now recognise that the burden of personal tax should fall that much more heavily on investment income than on income which is earned by current effort”.<sup>507</sup> I classify this measure as *endogenous* and, as it was in March, *spending-driven*.

Furthermore, over the years, inflation had meant higher taxes as the real value of tax allowances had been falling. In recognition of specific needs, the Chancellor explained that while he would not deal with tax concessions in this Budget, “there are two exceptions”.<sup>508</sup> The first was a special allowance — the age allowance — for the elderly. The second, following a Government commitment to review the blind allowance, was an increase in that allowance. Both were implemented on 6<sup>th</sup> April 1975. Little further motivation is given but these measures were to protect the income of vulnerable groups, offsetting the effects of inflation and boosting incomes which had been falling. I therefore classify these as *endogenous, demand management*.

## 1975: Budget 15<sup>th</sup> April 1975

*Chancellor:* Denis Healey; *Prime Minister:* Harold Wilson (Labour)

### Context

Between November 1974 and March 1975 unemployment had risen by nearly 100,000 and the retail price index had risen nearly 8 per cent (and 20 per cent on the previous March).<sup>509</sup> Healey had budgeted for reductions in the PSBR but by the end of 1974-5 was faced with a PSBR of nearly 10 per cent of GNP in 1974-5 and 11 per cent in 1975-6.<sup>510</sup> The Government’s strategy for inflation had been a series of subsidies and controls and as discussed above the fiscal stance had been mildly expansionary. That strategy had seemingly failed by 1975. Inflation had rocketed and the UK was in the grip of a severe recession – Britton (1991) notes “the depth of the recession was unprecedented since the war”.<sup>511</sup>

### Overall Budget Objectives

The tone of the Chancellor’s statement was very different in March 1975: “I fully understand why I have been urged by so many friends both inside and outside the House to treat

<sup>506</sup> HC Deb 12 November 1974 vol 881 c269

<sup>507</sup> HC Deb 12 November 1974 vol 881 cc273-274

<sup>508</sup> HC Deb 12 November 1974 vol 881 c274

<sup>509</sup> ONS (2010), claimant count, ELMR August 2010; Retail Price Index series CDKO.

<sup>510</sup> HC Deb 15 April 1975 vol 890 c285

<sup>511</sup> Britton (1991), page 24.

unemployment as the central problem and to stimulate a further growth in home consumption, public or private, so as to start getting the rate of unemployment down as fast as possible. I do not believe it would be wise to follow this advice today”.<sup>512</sup> July and November 1974 had seen reflationary measures but now “I cannot afford to increase demand further today when 5p in every £ we spend at home has been provided by our creditors abroad and inflation is running at its current rate”.<sup>513</sup> Budgeting for a higher PSBR “would involve unacceptable risks”.<sup>514</sup> The Chancellor announced a reduction in the PSBR of £1 billion in 1975–76 and £3 billion (nearly 3 per cent of GDP) in 1976–77.<sup>515</sup> In funding this “I shall rely on higher taxation, which can take effect at short notice and that the reduction in public expenditure should take place in 1976–77”.<sup>516</sup> The overall strategy, at face value, was to tackle the rising budget deficit – caused by contemporaneous shocks, that is *endogenous, deficit reduction*.

### **Budget Tax Measures**

On consumption taxes the Chancellor argued: “at a time when some sacrifices are required of all of us, the consumer has to play his part”<sup>517</sup> and V.A.T was increased. First, the higher rate of 25 per cent was to be charged on more items from 1<sup>st</sup> May 1975 and second, from 1<sup>st</sup> September 1975, V.A.T. was applied to gaming machines. Duties were increased on tobacco and alcohol from 16<sup>th</sup> April 1975, on gambling from 29<sup>th</sup> September 1975 and 1<sup>st</sup> October 1975 (which I assign both to 29<sup>th</sup> September without a method of splitting the revenue gain over the two dates) and on motor vehicles from 6<sup>th</sup> April 1975. Given the overriding objectives, I classify all these as *endogenous, deficit reduction*. These changes raised over £1 billion (nearly 1 per cent of GDP) both in the current year and in a full year.

The Chancellor did something to offset the costs of inflation as the employee and pensioner, “if nothing is done, can find that he has begun to pay tax even though in real terms, as distinct from money terms, his income has not increased”.<sup>518</sup> As a measure to offset the current rise in inflation and protect real incomes, the main personal allowances were raised from 6<sup>th</sup> April 1975. I classify this as *endogenous* – the most fitting sub category seems, somewhat imprecisely, *endogenous, demand management*.

The final proposals relate to income tax rates. “I made it clear in my Budget speech last November that if wages rose above the level laid down in the guidelines of the T.U.C I would find it necessary to raise taxation in order to remove the excess demand involved”.<sup>519</sup> I could classify this as *deficit reduction* given that it raises a considerable amount of revenue. However, the motive is clearly stated as *demand management*, with obvious implications for the deficit. Furthermore, this offsets the cost of the income tax allowance remissions, leaving the income tax proposals less important in terms of raising revenue than the consumption tax

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<sup>512</sup> HC Deb 15 April 1975 vol 890 cc282

<sup>513</sup> HC Deb 15 April 1975 vol 890 c282

<sup>514</sup> HC Deb 15 April 1975 vol 890 c286

<sup>515</sup> *Ibid.*

<sup>516</sup> HC Deb 15 April 1975 vol 890 c287

<sup>517</sup> HC Deb 15 April 1975 vol 890 c302

<sup>518</sup> HC Deb 15 April 1975 vol 890 c315

<sup>519</sup> HC Deb 15 April 1975 vol 890 c317

ones. I therefore classify this measure as *endogenous, demand management*. There was a consequential effect on Advance Corporation Tax but, as this was set against Corporation Tax liabilities in future years, I exclude the revenue effects in the current year.

Two measures relating to oil taxation were announced in the 1974 White Paper on oil and gas policy. The revenue yield is highly uncertain and not listed in the FSBR figures. I therefore exclude these measures.

These changes accounted for nearly 100 per cent of both the increases and the remissions.

## **1976 (A): Budget 6<sup>th</sup> April 1976**

*Chancellor: Denis Healey; Prime Minister: James Callaghan (Labour)*

### **Context**

Growth in the Retail Price Index peaked during 1975; annual inflation in 1976 was to be 16 per cent compared with the 24 per cent in 1975.<sup>520</sup> GDP also began to rise in the second half of 1975, although unemployment continued to rise well into 1977. Woodward (2004) notes that by the middle of 1975 the economy had reached a turning point and towards the end of the year the Chancellor turned his attention to the still rising level of unemployment.<sup>521</sup> A few, more microeconomic, reforms<sup>522</sup> were deployed to tackle unemployment but Britton (1991) argues that at the end of 1975 policy was still a question of waiting for the appropriate moment to bring in a reflation that would restore full employment in the 1950s and 60s sense.<sup>523</sup> Spending and monetary measures had been announced the previous September, December and February.

### **Overall Budget Objectives**

The Chancellor rejected a general reflation in April 1976: “whatever other issues may divide rival schools of economists who contend so publicly for our attention these days, they all agree that a massive reflation on its own could lead only to disaster. It would reduce unemployment temporarily but at the cost of increasing the balance of payments deficit intolerably”.<sup>524</sup> The key to dealing with the balance of payments constraint longer-term was “to ensure that our manufacturing industry performs much better in the future than it did in the past”.<sup>525</sup> The ‘analysis and strategy’ section of the speech reiterates this point many times, emphasising the importance of reducing costs and higher productivity. Familiar themes are also present: “we are well placed to sustain an expansion which is led by exports. But we shall not succeed in this unless we hold down the domestic claims on our resources, particularly consumption, both

<sup>520</sup> ONS (2010), Retail Price Index series CDKO

<sup>521</sup> Woodward (2004), page 144.

<sup>522</sup> See paragraph 4 of the 1976 FSBR.

<sup>523</sup> Britton (1991), page 28.

<sup>524</sup> HC Deb 06 April 1976 vol 909 c232

<sup>525</sup> Ibid.

private and public”.<sup>526</sup> In summarising the judgement, Healey concludes “It follows from this and from the constraints I have described that my Budget must not on balance add much to demand or change its pattern”.<sup>527</sup> Instead, Healey said he would focus on creating conditions in which “output and productivity are most likely to increase” and “wage costs can be kept as low as possible” without unnecessarily reducing real take home pay.<sup>528</sup>

### Major Budget Tax Measures

Overall the tax measures reduced taxes by nearly £1 billion (0.8 per cent of GDP) in a full year. However, this was mostly conditional on (and these tax cuts were implemented on this basis) pay agreements holding down wage increases. All the other measures left the budget neutral on the tax side, so a general classification of the measures as an endogenous stimulus would – at face value – appear inappropriate. Indeed, Healey argued “This is an almost neutral Budget”.<sup>529</sup>

The unconditional income tax reliefs were designed “primarily to help sections of the population, like the old and children, who will not be involved in the coming negotiations on incomes policy”.<sup>530</sup> The three major components were a rise in age allowance, the age allowance income limit and in child allowances. As measures to help specific sections of society, I classify these measures as *exogenous, ideological*. These changes occurred on 6<sup>th</sup> April 1976.

The conditional income tax cuts included increases in the main personal allowances, the additional personal allowance and the higher rate threshold. These changes were subsequently implemented for the tax year beginning 6<sup>th</sup> April 1976. These tax cuts “must be conditional upon agreeing — I hope at the latest by early June — a pay limit which is consistent with a further halving of our inflation rate in the coming year”.<sup>531</sup> The purpose of the policy was therefore to induce wage restraint, lower costs and allow firms to employ more workers (“inflation is the great enemy of full employment... Excessive pay increases are not only bound to increase unemployment.”<sup>532</sup>), so I classify this as *endogenous, supply stimulus*.

The other major remissions were on V.A.T. which had been increased in the previous year and “Although the severity of the 25 per cent. rate was necessary in the especially difficult circumstances of last year, I have decided that in the longer term the 25 per cent. rate is too high. It could damage some parts of manufacturing industry and jeopardise employment”.<sup>533</sup> This reduction to 12.5per cent took place on the 12<sup>th</sup> April 1976 and reversed the previous year’s action implemented to reduce the deficit. Being designed to support industry, I classify this as *endogenous, supply stimulus*.

<sup>526</sup> HC Deb 06 April 1976 vol 909 cc242-243

<sup>527</sup> HC Deb 06 April 1976 vol 909 c245

<sup>528</sup> HC Deb 06 April 1976 vol 909 cc245-246

<sup>529</sup> HC Deb 06 April 1976 vol 909 c 280

<sup>530</sup> HC Deb 06 April 1976 vol 909 c 274

<sup>531</sup> HC Deb 06 April 1976 vol 909 c274

<sup>532</sup> HC Deb 06 April 1976 vol 909 cc270-1

<sup>533</sup> HC Deb 06 April 1976 vol 909 c255



Turning to the major tax increases, alcohol duties were increased from 7<sup>th</sup> April 1976 and “increased revenue in this area will help make room for the socially desirable expenditure I shall be describing later in my speech”.<sup>534</sup> I therefore classify this as *endogenous, spending-driven*.

On fuel prices, if left unchecked the fall in V.A.T. would have lowered the price of petrol considerably, “At a time when it is essential to conserve oil, I cannot allow this to happen”.<sup>535</sup> Consequently, Fuel Duty went up on 9<sup>th</sup> April 1976. As this measure was aimed at limiting demand for oil, I classify this as *endogenous, demand management*.

Tobacco Duty also increased on 10<sup>th</sup> May 1976 and “There is a strong case on health grounds as well as revenue grounds for increases in the taxation of tobacco... the real burden of the specific duty falls at times of inflation, giving an unwelcome boost to consumption of a product dangerous to health”.<sup>536</sup> Being correlated with the current rise in inflation, I classify this as *endogenous, demand management*.

Finally, there were two major sources of revenue from income tax. Firstly, allowances in the year of marriage were altered from 6<sup>th</sup> April 1976 “to correct an anomaly which has caused a lot of unnecessary work”.<sup>537</sup> I therefore classify this at face value, *exogenous, long-run*. Secondly, the taxation of fringe benefits was altered from 6<sup>th</sup> April 1977. The reason given was that “I undertook last year to review the legislation on fringe benefits”<sup>538</sup> but little else is said. On car benefits, the changes “will bring a much-needed simplification into this part of the tax system and will also make it more equitable”.<sup>539</sup> Furthermore, implementation was deferred until the following year, so this change could not offset any remissions contemporaneously. I classify both the previous changes as *exogenous, ideological*.

It should be clear that the 1976 Budget measures are tricky to categorise neatly. There was no overall target for stimulus or for deficit reduction. Very few measures were said to offset others and many had differing motivations. I therefore stick with these specific justifications at face value.

The above changes account for nearly 90 per cent of the remissions and 100 per cent of the increases.

## **1976 (B): Extra measures 22<sup>nd</sup> July 1976**

*Chancellor:* Denis Healey; *Prime Minister:* James Callaghan (Labour)

### **Context**

The Chancellor’s method of dealing with inflation in the 1976 Budget had been by increasing demand (the conditional tax cuts). This also meant increasing the PSBR. Sterling was to come under pressure and interest rates were raised in April and May but, as noted by Britton (1991),

<sup>534</sup> HC Deb 06 April 1976 vol 909 c258

<sup>535</sup> HC Deb 06 April 1976 vol 909 c257

<sup>536</sup> HC Deb 06 April 1976 vol 909 c259

<sup>537</sup> HC Deb 06 April 1976 vol 909 c263

<sup>538</sup> HC Deb 06 April 1976 vol 909 c276

<sup>539</sup> HC Deb 06 April 1976 vol 909 c262

this did not satisfy the markets — believing the whole Government’s strategy was ill-conceived and worrying about the size of the PSBR and the control of expenditure. Coopey and Woodward (1996) argue that the Chancellor’s attempt to engineer an export-led boom, and the cutting of interest rates between January and March, was “the immediate cause of the sterling crisis that dominated the economic history of 1976”.<sup>540</sup>

### Overall Objectives

In his July speech the Chancellor argued “the 12 per cent depreciation of sterling since March will inevitably worsen the balance of payments in the short term, and make it more necessary than ever for us to maintain the confidence of those from whom we may have to borrow to finance our external deficit”.<sup>541</sup> While claiming that “there is no call for major action in the current financial year”<sup>542</sup>, measures were still announced. Reducing the budget deficit seems to weigh most heavily on the Chancellor’s mind and he argued “unless the deficit falls steadily over the next three years as expansion proceeds, the financing of the public sector will preempt private savings which productive industry is likely to require on a substantial scale to finance stock building and investment; or it will lead to an excessive growth of the money supply, which would refuel inflation”.<sup>543</sup> Expenditure was reduced by £1 billion (0.8 per cent of GDP) for 1977-78.

### Tax Measures

To accompany the expenditure reductions there was a single tax increase. The Chancellor explained: “In addition to the public expenditure measures which I have just announced, further action in the tax field is needed to reduce the PSBR to £9 billion”.<sup>544</sup> An increase in income tax or indirect taxes would “be disastrous for our counter-inflation policy, particularly since the effects would be felt immediately in the middle of the next pay round”.<sup>545</sup> The favoured option was therefore to add 2 percentage points to the employers’ National Insurance contribution, to be implemented on 6<sup>th</sup> April 1977. This is the first time National Insurance contributions were used to directly deal with anything other than increases in National Insurance expenditure. The tax change is clearly endogenous. There is a blurring of whether this was to limit demand, reduce the deficit or deal with the balance of payments. In a sense it deals with all three. However, the Chancellor repeats several times the need to reduce the PSBR and so I categorise this as *endogenous, deficit reduction*.

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<sup>540</sup> Coopey and Woodward (1996), page 13

<sup>541</sup> HC Deb 22 July 1976 vol 915 c2011

<sup>542</sup> Ibid.

<sup>543</sup> HC Deb 22 July 1976 vol 915 c2012

<sup>544</sup> HC Deb 22 July 1976 vol 915 c2017

<sup>545</sup> Ibid.

## 1976 (C): Extra measures 15<sup>th</sup> December 1976

*Chancellor:* Denis Healey; *Prime Minister:* James Callaghan (Labour)

### Context

The July measures failed to stop the pressure on sterling: in October alone sterling fell nearly 5 per cent on the effective exchange rate index, by which time it was down 23 per cent on the previous year.<sup>546</sup> The Bank of England's minimum lending rate hit 15 per cent in October in an attempt to defend sterling. Woodward (2004) notes that "underlying the crisis, of course, was apprehension about British financial policy. In the mid-1970s both public expenditure and the PSBR were high by historical standards".<sup>547</sup> The FSBR 1977 contains a rather different view on the causes of the crisis, citing the slowdown in growth during 1976, the depreciation feeding through into higher inflation and "fears of inflationary monetary expansion".<sup>548</sup> Whatever the cause, in September Healey announced the Government's intention to apply to the IMF for a loan.

### Objectives and Specific Tax Measures

To a large extent the December measures were forced on the Chancellor. After various negotiations with the International Monetary Fund, £2.5 billion (2 per cent of GDP) of cuts were agreed on 2<sup>nd</sup> December. These were to take the form of expenditure reductions and tax increases.

It is worth quoting the Chancellor on introducing his measures: "The latest forecast prepared before the measures showed a PSBR of £10½ billion in 1977–78 and £11½ billion in 1978–79. These forecasts embodied unrealistically favourable assumptions on several important points. Even so, the PSBR figures were unacceptably high and the immediate objective of the measures which I am announcing this afternoon is to reduce the public sector borrowing requirement to about £8.7 billion in 1977–78 and to somewhat less in the following year — on present forecasts I expect a figure of some £8.6 billion".<sup>549</sup> The savings were to come "mainly from savings in public expenditure rather than increases in taxation".<sup>550</sup>

However, there were increases in expenditure to "promote industrial investment and expansion, and measures to reduce unemployment".<sup>551</sup> Consequently, "To finance this additional expenditure on investment and employment, I must look for some contribution from the specific Revenue duties".<sup>552</sup> The regulator power was used to increase by 10 per cent the duties on tobacco and alcohol. For customs duties on tobacco they were put into effect at midnight on the 15<sup>th</sup> December; for all other duties, 1<sup>st</sup> January 1977. As this was to finance extra spending I classify these measures as *endogenous, spending-driven*. To estimate a split in

<sup>546</sup> Britton (1991), page 32.

<sup>547</sup> Woodward (2004), page 145.

<sup>548</sup> FSBR 1977, paragraph 5.

<sup>549</sup> HC Deb 15 December 1976 vol 922 c1525

<sup>550</sup> HC Deb 15 December 1976 vol 922 c1526

<sup>551</sup> HC Deb 15 December 1976 vol 922 c1530

<sup>552</sup> HC Deb 15 December 1976 vol 922 c1531

the yield between the two taxes, I use the proportions of each tax in revenue from the FSBR 1977.

### **1977 (A): Budget 29<sup>th</sup> March 1977**

*Chancellor:* Denis Healey; *Prime Minister:* James Callaghan (Labour)

#### **Context**

There were promising signs at the start of 1977; GDP was growing (at over 2 per cent in 1977) and unemployment seemed to be levelling out.<sup>553</sup> The FSBR 1977 had a positive take on the December 1976 action arguing it had led to a “rapid return of confidence in financial markets”.<sup>554</sup> However, inflation remained a problem having risen about 15 per cent over the 12 months to March.<sup>555</sup> 1976 was also the year Britain moved away from demand management, although Healey was to argue he had abandoned Keynesian policies in 1975.<sup>556</sup> Much was made of Prime Minister Callaghan’s speech to the Labour Party conference arguing that ‘you can’t spend your way out of recession’ and monetary targets were introduced in July 1976.<sup>557</sup>

#### **Overall Budget Objectives**

From the outset Healey notes “a high and sustainable level of output and employment, [which] remains this Government’s overall economic objective”.<sup>558</sup> The Chancellor announced two key aims: “getting our inflation down to the level of our main competitors and improving the performance of our manufacturing industry”.<sup>559</sup> The centrepiece of the Budget was to be the use of conditional income tax cuts to ‘buy’ the agreement of the T.U.C. in another round of wage restraint. Wage restraint, rather than deflation, was the preferred method of dealing with inflation. Unpicking the overall motivation for the rest of the Budget is tricky. The Chancellor had decided a stimulus was needed: “There is all too much spare capacity in the economy...The balance of payments should have moved into surplus by the end of the year. The forecasts for the public sector borrowing requirement and domestic credit expansion give me significant headroom. So there is scope for a carefully controlled fiscal stimulus, to make at least a start in expanding domestic demand by reducing the burden of income tax”.<sup>560</sup> At face value this seems a classic demand management policy. However, the degree to which income tax cuts were a supply-side reform and also a social objective for offsetting the negative effects of inflation is unclear. The Chancellor explains that achieving the Government’s objectives will require reductions in the general burden of income tax. He notes the T.U.C. view that it is essential to a successful pay policy and the CBI view that it assists the industrial strategy. He

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<sup>553</sup> ONS (2010)

<sup>554</sup> FSBR 1977 paragraph 7.

<sup>555</sup> ONS (2010)

<sup>556</sup> Pearce (2002).

<sup>557</sup> Coopey and Woodward (1996), page 13.

<sup>558</sup> HC Deb 29 March 1977 vol 929 c256

<sup>559</sup> HC Deb 29 March 1977 vol 929 cc256-257

<sup>560</sup> HC Deb 29 March 1977 vol 929 c266

also notes the need to “increase incentives at all levels of industry”.<sup>561</sup> For whatever reason, the overall Budget strategy appears one of endogenous stimulus.

### **Budget Tax Measures**

The stimulus instrument was largely a cut in the burden of income tax. The package had an unconditional part costing nearly £1300 million (0.9 per cent of GDP) and a conditional part costing a further £1 billion (0.7 per cent of GDP). The above comments suggest these were *endogenous, demand management* changes – although this requires exploring further. Income tax formed the “the heart of my Budget—the reductions in income tax and their relevance for pay policy... Given the size of the fiscal stimulus I consider justified and the net revenue resulting from the tax changes I have just described, I shall be able to make reductions in income tax amounting to some £2¼ billion in a full year”.<sup>562</sup> The makeup of this £2 ¼ billion tax cut was an increase in various allowances, changes to the basic and higher rate bands, a conditional cut in the basic rate of income tax and an increase in the Investment Income Surcharge. These measures now require further discussion.

The conditional income tax cut of 2p in the basic rate was clearly stated as an anti-inflation policy. The objective was to ‘buy’ wage restraint: “I believe that the advantage which working people will get from the tax reliefs I have proposed should make it easier to reach agreement on a pay policy which will reduce inflation substantially in the coming year”.<sup>563</sup> The primary objective of this particular measure does not appear to be a stimulus, but rather the reduction in inflation. In previous years I have classified this type of measure as *endogenous, supply stimulus* as the Chancellor viewed wage restraint as an important component of lowering industrial costs and increasing labour demand. I continue with this classification.

The other income tax cuts are justified in various ways, partly as a supply-side reform to remove disincentives, and partly as a social objective of lowering the tax burden made worse by inflation raising nominal incomes. However, on the strength of statements about a need for a stimulus, I will classify all the remaining income tax changes as *endogenous, demand management*.

Before reaching the income tax section however, various other changes in taxation were proposed. Of the other major changes, indirect taxes played an important role as “I believe that in two fields some increase in indirect taxation is desirable to support important objectives of national policy”.<sup>564</sup> Firstly, fuel duties were increased as “energy conservation must remain a major objective throughout the industrialised world”.<sup>565</sup> The rise in fuel duties and consequential changes in V.A.T. occurred on 29<sup>th</sup> March 1977. I classify this as *endogenous, demand management*. Second, Tobacco Duty was increased from 4<sup>th</sup> April 1977 as “There are compelling health arguments for increasing the duty on tobacco in real terms”.<sup>566</sup> I therefore take this at face value and classify it as *exogenous, ideological*. Finally, Vehicle

<sup>561</sup> HC Deb 29 March 1977 vol 929 c276

<sup>562</sup> HC Deb 29 March 1977 vol 929 c279

<sup>563</sup> HC Deb 29 March 1977 vol 929 c284

<sup>564</sup> HC Deb 29 March 1977 vol 929 c271

<sup>565</sup> HC Deb 29 March 1977 vol 929 c271

<sup>566</sup> HC Deb 29 March 1977 vol 929 c274

Excise Duty was increased from 30<sup>th</sup> March 1977 but “as I am already going a long way to meet the Government's objectives in transport and energy policy by substantial increases in the duty on petrol and derv, I am proposing a more limited increase in VED”.<sup>567</sup> This change appears related to the Fuel Duty changes and so I classify it in the same way as *endogenous, demand management*.

The structure of the Budget speech suggests that an alternative classification should be given to the exogenous measures. The Chancellor left the income tax cuts until last and it is worth repeating the quote from there: “Given the size of the fiscal stimulus I consider justified and the net revenue resulting from the tax changes I have just described, I shall be able to make reductions in income tax amounting to some £2¼ billion in a full year”. This suggests that all the other changes (including minor ones covered in the appendix) — in the aggregate — allowed Healey to pursue the specific income tax remissions. It is therefore sensible to provide an alternative classification of *endogenous, demand management* for all the measures.

These major changes account for over 95 per cent of the remissions (all income tax) and 100 per cent of the increases (all indirect taxes).

#### *15<sup>th</sup> July 1977 alterations during the Budget debate*

Unusually there were some alterations during the Budget Parliamentary debate. First, the actual reduction in income tax was less than 2p as a result of the wage negotiations. The basic rate was only lowered by 1p. I therefore take this announcement on the 15<sup>th</sup> July 1977 as a separate measure which was actually a tax rise on 1p. I maintain the original classification as *endogenous, supply stimulus*. Second, income tax allowances were increased by more than in the Budget by an amount which actually offset the, less than expected, fall in income tax. Third, the House of Commons agreed to reverse the petrol duty rise from 8<sup>th</sup> August 1977. These latter two measures were explained by the “improvement in the economic prospects since the Budget — in particular the improvement in the balance of payments — makes it possible for me to make the following proposals in the field of tax relief”.<sup>568</sup> I therefore classify these two measures as *endogenous, demand management*.

As a final aside, the Rooker-Wise amendment in the House of Commons indexed personal allowances each year unless otherwise stated by Parliament. From 1977 onwards, inflation-only rises in the personal allowances are not included as new discretionary policy decisions.

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<sup>567</sup> HC Deb 29 March 1977 vol 929 c273

<sup>568</sup> HC Deb 15 July 1977 vol 935 c990

**1977 (B): Extra measures 26<sup>th</sup> October 1977**

*Chancellor: Denis Healey; Prime Minister: James Callaghan (Labour)*

**Context**

Growth picked up in the second half of 1977<sup>569</sup> and by this time inflation was falling, although remaining in double digits. Unemployment, however, remained a problem with over 1.1 million on the claimant count in October 1977.<sup>570</sup> Britton (1991) noted that “it was still believed by many economists that the pressure of demand in the economy was low, giving ample room for macroeconomic expansion”.<sup>571</sup>

**Overall Objectives**

The October 1977 measures were intended to bring growth back to trend and reduce unemployment. From the outset the Chancellor stated “Since the House debated the economic situation in July, the improvement in our financial position has been greatly strengthened. Confidence in Britain's future has been powerfully reinforced both at home and abroad. As a result we are now in a position to take further measures to improve the outlook for employment and to bring the growth of output on to its intended path”.<sup>572</sup> Healey noted that the recent meetings of the IMF and the Finance Council of the European Community had agreed the World should take steps to stimulate demand and “Britain is in a position to join in this collective effort”.<sup>573</sup> There was scope, Healey argued, for measures costing just over £1 billion (0.7 per cent of GDP) in the current year and £2 billion (1.4 per cent of GDP) next financial year.

**Tax Measures**

In introducing his tax measures, the Chancellor said “We can now be confident of substantial headroom below the ceiling which I set for the PSBR this year. It is important that we should take advantage of this headroom by measures which are quick acting and which have a maximum effect in bringing unemployment down as soon as possible. The measures should also, if possible, reinforce our attack on inflation and our commitment to the industrial strategy. This points strongly to the speediest possible reduction in income tax”.<sup>574</sup> As in the March budget we can see the Chancellor's belief that income tax reductions serve a variety of purposes, although the overriding objective here seems to point to a stimulus to demand.

Following these statements, the Chancellor announced the bringing forward of the 12 per cent increase in personal allowances due in April 1978. These reliefs therefore had effect for the current year beginning 6<sup>th</sup> April 1977. As mentioned above, this will be the last time an indexation increase in the personal allowances is included in the policy decisions series. The

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<sup>569</sup> ONS (2010), series ABMI

<sup>570</sup> ONS (2010), claimant count, ELMR: Retail Price Index.

<sup>571</sup> Britton (1991), page 38.

<sup>572</sup> HC Deb 26 October 1977 vol 936 c1437

<sup>573</sup> Ibid.

<sup>574</sup> HC Deb 26 October 1977 vol 936 c1442

implementation of this decision created extra work and “In order to make room for the additional work”<sup>575</sup> the Chancellor excluded from tax, for the current year, the increase in National Insurance pensions and social security benefits which were to come into effect in December 1977. I therefore classify both these measures together as *endogenous, demand management* on the strength of the introductory comments quoted in the previous paragraph.

Two other measures were announced. The Government had been conducting a review into the problems for small firms and the Chancellor announced some of its first conclusions: “It is argued that the taxation of business transfers is an inhibition on the growth of small firms”<sup>576</sup> — the Capital Transfer Tax relief was therefore increased from 27<sup>th</sup> October 1977. The threshold for apportionment of trading income of close companies was increased from 6<sup>th</sup> April 1978 “to encourage business men to retain their profits in the business”.<sup>577</sup> I classify these measures as *exogenous, long-run* as they follow from an existing review designed to give longer-term help to small businesses. These announcements were also made before the main tax section which covered tax reductions to stimulate the economy and to lower unemployment.

## **1978: Budget 11<sup>th</sup> April 1978**

*Chancellor:* Denis Healey; *Prime Minister:* James Callaghan (Labour)

### **Context**

The economic position in April 1978 was, in many ways, similar to that of the previous October. By April though, the economy had grown nearly 2 per cent between the third quarter of 1977 and the first quarter of 1978 and inflation was falling consistently: the Retail Price Index had risen just over 6 per cent between April 1977 and March 1978.<sup>578</sup> The 1978 FSBR was to note that “1977 saw a turning point in the British economy”. However, as in October, unemployment was still very high.<sup>579</sup>

### **Overall Budget Objectives**

The Chancellor explained the Government’s main objective “must be to reduce the intolerable level of unemployment by stimulating demand in ways which create jobs at home without refuelling inflation”.<sup>580</sup> Healey recognised that demand itself was not enough; without the supply of goods, higher demand would lead to inflation: “unless British industry can produce and sell the goods required to meet the demand created by any Budget stimulus, that increase in demand will be met by imports and set inflation going again”.<sup>581</sup> Indeed, ‘stimulus’ was not just seen as a demand side phenomenon: “It can be larger to the extent that it is clearly designed to improve our industrial performance and to strengthen our prospects of success in

<sup>575</sup> Ibid.

<sup>576</sup> HC Deb 26 October 1977 vol 936 c1441

<sup>577</sup> Ibid.

<sup>578</sup> ONS (2010)

<sup>579</sup> FSBR 1978, paragraph 32.

<sup>580</sup> HC Deb 11 April 1978 vol 947 c1187

<sup>581</sup> Ibid.



the fight against inflation”.<sup>582</sup> But the tone is still generally one of stimulating demand, with some measures seemingly more aimed at boosting industrial performance. I unpick which is which below.

### **Budget Tax Measures**

Almost all of the 28 tax measures were tax cuts – reinforcing the comments about a stimulus above. The size of the stimulus is reported as about £2 ½ billion, which is the same size as all the Budget measures together. On this basis I will classify these *endogenous* unless I can provide evidence to the contrary.

The Budget speech divided largely into two parts: a business taxation section and a section on personal income taxes. The former was largely concerned with improving performance but was more minor. The major remissions came in the second part of the speech dealing with the personal income tax remissions: “the proposals I have announced so far leave £2,400 million for reductions in income tax”.<sup>583</sup> These were: an introduction of a lower rate; changes to the basic rate band; changes to the higher rate bands; changes to the main allowances, the additional allowance and the age allowance; increases in the Investment Income Surcharge thresholds and exemption of maintenance payments from the National Insurance surcharge.

Many of these tax measures were justified in terms of social objectives. In addition, the Chancellor clearly viewed the supply-side effects of income tax cuts as desirable; he noted: “I have considered carefully how they should be distributed so as to further the objectives I have set myself, to increase the incentive for greater effort and to promote social justice”.<sup>584</sup> However, these would appear secondary objectives about how best to split up the £2,400 million of tax cuts earmarked to stimulate demand. As such I classify all these measures as *endogenous, demand management*.

To avoid adding to inflation, raising indirect tax rises was ruled out as way of funding even larger income tax cuts (“I cannot believe it would make sense for the Government themselves deliberately to raise the inflation rate and increase the cost of living”<sup>585</sup>). There was one exception; “to discourage the smoking of cigarettes which have a higher tar yield”<sup>586</sup> a supplementary duty on cigarettes with a higher tar yield was introduced from 4<sup>th</sup> September 1978. This is the only tax rise and is small relative to the remissions. I classify it as *exogenous, ideological*. However, in keeping with the overall objective I assume an alternative classification of *endogenous, demand management*.

### *Amendments during the 1978 Finance Bill debate*

During debate the Conservative Opposition forced a 1 pence cut in the basic rate of income tax. The Government opposed this but lost. On the 8<sup>th</sup> May 1978 Geoffrey Howe – the Shadow Chancellor – attacked the Chancellor’s claim of providing an environment which encourages

<sup>582</sup> HC Deb 11 April 1978 vol 947 c1194

<sup>583</sup> HC Deb 11 April 1978 vol 947 c1204

<sup>584</sup> Ibid.

<sup>585</sup> HC Deb 11 April 1978 vol 947 c1203

<sup>586</sup> Ibid.

work; introducing the amendment he argued: “The way in which that ought to happen should be... by securing a reduction in the basic rate of tax and by doing something to restore incentives to the skilled worker, to the manager and to those who had their hopes raised last year by the Chancellor and have seen them as readily dashed this year”.<sup>587</sup> I therefore classify this as *exogenous, long-run* –forming part of the Conservative Party’s long-term economic policy once in Government (see later Budgets).

There is an interesting passage in which the Financial Secretary to the Treasury (Mr Sheldon) responds to the amendment. It, to some extent, reinforces my categorisation of Labour income tax cuts as demand management and deserves being quoted in full: “The argument [in favour of the amendment] would presumably be that through incentives we would boost supply without having the changes of demand. I understand this argument. It is basically an argument that demand management is what Labour does and supply boosting is what Conservatives do. Either way it reduces the levels of taxation, but when the Conservatives do it, that is boosting supply, and when Labour does it, we are boosting demand...These convolutions of thought by the hon. Gentleman are not acceptable. When we examine them, we see them for what they are. Tax cuts, whatever they are, whoever they are done by, result in people going out to buy goods that they otherwise might not have bought. We also hope that they will produce more goods”.<sup>588</sup>

On the 5<sup>th</sup> July 1978, the Government responded by increasing the National Insurance surcharge to pay for the amendment (though it did not fully cover the cost). In a lengthy discussion of this issue, the Chief Secretary to the Treasury, Mr Barnett, argued that the cost of the income tax remission must be financed.<sup>589</sup> At various points the size of the PSBR was discussed. Britton (1991) noted that “market concern about the loss of revenue during the progress of the Finance Bill obliged the Government to announce an increase... in the National Insurance surcharge”.<sup>590</sup> Being to offset a specific exogenous change, I classify it in the same way.

## **1979: Budget 12<sup>th</sup> June 1979**

*Chancellor:* Geoffrey Howe; *Prime Minister:* Margaret Thatcher (Conservative)

### **Context: a new era in macroeconomic policy**

Overall growth in 1978 was the strongest for five years and unemployment fell throughout the year. Whilst still high by post-war standards, the unemployment rate fell throughout 1979 as well. However, the Government had serious problems containing pay inflation during the second half of 1978 and the Winter of Discontent of 1978/79 was to epitomise the final months of the Labour Government. The Government lost the May 1979 General Election and Margaret Thatcher became the U.K.’s first woman Prime Minister.

<sup>587</sup> HC Deb 08 May 1978 vol 949 c801

<sup>588</sup> HC Deb 05 July 1978 vol 953 c591

<sup>589</sup> HC Deb 05 July 1978 vol 953 cc469-597

<sup>590</sup> Britton (1991), page 40.

1979 marked the beginning of a new economic paradigm in the United Kingdom. The old fiscal tools of demand management were shunned in favour of monetary weapons. The fiscal reform which took place over the 18 years of Conservative rule was to radically alter the tax system to foster business and individual incentive. As I have discussed, these themes were also strong in previous Conservative Budgets, but the important difference after 1979 was the complete lack of emphasis on demand or any attempt to control it. The list of Budget tax measures was also to become much longer and more technical. There were very few endogenous, demand management actions; most of the reforms were for long-run purposes and so this marks a distinct break from the previous 34 years of post-war macroeconomic policy.

### **Overall Objectives in 1979**

The new philosophy is nicely summarised by the new Chancellor's comment: "it is our belief that many of these failures are themselves the result of actions and interventions by the Government themselves".<sup>591</sup> Four principles were set out to reverse the "years of decline"<sup>592</sup>: strengthening incentives; enlarge freedom of choice and reduce the role of the State; reduce the burden of financing in the public sector; and ensure those taking part in collective bargaining understand the consequences of their actions, to promote a proper sense of responsibility.<sup>593</sup> Priority was given to monetary policy and the importance of "sound money" through "firm monetary discipline and fiscal policies consistent with that, including strict control over public expenditure".<sup>594</sup> This included progressive reductions in the growth of the money supply. On the fiscal side, Howe planned for a reduction in the PSBR as a percentage of GDP, "from over 5½ per cent. last year to under 4½ per cent. in the current year".<sup>595</sup> Fiscal policy was to support the overall monetary and disinflationary strategy. There is no discussion of the 'right' amount of fiscal tightening so as to influence demand: no 'Budget judgement'. In a rejection of the old stimulus/contraction terminology the Chancellor noted that the Budget cannot be seen as contractionary as "To make that claim is to argue that an alternative course of fiscal policy would produce more growth and more employment".<sup>596</sup> The overall tax changes were relatively neutral but altering the balance of different taxes within that total. The deficit reduction measures then largely fell to the control of expenditure: "In order to reduce the borrowing requirement and the burden of direct taxation, we must make savings in public spending and roll back the boundaries of the public sector".<sup>597</sup> Tax changes supported the Government's long-term objectives: "At this stage, we have concentrated on tax changes of strategic importance".<sup>598</sup> Most of the tax changes are therefore *exogenous*.

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<sup>591</sup> HC Deb 12 June 1979 vol 968 c240

<sup>592</sup> HC Deb 12 June 1979 vol 968 c236

<sup>593</sup> HC Deb 12 June 1979 vol 968 c240

<sup>594</sup> 241

<sup>595</sup> HC Deb 12 June 1979 vol 968 c243

<sup>596</sup> HC Deb 12 June 1979 vol 968 cc243-244

<sup>597</sup> HC Deb 12 June 1979 vol 968 c246

<sup>598</sup> *Ibid.*

### Major Budget Tax Measures

Most significantly, income taxes were cut and indirect taxes increased as: “We made it clear in our manifesto that we intended to switch some of the tax burden from taxes on earnings to taxes on spending. This is the only way that we can restore incentives and make it more worthwhile to work and, at the same time, increase the freedom of choice of the individual”.<sup>599</sup> Consequently V.A.T. was increased and rates unified at 15 per cent from 18<sup>th</sup> June 1979. This measure raised over £4 billion (2 per cent of GDP), which was then very close to the total value of the income tax remissions. The income tax reductions were “the keystone of our policy. Excessive rates of income tax bear a heavy responsibility for the lack-lustre performance of the British economy”.<sup>600</sup> The higher rates of tax above 60 per cent were abolished and there were changes to the bands from October 1979. The main personal allowances and the additional personal allowance increased above indexation from 6<sup>th</sup> April 1979 (and I now use the above indexation figures in the tax series as the indexed rise had been statutory since 1977). “To help the elderly”<sup>601</sup> the age allowance was increased from 6<sup>th</sup> April 1979. The investment income surcharge thresholds were raised from October 1979, a measure which combined “a considerable simplification of the tax with a measure of justice that is long overdue”.<sup>602</sup> The Chancellor also proposed “to implement immediately our election pledge to war widows”<sup>603</sup> and exempt their pensions from tax as of 6<sup>th</sup> April 1979. Finally, the basic rate of income tax was cut by 3p and there were extensions to the band from October 1979. With the exception of the age allowances, the investment income surcharge and the war widows pensions, which appear *exogenous ideological* changes, the others I classify as *exogenous, long-run* for economic purposes. The V.A.T. cut was to fund this switch in the tax burden and was also for *exogenous, long-run* economic purposes.

There were a few other changes to indirect consumption taxes, namely increased fuel duties from 12<sup>th</sup> June 1979. These are listed separately from the V.A.T. rise to fund the income tax cuts, although the revenue gained clearly offset cuts elsewhere. Taking the Chancellor’s justification at face value these changes appear endogenous and to manage the demand for oil in response to continuing troubles with supply and prices from the Middle East. The Chancellor explained that there is a “general case for measures that will help us to meet the growing and undoubted need to conserve oil. At a time when there is a worldwide shortage of crude oil, it is essential that we should play our full part in achieving the 5 per cent. reduction in consumption to which the previous Government rightly committed us”.<sup>604</sup> I therefore classify this as *endogenous, demand management*. However, given the overall comments about control of the public finances, these may well have been to offset the exogenous remissions – with V.A.T. and fuel duty increases almost exactly matching the income tax cuts. I therefore

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<sup>599</sup> HC Deb 12 June 1979 vol 968 cc249-250

<sup>600</sup> HC Deb 12 June 1979 vol 968 c258

<sup>601</sup> HC Deb 12 June 1979 vol 968 c260

<sup>602</sup> Ibid.

<sup>603</sup> Ibid.

<sup>604</sup> HC Deb 12 June 1979 vol 968 c253

provide an alternative classification of the Fuel Duty increase as *exogenous, long-run*, in keeping with the majority of the income tax cuts<sup>605</sup>.

These changes accounted for over 95 per cent of the remissions and nearly 95 per cent of the increases.

## **1980: Budget 26th March 1980**

*Chancellor:* Geoffrey Howe; *Prime Minister:* Margaret Thatcher (Conservative)

### **Context**

Real GDP growth in 1979 was 2.7 per cent with real consumption growth still high at 4.7 per cent. However, in the first quarter of 1980 real GDP growth turned downwards (although the third quarter of 1979 had also shown a sizable fall), a trend which was to continue for five quarters.<sup>606</sup> Inflation remained high, bolstered by the oil shocks in 1979: crude oil prices almost doubled.<sup>607</sup> Unemployment started rising towards the end of 1979 and was to increase sharply through 1980. There was also monetary tightening over the course of 1979; the Minimum Lending Rate rose from 12 per cent in April 1979 to an unprecedented 17 per cent in November, where it was at the time of the March 1980 budget.

### **Overall Budget Objectives**

The 1980 Budget announced the Medium-Term Financial Strategy with paths for spending and taxation consistent with the monetary objectives of reducing the growth rate of money supply and inflation. It was judged that excess monetary growth must not be curbed by “excessive reliance on interest rates. The Government’s financial strategy, therefore, plans a substantial reduction over the medium term in Government borrowing as a percentage of national income”.<sup>608</sup> Crucially, however, the Chancellor argued that even though the recession had raised the deficit, it was still imperative to cut borrowing in the current year, otherwise borrowing would be inconsistent with the monetary target.<sup>609</sup> The overall tax objective was thus to reduce borrowing and was responding to the contemporaneous rise in the deficit due to the slowdown. However, “Many [of the tax changes] are made necessary only by the impact of inflation upon the tax system” and “Three developments in particular have influenced me: high pay settlements, high oil prices, and the high exchange rate... those developments have swung the balance strongly in favour of consumers and against companies”.<sup>610</sup> In dealing with the effects of inflation, the Chancellor was not in favour of demand management: “I see a stronger case for reducing the real burdens on companies and small businesses than on private

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<sup>605</sup> It is worth noting here that this is first year I use the series for ‘changes against indexation’ for income taxes. The comments about revenues offsetting one another above relate simply to nominal revenues.

<sup>606</sup> ONS (2010)

<sup>607</sup> FSBR 1980, page 20.

<sup>608</sup> HC Deb 26 March 1980 vol 981 c1446

<sup>609</sup> HC Deb 26 March 1980 vol 981 cc1446-7

<sup>610</sup> HC Deb 26 March 1980 vol 981 cc1463-1464

individuals... I shall concentrate the limited funds available to me on encouraging enterprise and on relieving specific pressures which are particularly damaging or unfair”.<sup>611</sup>

### Major Budget Tax Measures

Inflation increases in three of the personal allowance thresholds, from 6<sup>th</sup> April 1980, accounted for over 70 per cent of the 1980 tax remissions. However, these were statutory rises with inflation and not discretionary. I therefore use the indexed series and so exclude these changes (being zero). However, even the nominal loss could not be allowed to raise the deficit so “in order to afford this I intend to remove the lower rate band of taxation”. I classify this change as *endogenous, deficit reduction*.

On the business tax side there were two major measures. Firstly, Petroleum Revenue Tax rates increased from 1<sup>st</sup> January 1980 as “world oil prices have increased dramatically... This substantial change has greatly favoured the oil companies”. Secondly, the closing of several anomalies with regard to capital allowances for leasing from 1<sup>st</sup> June 1980 noting that “leasing effectively extends the benefits of tax incentives to certain users...who would not qualify for tax incentives if they had purchased the equipment themselves”. I classify these as *endogenous, deficit reduction* as they both raise sizable amounts of revenue given the Budget’s overall objectives.

The revenue raising and real revenue protection themes equally applied to consumption: “I turn now from companies to my other proposals for finding extra revenue. I begin with the indirect taxes” and he intended “to ensure that the real yield of indirect taxation is not eroded”.<sup>612</sup> All the measures following this introduction I classify as *endogenous, deficit reduction* – it being the Chancellor’s purpose for higher revenue. From 23<sup>rd</sup> March 1980 tobacco, alcohol and rebated oils were increased. From 1<sup>st</sup> October 1980 gaming duties were altered and from 29<sup>th</sup> September 1980 Bingo Duty was raised. From 27<sup>th</sup> March 1980 vehicle excise duties were altered and increased, although there were some minor adjustments.

Road fuel duties were raised from 23<sup>rd</sup> March 1980 as “if we are to ensure that our oil resources are not wasted, a duty increase is justified this year”. I therefore classify this as *endogenous, demand management* as it aimed to reduce road fuel consumption.

These changes account for nearly 75 per cent of the tax remissions and 95 per cent of the increases.

## 1981: Budget 10<sup>th</sup> March 1981

*Chancellor: Geoffrey Howe; Prime Minister: Margaret Thatcher (Conservative)*

### Context

Inflation began to fall from mid-1980. For the year it was 18 per cent, falling to 12 per cent in 1981. The 1981 FSBR notes that the previous year was difficult against a “world recession, a higher exchange rate and lower inflation. The immediate costs of this adjustment are falling

<sup>611</sup> HC Deb 26 March 1980 vol 981 c1464

<sup>612</sup> HC Deb 26 March 1980 vol 981 c1468

output and sharply rising unemployment”. By March 1981 unemployment was about 2 million. Despite the previous year’s efforts, the FSBR also notes that public expenditure and the PSBR in 1980-1 were both well above expectation; Woodward (2004) argues that this was largely due to the recession.<sup>613</sup>

### **Overall Budget Objectives**

The 1981 Budget was to be the famous ‘hair shirt’ Budget.<sup>614</sup> The overall strategy, as Cairncross (1992) notes, “was the raising of taxes and tightening of fiscal policy in a depression to cut the money supply”.<sup>615</sup> Inflation remained the Chancellor’s number one priority “Some have urged that I should abandon the battle against inflation as our top priority and look instead for ways of expanding the economy... But to change course now would be fatal to the whole counter-inflation strategy. Our problem in recent years has not been a lack of final demand... There is now world-wide recognition that inflation is the enemy of growth and employment”.<sup>616</sup> To achieve lower inflation and lower interest rates, the Chancellor argued that the Government must borrow less. On that basis Howe argued “if the figure is to be brought down to £10½ billion from £14 billion, some harsh decisions are inescapable”.<sup>617</sup> The Chancellor set himself a reduction figure of about £3½ billion (1.5 per cent of GDP) in the current year and set about finding this sum.

### **Major Budget Tax Measures**

Income tax allowances were not raised by statutory indexation: “In the circumstances of this year that simply is not possible”.<sup>618</sup> Given that uprating was statutory this ‘raised’ taxes by about £2.5 billion (1.1 per cent of GDP) in a ‘full year’. Following the overall objectives I classify this as *endogenous, deficit reduction*.

There were three major sources of extra revenue. Firstly, a supplementary petroleum revenue duty was introduced from 1<sup>st</sup> January 1981. The measure was introduced as being “necessary to raise the extra revenue for this year”<sup>619</sup>, although justification for focusing on North Sea oil is given in terms of higher oil prices and profits. I classify this measure as *endogenous, deficit reduction*.

Secondly, a special tax was levied on banking deposits. High banking profits are a “direct consequence of high interest rates in recent years”<sup>620</sup> and “in present difficult circumstances, I cannot avoid the conclusion that I should require the banks to make a special fiscal contribution”.<sup>621</sup> The charge was for 1981-2 only, effective from the 6<sup>th</sup> April 1981. I classify this measure as *endogenous, deficit reduction*.

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<sup>613</sup> Woodward (2004), page 175.

<sup>614</sup> Woodward (2004), page 174.

<sup>615</sup> Cairncross (1992), page 254.

<sup>616</sup> HC Deb 10 March 1981 vol 1000 cc760-761

<sup>617</sup> HC Deb 10 March 1981 vol 1000 c764

<sup>618</sup> HC Deb 10 March 1981 vol 1000 c776

<sup>619</sup> HC Deb 10 March 1981 vol 1000 c771

<sup>620</sup> HC Deb 10 March 1981 vol 1000 c772

<sup>621</sup> HC Deb 10 March 1981 vol 1000 c773

Thirdly, indirect consumption taxes were raised considerably: “it is necessary to look principally to the personal sector for the additional revenue needed. People in employment have in general had more money to spend. Extra tax will have to be levied on that expenditure”.<sup>622</sup> Fuel and alcohol duties were increased from 10<sup>th</sup> March 1981. Tobacco Duty was raised from 13<sup>th</sup> March 1981 and on matches and lighters from 13<sup>th</sup> March 1981. The car tax increased from 1<sup>st</sup> April 1981 and Vehicle Excise Duty was altered and raised on 10<sup>th</sup> March 1981. In all, these consumption tax changes raised 75 per cent of the increased revenue in 1981. I classify all these as *endogenous, deficit reduction*.

On business taxation there were some major remissions but the new system of stock relief was to account for nearly 70 per cent of this. The Chancellor discounted lowering the National Insurance surcharge and implemented a general reduction in Corporation Tax instead, “I therefore propose to bring help to business and to encourage enterprise”.<sup>623</sup> The new system took effect from 1<sup>st</sup> April 1981. As a long-term measure to help business and encourage enterprise I classify this as *exogenous, long-run*.

The final major tax remission was “an entirely new tax incentive to attract individual investors to back new enterprises”.<sup>624</sup> The Chancellor noted that considerable sums of risk capital were needed to finance the starting of a business and “The individual private investor has for many years had little encouragement to help fill that gap in the capital market”.<sup>625</sup> This became known as the ‘Business Start-up Scheme’ and initially applied from 6<sup>th</sup> April 1981 for three years. I classify this measure *exogenous, long-run*.

As any *exogenous* remissions had to be offset in the aggregate, I provide an alternative classification of *endogenous, deficit reduction*, classifying the whole package together.

These changes account for nearly 80 per cent of the remissions and over 95 per cent of the increases.

#### *Changes during debates of the Finance Bill 1981*

During debate the rate on derv was cut as “a reduction in the duty would therefore be of particular benefit to that industry [haulage]”. This took effect on the 2<sup>nd</sup> July 1981 and I classify it as *exogenous, long-run* as it is to provide long-term support to that sector. However, the Chancellor offset the cut exactly (“I made it clear that I would have to recoup the revenue lost in some other way”), with a rise in tobacco and gambling duties, implemented on 8<sup>th</sup> and 12<sup>th</sup> July 1981 respectively. The gambling changes were actually staggered over the months to October, but without a method of splitting the yield I assign it all to the 12<sup>th</sup> July 1981. There was also no ‘full year’ cost given and so I use the current year estimates, which sum to zero over the three changes. I assign the same classification to the whole package.

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<sup>622</sup> Ibid.

<sup>623</sup> HC Deb 10 March 1981 vol 1000 c776

<sup>624</sup> HC Deb 10 March 1981 vol 1000 c782

<sup>625</sup> Ibid.



## 1982: Budget 9<sup>th</sup> March 1982

*Chancellor: Geoffrey Howe; Prime Minister: Margaret Thatcher (Conservative)*

### Context

Over 1981 real output continued to fall, although there was some variation between quarters. The continuous quarter on quarter fall in GDP came to an end in the first half of 1981, though real consumer spending fell after the 1981 Budget. The inflation trend was downward; in 1981 inflation was more than 6 percentage points lower than in 1980. However, in January 1982 the twelve month change in the Retail Price Index was still 11 per cent, the same as a year earlier. Unemployment, however, rose to reach nearly 2.5 million by the March 1982 Budget,<sup>626</sup> albeit a smaller increase than over the 12 months to March 1981.

### Overall Budget Objectives

Familiar themes were restated in the Budget speech: public borrowing “cannot make excessive demands on the funds available without putting upward pressure on interest rates”.<sup>627</sup> However, there was to be no large rise in taxation, in fact “I shall be proposing substantial reductions in taxation while at the same time reducing the Government’s borrowing requirement”.<sup>628</sup> This was not, however, a demand stimulus. Indeed, Britton (1991) notes “fiscal policy was not tightened further, but on the other hand little was conceded to those who argued for a large stimulus to help the economy climb out of recession”.<sup>629</sup> Rather “this will be a Budget for industry — and so a Budget for jobs”.<sup>630</sup> ‘Borrow, borrow, borrow’, the Chancellor argued would not help the unemployed, better to secure lower borrowing and stable prices and at the same time “to achieve substantial tax reforms, to promote the wider ownership of wealth, and to encourage the productive private sector”.<sup>631</sup> Essentially this Budget began work on the Government’s exogenous, long-term objectives.

### Major Budget Tax Measures

Cuts in personal income tax made up over half the nominal cost of the tax remissions. The Chancellor considered all six of these measures together in his speech, and introducing them explains “the paramount aim of this Budget is to help industry, to encourage business, and to create jobs... We remain firmly committed as ever, over the years, to reduce the burden of direct taxation. It is essential to do so to improve incentives, to remove disincentives and to reduce the poverty trap”.<sup>632</sup> The main, additional and age allowances were then increased, as was the basic rate limit, the further higher rate threshold and the investment income threshold; all from 6<sup>th</sup> April 1982. A sizable amount of this remission was however, statutory indexation

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<sup>626</sup> Claimant count measure; Cairncross (1992) explains that it was well over 3 million by March 1982 (p. 249).

<sup>627</sup> HC Deb 09 March 1982 vol 19 c735

<sup>628</sup> HC Deb 09 March 1982 vol 19 c727

<sup>629</sup> Britton (1991), page 61.

<sup>630</sup> Ibid.

<sup>631</sup> HC Deb 09 March 1982 vol 19 c757

<sup>632</sup> HC Deb 09 March 1982 vol 19 c756

and so I only include that which was additional in the tax series. Being to stimulate the supply-side of the economy, I classify these tax cuts as *exogenous, long-run*.

Changes were made to the Petroleum Revenue Tax (P.R.T.). The supplementary petroleum duty was abolished and the P.R.T. rate was reduced from 1<sup>st</sup> January 1983. In the previous year the changes made the taxes more responsive to changes in price. With the fall in oil prices over 1982, the Chancellor noted that he could not reduce the burden of tax as much as industry had wished for. However, “I do agree with it on the need for some change of structure. I see, in particular, the advantage of profit-related taxes in relation to additional investment in existing fields... My hope is that the new tax structure that I have proposed will provide a more secure and stable regime for the future, permitting development to go ahead uninhibited by major fiscal uncertainties”.<sup>633</sup> I classify these changes as *exogenous, long-run*.

The National Income Surcharge (N.I.S.), imposed by the previous Government, was cut by 1 percentage point from 2<sup>nd</sup> August 1982. Howe explained: “our prime purpose is to help private commerce and industry to help itself, by cutting its costs”.<sup>634</sup> To provide more relief during the current year, there was a further ½ per cent reduction between August and 5<sup>th</sup> April 1983. The purpose of this was to effectively reduce by 1 per cent payments for the whole year 1982-3. I therefore do not treat this as a temporary measure and make use of the ‘full year’ cost. The purpose was to lower the long-term burden placed on industry by the tax; I therefore classify this as *exogenous, long-run*. The changes in income, P.R.T. and N.I.S. account for over 80 per cent of the tax cuts.

Almost all the tax rises were on indirect taxes. The Chancellor noted: “For the Excise duties there has grown up in recent years a sensible presumption that they should be adjusted in line with the movement in prices from one year to the next...That is the basis of my approach to Excise duty changes this year”.<sup>635</sup> Following this comment, fuel and alcohol duties rose on 9<sup>th</sup> March, tobacco duty from 11<sup>th</sup> March, gambling duties increased from 1<sup>st</sup> April and 1<sup>st</sup> October and Vehicle Excise Duty from 9<sup>th</sup> March 1982. Little is said other than the need to maintain real revenue or to raise revenue. Given that the overall stance of the Budget provides significant remissions for exogenous, long-run reasons, I assume the above changes are part of the package to fund the remissions and classify these as *exogenous, long-run*.

### **1983: Budget 15<sup>th</sup> March 1983**

*Chancellor: Geoffrey Howe; Prime Minister: Margaret Thatcher (Conservative)*

#### **Context**

Real GDP growth resumed at around 2 per cent in 1982. Inflation was also falling, with the 12 month inflation in January 1983 having fallen to around 5 per cent. Unemployment, however, was relentless: the claimant count reached 2.7 million by March 1983, although the rise had

<sup>633</sup> HC Deb 09 March 1982 vol 19 c745

<sup>634</sup> HC Deb 09 March 1982 vol 19 c741

<sup>635</sup> HC Deb 09 March 1982 vol 19 c742

slowed. The recovery in 1982, however, appeared to be hampered by poor world growth.<sup>636</sup> On the monetary side interest rates had been allowed to fall from October 1981 to November 1982. In the Autumn Statement of November 1982 the National Insurance Surcharge was cut again, and I deal with this below.

### **Overall Budget Objectives**

The Chancellor opened his statement by announcing “I shall today be proposing further significant cuts in the taxes paid both by businesses and by individuals. These proposals will be consistent with our medium-term strategy for effective control of the money supply, for lower public borrowing, and for further progress on inflation”.<sup>637</sup> There was a specific section on unemployment and a series of microeconomic measures were announced to help combat it. But there was no return to the old view that the economy required a short term stimulus. The primary fiscal judgement was regarding the size of the public deficit and the strategy of fiscal policy supporting monetary policy is again clear “On interest rate grounds, there is a clear case for continued fiscal restraint”.<sup>638</sup> And again the Chancellor budgeted for a PSBR for the coming year of 2.75 per cent. This figure allowed for “further real tax cuts with a net cost to the PSBR of some £1 billion. The full year revenue costs of my proposals will be rather larger than that”.<sup>639</sup> The tax cuts were focused on the Government’s long-term objectives and most will be *exogenous*.

### **Budget Tax Measures**

In November 1982 the Chancellor announced his intention to lighten the burden on, and reduce costs of, business. The National Insurance Surcharge (N.I.S.) was reduced by 1 per cent and ½ a per cent of this was also brought forward to between January and March 1983. The Chancellor argued that the N.I.S. “has long been criticised, and rightly so, by commerce and industry. As I said in my last Budget statement, it raises production costs, it is not rebatable on exports, and it either puts up prices or cuts into profits”<sup>640</sup> and that “I am sure that it [the cut] will commend itself warmly to the House as providing a substantial reduction in the costs faced by private sector commerce and industry”.<sup>641</sup> I classify this as *exogenous, long-run*.

The largest tax cuts in Budget 1983 were again on income taxes. The Chancellor argued that “the burden of tax on people, under successive Governments, becoming so unacceptably high... But the fact is that reductions in personal taxation themselves help business and employment... Yet for years in Britain the tax system and the tax burden have discouraged individual effort, commitment and enterprise. By strengthening incentives through lower personal taxes, Government can help increase the commitment to business success at every level....Cuts in personal tax provide a vital stimulus for lasting growth and jobs”.<sup>642</sup>

<sup>636</sup> FSBR 1983, page 11. Britton (1991), page 62.

<sup>637</sup> HC Deb 15 March 1983 vol 39 c134

<sup>638</sup> HC Deb 15 March 1983 vol 39 c141

<sup>639</sup> Ibid.

<sup>640</sup> HC Deb 08 November 1982 vol 31 c315

<sup>641</sup> Ibid.

<sup>642</sup> HC Deb 15 March 1983 vol 39 c155

Changes were then made to the main additional and age allowances, the basic rate limit, the further higher rate limit and the Investment Income Surcharge threshold from 6<sup>th</sup> April 1983. I classify these changes as *exogenous, long-run*. Again, I used the data against an indexed base. The nominal reductions totalled over £2.5 billion (0.9 per cent of GDP) but some of that was statutory and not a new policy change. Against the indexed base these remissions cost about £1.5 billion (0.5 per cent of GDP) — still a sizable reduction.

The other major tax cut was a further reduction in the N.I.S. from 1<sup>st</sup> August 1983. The Chancellor explained “Our living standards and jobs depend on our ability to sell and compete, producing the right goods and services at the right time and the right price. The main responsibility for achieving this lies with industry and commerce. But the Government can help by reducing the burdens they place on business.”<sup>643</sup> I classify this as *exogenous, long-run*.

There were also some tax rises. On indirect taxes it was argued “In successive Budgets I have sought to establish the sensible presumption that the excise duties should be adjusted broadly in line with the movement of prices”.<sup>644</sup> The Chancellor raised fuel and alcohol duties from 15<sup>th</sup> March, Tobacco Duty from 18<sup>th</sup> March and Vehicle Excise Duty from 18<sup>th</sup> March 1983 in line with inflation. Little else is said but these changes covered part, but by no means all, of the other tax remissions. I therefore classify these as part of the overall package, *exogenous, long-run*. In addition, taxes on company cars increased from 6<sup>th</sup> April 1984 as “Recent increases have been at a rate of 20 per cent., but the levels still fall short of any objective measure of the true benefit”.<sup>645</sup> Again, little else is said so I classify this as part of the overall package for similar reasons as above: *exogenous, long-run* (as in previous years with changes from indirect to direct taxes).

These changes make up over 85 per cent of the remissions and over 90 per cent of the increases.

## 1984: Budget 13<sup>th</sup> March 1984

*Chancellor:* Nigel Lawson; *Prime Minister:* Margaret Thatcher (Conservative)

### Context

The Conservative Party won the June 1983 General Election and Lawson replaced Howe as Chancellor. The 1982 and 1983 Budgets had provided some sizable remissions in taxation, as Britton (1991) notes “the fiscal contraction of 1981 had been substantially reversed”.<sup>646</sup> 1983 saw real GDP growth grow by over 3.5 per cent and real consumption growth of over 4 per cent. Inflation also remained relatively low, although there had been some inching upwards towards the end of 1983. However, unemployment was higher than the previous March but only by around 100,000 – a smaller increase than in previous years. The second term of the

<sup>643</sup> HC Deb 15 March 1983 vol 39 c149

<sup>644</sup> HC Deb 15 March 1983 vol 39 c146

<sup>645</sup> HC Deb 15 March 1983 vol 39 c150

<sup>646</sup> Britton (1991), page 65. Some still regarded the Budgets as deflationary as the PSBR was reduced, although Cairncross (1992) argues that looking at the public sector financial deficit implies that there was a reversal of the 1981 deflationary stance in 1982 and 1983 (page 250).

Thatcher Government saw the famous miners' strikes. In October 1983 the Government published the Trade Union Bill aimed at the expansion of union democracy. In March 1984 the miners' strike began.

### **Overall Budget Objectives**

The objectives in 1983 were "first, the further reduction of inflation; and, second, a series of tax reforms designed to enable the economy to work better, reforms to stimulate enterprise and set British business on the road to profitable expansion, reforms that will help to bring new jobs".<sup>647</sup> Again there was a rejection of "a self-defeating stimulus to monetary demand".<sup>648</sup> Borrowing had been above forecast and so "We now need a further substantial reduction in borrowing in order to help bring interest rates down further as monetary growth slows down".<sup>649</sup> However the Chancellor noted that there should be room for tax cuts provided firm control over public spending was maintained.<sup>650</sup> 1984 was a hugely tax-reforming Budget and almost all the changes were for *exogenous, long-run or ideological* goals.

### **Major Budget Tax Measures**

#### *Reforms to personal taxation*

Personal income tax cuts made up nearly 40 per cent of the nominal remissions in 1984. The Chancellor argued that, since 1979, good progress had been made: "we have cut the basic rate of income tax from 33 per cent. to 30 per cent. and sharply reduced the confiscatory higher rates inherited from the last Labour Government... It is a good record, but it is not enough. The burden of income tax is still too heavy... During the lifetime of this Parliament, I intend to carry forward the progress we have already made".<sup>651</sup> Consequently, the main, additional and age allowances all increased by more than indexation, the basic rate limit and the further higher rate limit were raised. In line with the previous Budgets I classify these reforms as *exogenous, long-run*. These changes took effect from 6<sup>th</sup> April 1984.

This package of income tax reductions was again closely linked to the increases in indirect consumption taxes. The Chancellor argued "The broad principle was clearly set out in the manifesto on which we were first elected in 1979. This emphasised the need for a switch from taxes on earnings to taxes on spending... To reduce direct taxation by this means is important in two ways. It improves incentives and makes it more worthwhile to work, and it increases the freedom of choice of the individual".<sup>652</sup> To this effect the zero rating of various goods with respect to V.A.T. was removed from 1<sup>st</sup> May 1984 and 1<sup>st</sup> June 1984. Without a good way of splitting this yield I assign the 'full year' gain to the 1<sup>st</sup> May 1984. Additionally fuel, alcohol, tobacco and vehicle excise duties rose from 13<sup>th</sup> March, 15<sup>th</sup> March and 14<sup>th</sup> March 1984 respectively. In conclusion: "The extra revenue raised in this way will enable me,

<sup>647</sup> HC Deb 13 March 1984 vol 56 c286

<sup>648</sup> Ibid.

<sup>649</sup> HC Deb 13 March 1984 vol 56 c290

<sup>650</sup> HC Deb 13 March 1984 vol 56 c291

<sup>651</sup> HC Deb 13 March 1984 vol 56 c303

<sup>652</sup> HC Deb 13 March 1984 vol 56 c301

within the overall framework of a neutral Budget, to lighten the burden of income tax”.<sup>653</sup> As part of the overall income tax reform package, their motivation is *exogenous, long-run*.

Whilst on income taxes, life assurance premium relief was abolished from 14<sup>th</sup> March 1984 “the main effect of life assurance premium relief today is unduly to favour institutional rather than direct investment. It has also spawned a multiplicity of well-advertised tax management schemes and no fewer than 50 pages of legislation attempting to deal with its abuse”.<sup>654</sup> I classify this as *exogenous, ideological*.

#### *Capital tax reforms*

There were some sizable remissions in the taxation of savings and investment: “The proposals I am about to make should improve the direction and quality of both. And they will contribute further to the creation of a property-owning and share-owning democracy, in which more decisions are made by individuals rather than by institutions”.<sup>655</sup> Of the large remissions, firstly there were reductions in the rate and the increases in thresholds of Stamp Duty from 13<sup>th</sup> March 1984. This was in part to help and encourage home buyers but also to reduce the rate of duty on share transfers. It “will remove an important disincentive to investment in equities and increase the international competitiveness of our stock market”.<sup>656</sup> I classify this as *exogenous, long-run*. Secondly, the Investment Income Surcharge was abolished from 6<sup>th</sup> April 1984. It “is an unfair and anomalous tax on savings and on the rewards of successful enterprise. It hits the small business man who reaches retirement without the cushion of a company pension scheme and impedes the creation of farm tenancies”.<sup>657</sup> I therefore also classify this change as *exogenous, long-run*.

#### *Reforms to Business Taxation*

The 1984 Budget contained considerable reforms to Corporation Tax. The Chancellor explained “the Government have two responsibilities towards British business and industry. The first is to ensure that they do not have to bear an excessive burden of taxation. The second is to ensure that, given a particular burden, it is structured in the way that does least damage to the nation’s economic performance... My purpose, therefore, is to phase out some unnecessary reliefs in order to bring about, over time, a markedly lower rate of tax on company profits”.<sup>658</sup>

The reforms involved: the abolition of stock relief from 13<sup>th</sup> March 1983, which was designed to help firms in times of high inflation and was no longer needed; a reduction in the rate of first year allowances for plant and machinery; the rate of initial allowance for certain buildings and other further reductions in the first year and initial allowances as “there is little evidence that these incentives have strengthened the economy or improved the quality of investment”.<sup>659</sup> These were implemented on several dates beginning 14<sup>th</sup> March 1984 but I

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<sup>653</sup> HC Deb 13 March 1984 vol 56 c303

<sup>654</sup> HC Deb 13 March 1984 vol 56 c293

<sup>655</sup> HC Deb 13 March 1984 vol 56 c292

<sup>656</sup> HC Deb 13 March 1984 vol 56 c293

<sup>657</sup> Ibid.

<sup>658</sup> HC Deb 13 March 1984 vol 56 c295

<sup>659</sup> Ibid.

assign the full year cost to this date. The changes allowed the Chancellor to lower the rates of Corporation Tax both this year from 1<sup>st</sup> April 1983 and from 1<sup>st</sup> April 1984, 1985 and 1986. The small companies' rate was also reduced from 1<sup>st</sup> April 1983. Taken together the overall changes “hold out an exciting opportunity for British industry as a whole: an opportunity further to improve its profitability and to expand, building on the recovery that is already well under way. Higher profits after tax will encourage and reward enterprise, stimulate start innovation in all its forms, and create more jobs”.<sup>660</sup> I classify all these changes as *exogenous, long-run* being part of the reform package. While the stock relief was unnecessary as inflation had fallen, I deem its abolition *exogenous* in that the prior motivation for abolishing unnecessary reliefs was to reform business taxation.

The N.I.S. was abolished from 1<sup>st</sup> October 1984. The Chancellor argued that “given the impact that this tax has, not only on industrial costs but also — at a time of high unemployment — on jobs, I have decided to take the opportunity of this my first Budget to fulfil that pledge”.<sup>661</sup> This may appear endogenous but it had been a Government aim to abolish the N.I.S. for a long time and the Chancellor noted that “we are pledged to abolish it during the lifetime of this Parliament”.<sup>662</sup> In previous years various long-term reasons why it should be abolished were deployed. On balance I classify this *exogenous, long-run*.

These changes accounted for nearly 90 per cent of the tax rises and 97 per cent of the cuts.

## **1985: Budget 19<sup>th</sup> March 1985**

*Chancellor:* Nigel Lawson; *Prime Minister:* Margaret Thatcher (Conservative)

### **Context**

The Chancellor faced a familiar environment in 1985: 1984 had been another year of decent growth at 2.7 per cent. This was 1 percentage point slower than the previous year but may well have been affected by the miners' strikes. Inflation was edging up but still comparatively low at 5 per cent in 1984. Unemployment was again around 100,000 higher than the previous March. Britton (1991) noted that the PSBR presented a problem but was disguised by increased revenue from various privatisations — a key ideological objective of the Government.<sup>663</sup>

### **Overall Budget Objectives**

From the outset unemployment was acknowledged as a problem: “my Budget today has two themes: to continue the drive against inflation and to help create the conditions for more jobs”.<sup>664</sup> However, a demand stimulus was not the answer. The Government published an employment White Paper in March as well – unemployment was viewed as a microeconomic

<sup>660</sup> HC Deb 13 March 1984 vol 56 c298

<sup>661</sup> HC Deb 13 March 1984 vol 56 c301

<sup>662</sup> Ibid.

<sup>663</sup> Britton (1991), page 71.

<sup>664</sup> HC Deb 19 March 1985 vol 75 c783

problem: “boosting demand without the necessary improvements to the performance of the economy would only generate higher inflation”.<sup>665</sup> In short, “The Government’s economic strategy has two key components: a monetary policy designed to bring down inflation and a supply-side policy designed to improve the competitive performance of the economy”.<sup>666</sup> The higher PSBR was justified by the cost of the coal strike but this year Lawson planned to keep to his previous plans; there were to be no giveaways “for the coming year, a substantial reduction in the PSBR must take precedence over our objectives for reducing the burden of tax”.<sup>667</sup> However, the Budget was designed to carry “forward the theme of tax reform I set out last year... reform designed to improve our economic performance over the longer term, on which the jobs of the future will depend”<sup>668</sup> and almost all the tax changes were, in the end, *exogenous long-run* changes.

### Major Budget Tax Measures

The Chancellor continued the switch from personal income tax to indirect consumption taxes: “My Budget last year shifted some of the burden of personal taxation from earnings to spending. Today I propose to make a further move in this direction”.<sup>669</sup> As a consequence, the Chancellor sought the revenue required from excise duties. Alcohol, fuel, tobacco and vehicle excise duties all rose on the 19th March 1985. In choosing which taxes to cut, the Chancellor argued “this year, a Budget for jobs and for enterprise has to give high priority to raising the tax thresholds”.<sup>670</sup> The main, additional and age allowances all increased by more than indexation. There were indexation increases in the basic rate limit and the further higher rate thresholds. All these changes took place from 6<sup>th</sup> March 1985. Based on the comments here, those above and those from the previous year I classify this package of measures as *exogenous, long-run*.

There were also a number of changes to V.A.T. which, the Chancellor explained, (combined with the excise duty increases) “will help me to lighten the burden of income tax”.<sup>671</sup> V.A.T. was extended to magazines and newspapers from 1<sup>st</sup> May 1985; changes to V.A.T. on credit cards and similar payment cards also raised revenue from 1<sup>st</sup> May 1985; and “I propose to include in this year’s Finance Bill legislation to implement most of the recommendations of the first two volumes of the Keith report on the enforcement powers of the revenue departments, including measures to deal with the problem of the late payment of V.A.T.”.<sup>672</sup> I classify these changes together with the excise duties as *exogenous, long-run*.

There were also reforms to Capital Gains Tax. The Chancellor explained “I have a number of other important proposals for tax reform to announce today, which will both simplify the system and encourage enterprise”.<sup>673</sup> These took the form of changes to

<sup>665</sup> Britton (1991), page 73. A point reiterated in the 1985 Budget speech (c785)

<sup>666</sup> HC Deb 19 March 1985 vol 75 c784

<sup>667</sup> HC Deb 19 March 1985 vol 75 c786

<sup>668</sup> HC Deb 19 March 1985 vol 75 c790

<sup>669</sup> HC Deb 19 March 1985 vol 75 c795

<sup>670</sup> HC Deb 19 March 1985 vol 75 c797

<sup>671</sup> Ibid.

<sup>672</sup> HC Deb 19 March 1985 vol 75 c798

<sup>673</sup> HC Deb 19 March 1985 vol 75 c791



indexation relief from 6<sup>th</sup> March 1985. In terms of revenue they were minor remissions, however; they followed a change, announced on 28<sup>th</sup> February 1985, that prevented the conversion of income into less heavily taxed capital gains. As reforms to Capital Gains Tax, I classify these changes as *exogenous, long-run*.

Finally the Chancellor announced significant cuts to and reform of National Insurance: “I want to do more to improve job prospects for young people and the unskilled, among whom the problem of unemployment is most severe...I have concluded that an effective response to this problem must include direct action in two related areas — to cut the costs of employing the young and unskilled, and to sharpen their own incentive to work at wages which employers can afford to pay... They tackle the problem of unemployment where it is most acute”.<sup>674</sup> I classify this measure as *endogenous* (related to current unemployment levels), *supply stimulus*.

These changes account for 95 per cent of the increases and nearly 90 per cent of the remissions.

## 1986: Budget 18<sup>th</sup> March 1986

*Chancellor:* Nigel Lawson; *Prime Minister:* Margaret Thatcher (Conservative)

### Context

Real GDP had grown by 3.6 per cent in 1985 and by 1.5 per cent between the end of 1985 and the first quarter of 1986. However, inflation had edged up to just over 6 per cent in 1985. Unemployment was still increasing despite the 1985 Employment White Paper and other supply-side measures. That said, the claimant count was to peak in June 1986 at just under 3.1 million.

### Overall Budget Objectives

The Budget speech started with a significant degree of optimism as “The strength and durability of the current economic upswing continues to confound the commentators... At the heart of this success lies a remarkable turn-around in productivity”.<sup>675</sup> The now familiar fiscal objective was reiterated “monetary policy must always be supported by an appropriate fiscal policy. That means, in plain English, keeping borrowing low”.<sup>676</sup> The Chancellor announced that the Government would broadly stick to their pre-announced plan for the PSBR but err on the side of caution given uncertainties over the oil price. He budgeted for a PSBR of 1¼ per cent of GDP. The Chancellor argued that this year he was able to accommodate a modest net reduction in the real burden of taxation of just under £1 billion (0.3 per cent of GDP). The long-term solution to unemployment would, the Chancellor argued, come from “the creation of a climate in which business and industry flourish”.<sup>677</sup> Once again, the overall theme was one of fostering long-run productivity and growth and almost all the changes were *exogenous, long-run* or *ideological*.

<sup>674</sup> HC Deb 19 March 1985 vol 75 cc798-800

<sup>675</sup> HC Deb 18 March 1986 vol 94 cc166-7

<sup>676</sup> HC Deb 18 March 1986 vol 94 c170

<sup>677</sup> HC Deb 18 March 1986 vol 94 c173

### Major Budget Tax Measures

Again income tax cuts made up the lion's share of remissions. Lawson argued "It is no accident that the two most successful economies in the world, both overall and specifically in terms of job creation — those of the United States and Japan — have the lowest level of tax as a proportion of GDP. Reductions in taxation motivate new businesses and improve incentives at work. They are a principal engine of the enterprise culture, on which our future prosperity and employment opportunities depend".<sup>678</sup> The Chancellor confirmed the statutory indexation rise in all the main thresholds and allowances. The major new measure was a cut in the basic rate of income tax from 30 per cent to 29 per cent. The higher rate thresholds were raised but not all in line with statutory indexation. All these took effect from 6<sup>th</sup> April 1986. I classify these changes as *exogenous, long-run*.

On indirect consumption taxes "the overriding question this year is how far I should recover from the oil consumer the tax revenues I have lost from the oil producer, as a result of the massive fall in the oil price".<sup>679</sup> Whilst the real value of revenue obtained from the motorist was to be maintained "I will not increase it. But I do believe it makes sense to look again, in the light of the radically changed circumstances, at the relative weight of petrol tax and vehicle excise duty".<sup>680</sup> Consequently there were increases in fuel duties from 18<sup>th</sup> March 1986 but no change in most vehicle excise duties. The purpose being to offset the fall in oil producer revenues, I classify this measure as *endogenous, deficit reduction*.

The other major consumption tax change was on Tobacco Duty. "In the light of the representations that I have received on health grounds"<sup>681</sup> the Chancellor increased Tobacco Duty more than was needed to keep pace with inflation, from 20<sup>th</sup> March 1986. I take this justification at face value and classify the measure as *exogenous, ideological*.

There were two other larger changes in taxation. Firstly, "to correct an anomaly in the taxation of international entertainers and sportsmen"<sup>682</sup> it was proposed to "withhold tax at the basic rate on the earnings of overseas entertainers and sportsmen in the United Kingdom".<sup>683</sup> This came into effect from 6<sup>th</sup> April 1987. I classify it as *exogenous, ideological* as a reform to the balance of the tax system. Secondly, there were changes to the rules for pension fund surpluses: "The absence of clear rules on how surpluses should and may be dealt with, and the consequent reliance that has to be placed on the exercise by the Inland Revenue of its discretion, have created considerable uncertainty and have unnecessarily constrained trustees' freedom of action".<sup>684</sup> This took effect in the current year starting 6<sup>th</sup> April 1986. As a longer-term reform to improve the tax system, I classify this *exogenous, long-run*.

These changes made up over 85 per cent of the remissions and over 80 per cent of the increases, although there were a significant number of small changes.

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<sup>678</sup> HC Deb 18 March 1986 vol 94 c182

<sup>679</sup> HC Deb 18 March 1986 vol 94 c179

<sup>680</sup> HC Deb 18 March 1986 vol 94 c180

<sup>681</sup> Ibid.

<sup>682</sup> HC Deb 18 March 1986 vol 94 c174

<sup>683</sup> Ibid.

<sup>684</sup> HC Deb 18 March 1986 vol 94 c176

## 1987: Budget 17<sup>th</sup> March 1987

*Chancellor:* Nigel Lawson; *Prime Minister:* Margaret Thatcher (Conservative)

### Context

Growth in 1986 was even faster than in the previous year at 4 per cent. Unemployment had finally peaked and was now falling, although still near 3 million. Inflation also fell to 3.4 per cent in 1986. Strong growth, falling unemployment and low inflation made for a very good outlook in March 1987. Part of this may have been reflected by oil prices hitting a 12-year low in July 1986.<sup>685</sup> However, Britton (1991) claims that by the end of 1986 “what had been a well-sustained recovery was turning into a boom”.<sup>686</sup> But by the time of the June 1987 General Election it was difficult for the Labour opposition to make the argument that unemployment should be dealt with by reflation.

### Overall Budget Objectives

The 1987 Budget repeated themes from previous years: the central objective of monetary and fiscal policy was to squeeze out inflation “this requires monetary discipline buttressed by low public sector borrowing”.<sup>687</sup> The argument for fiscal stimulus was again discounted: “our critics have consistently maintained not only that a fiscal stimulus would produce real economic growth but that without an expansionary fiscal policy sustained growth was impossible. They were wrong, and have been proved wrong”.<sup>688</sup> The Chancellor again budgeted for a low PSBR at £4 billion, having come in under forecast. However, “Inevitably, this greatly diminishes the scope I have this year for reducing the burden of taxation, which of course remains a major objective of Government policy”.<sup>689</sup> The tax changes were again largely for supply-side reform and “I shall propose some changes in taxation designed to improve still further the prospects that lie before us”.<sup>690</sup> All the tax changes will therefore be *exogenous long-run* or *ideological* and further evidence is given below.

### Major Budget Tax Measures

The major tax remission was a 2p cut in the basic rate of income tax. This made up 70 per cent of the tax remissions measured from an indexed base. The allowances and thresholds were also increased, with indexation making the nominal income tax cuts even larger. The age allowance was increased by double the statutory requirement. The Chancellor argued “There is now a worldwide consensus on the economic desirability of tax reform and tax reduction, and in particular the reduction of income tax...Lower rates of tax sharpen up incentives and stimulate enterprise, which in turn is the only route to better economic performance”.<sup>691</sup> These cuts I classify as *exogenous, long-run*. The further higher rate thresholds were not raised by as much

<sup>685</sup> Woodward (2004), page 272.

<sup>686</sup> Britton (1991), page 78.

<sup>687</sup> HC Deb 17 March 1987 vol 112 c817

<sup>688</sup> HC Deb 17 March 1987 vol 112 c818

<sup>689</sup> Ibid.

<sup>690</sup> HC Deb 17 March 1987 vol 112 c815

<sup>691</sup> HC Deb 17 March 1987 vol 112 c827

as indexation. There is no specific motivation given but it is included in the discussion of the income tax cut package. I therefore continue to classify it as *exogenous, long-run*, even though it counts as a major tax rise.

The other major real tax cut was the decision not to increase petrol duty in line with inflation.<sup>692</sup> No motive is given for this change or the decision to freeze most rates of duty – despite setting the expectation of inflation rises each year. The decision does not appear correlated with macroeconomic factors but may reflect the impending General Election. I argue that it is safe to regard this as an exogenous decision, and probably a political choice, so I classify it – and all the other duty freezes — as *exogenous, ideological*.

There were three measures implying sizable increases in revenue from businesses. Firstly, there was harmonisation of payment dates for Corporation Tax from 17<sup>th</sup> March 1987. This measure, however, relates to the timing of payment, not the amount. I therefore exclude this. Secondly, the taxation of indexed gains would now be taxed in full at normal Corporation Tax rates from 17<sup>th</sup> March 1987. The Chancellor argued “the low rate of Corporation Tax enables me to introduce a further simplification into the system”.<sup>693</sup> I therefore classify this measure as *exogenous, long-run*. Finally, there were changes to the rules for dual resident companies from 1<sup>st</sup> April 1987 as “in any ongoing programme of tax reduction and reform, where much still remains to be done, an essential element must always be the elimination of unintended or unjustified tax breaks, which cause rates of tax generally to be higher than they need to be”.<sup>694</sup> I therefore classify this as *exogenous, ideological*.

By far the largest revenue raiser was the introduction of new rules relating to V.A.T. from 1<sup>st</sup> April 1987. In justifying the changes the Chancellor again argued “In any ongoing programme of tax reduction and reform, where much still remains to be done, an essential element must always be the elimination of unintended or unjustified tax breaks”.<sup>695</sup> I therefore classify this as *exogenous, ideological*.

These changes account for over 80 per cent of the tax increases and 70 per cent of the remissions – there were a sizable number of minor *exogenous* changes, not specifically discussed here for brevity.

## **1988: Budget 15<sup>th</sup> March 1988**

*Chancellor:* Nigel Lawson; *Prime Minister:* Margaret Thatcher (Conservative)

### **Context**

Real GDP growth in 1987 was over 4.5 per cent and the strong trend continued into the first quarter of 1988. Unemployment had also fallen by around 500,000 since the previous March. Both consumer spending and fixed investment continued to rise despite the October 1987 stock

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<sup>692</sup> Over the years the Government had emphasised its policy that duties should rise with inflation to protect the real yield. 1987 was the first year that the FSBR started reporting figures against an indexed base for the years ahead and I now use this series for duty changes.

<sup>693</sup> HC Deb 17 March 1987 vol 112 c819

<sup>694</sup> HC Deb 17 March 1987 vol 112 c822

<sup>695</sup> Ibid.

market crash. However inflation was edging up, 4.2 per cent in 1987 from 3.4 per cent in 1986. Britton (1991) argues that the boom had got out of hand; and the growth of personal credit following deregulation was “at first maintained and encouraged by the authorities”.<sup>696</sup> The boom showed up in both a current account deficit and a collapse in the household savings ratio which fell from over 11 per cent in 1985 to 3.3 per cent in the third quarter of 1988.<sup>697</sup>

### Overall Budget Objectives

Familiar themes continued from previous years. In terms of tax changes: “I shall propose a number of measures designed to improve the performance of the economy still further, by changing the structure of taxation. For this will be a tax reform Budget”.<sup>698</sup> Once again, “a sound monetary policy needs to be buttressed by a prudent fiscal stance”.<sup>699</sup> Indeed the Chancellor estimated that the final outturn for the PSBR in 1987-88 would be negative (surplus). Moreover, there had been increases in expenditure and “over the coming year, we will be spending at least £1,100 million more on health than in the year now ending, at least £900 million more on education, and at least £500 million more on law and order”.<sup>700</sup> These increases reduced the scope for tax reductions and “it will not be possible in this Budget to reduce the burden of taxation; that is to say, to reduce taxation as a share of GDP”.<sup>701</sup> However, in keeping with the introductory comments, there were a number of supply-side reforms sizably reducing tax revenues – all being *exogenous*.

### Major Budget Tax Measures

Reductions in income tax made up nearly 85 per cent of the tax remissions in 1988. The Chancellor again argued: “The way to a strong economy is to boost incentives and enterprise. And that means, among other things, keeping income tax as low as possible”.<sup>702</sup> The main, additional, age and widows’ bereavement allowances were all increased by more than statutory indexation. The basic rate limit also rose by more than indexation. Two pence came off the basic rate of income tax and the higher rates of tax above 40 pence were abolished as “excessive rates of income tax destroy enterprise, encourage avoidance, and drive talent to more hospitable shores overseas”.<sup>703</sup> These changes were all implemented on 6<sup>th</sup> April 1988. I classify these changes as *exogenous, long-run*.

There were also some sizable increases in income taxes. Firstly, the relief on life insurance premiums was reduced from 6<sup>th</sup> April 1989 as “it has traditionally been given at half the basic rate of income tax. I therefore propose to reduce it”.<sup>704</sup> I classify this in the same way as the income tax change, *exogenous, long-run*. Secondly, car benefit scales were increased by a considerable amount as “independent studies, based on figures supplied by the AA, suggest

<sup>696</sup> Britton (1991), page 81.

<sup>697</sup> ONS (2010), ELMR Data Table 1.7, series NRJS

<sup>698</sup> HC Deb 15 March 1988 vol 129 c993

<sup>699</sup> HC Deb 15 March 1988 vol 129 c995

<sup>700</sup> HC Deb 15 March 1988 vol 129 c996

<sup>701</sup> HC Deb 15 March 1988 vol 129 c997

<sup>702</sup> HC Deb 15 March 1988 vol 129 c1006

<sup>703</sup> HC Deb 15 March 1988 vol 129 c1012

<sup>704</sup> HC Deb 15 March 1988 vol 129 c1011

that an employee with a typical company car may be taxed on only about a quarter of its true value. This discrepancy is too great to be allowed to continue”.<sup>705</sup> As this was designed to raise a considerable amount of revenue and thus offset the rest of the reforming package, I classify it with the other measures, *exogenous, long-run*. Thirdly, tax relief on new home improvements was abolished as “Most of these loans are for fittings such as double glazing, and have played a significant part in the recent growth of consumer credit without in any way contributing to the expansion of home ownership. This may be partly due to the substantial scope for abuse, as loans ostensibly taken out for home improvements are used for other purposes, a matter which was the subject of a recent report from the Public Accounts Committee”. I classify this as *exogenous, ideological*. Finally, tax relief on non-charitable covenants was also abolished, although this was from 15<sup>th</sup> March 1988. This follows the removal of covenants and maintenance from the tax system which will “greatly simplify an unnecessarily complex part of the tax system”. The consequence was that “people receiving payments under covenants will not be liable to tax on them, and those making the payments will not be able to claim tax relief on them”.<sup>706</sup> I classify this as *exogenous, ideological*.

The final sizable measure was on Capital Gains Tax. The Chancellor announced “a fundamental reform. Subject to the new base date, capital gains will continue to be worked out as now, with the present exemptions and reliefs. But the indexed gain will be taxed at the income tax rate that would apply if it were the taxpayer's marginal slice of income. In other words, I propose in future to apply the same rate of tax to income and capital gains alike”.<sup>707</sup> This change follows Lawson's analysis that income and capital gains should not really be treated differently and “taxing them at different rates distorts investment decisions and inevitably creates a major tax avoidance industry”.<sup>708</sup> This change was implemented on 6<sup>th</sup> April 1988. I classify this measure as *exogenous, long-run* as it attempts to modernise and reform the tax system.

These changes account for 85 per cent of the cuts and three quarters of the increases.

## **1989: Budget 14<sup>th</sup> March 1989**

*Chancellor:* Nigel Lawson; *Prime Minister:* Margaret Thatcher (Conservative)

### **Context**

The 1987 trends continued into 1988: real GDP growth was an impressive 5 per cent with real consumer expenditure growing by 7.7 per cent. However, the savings ratio hit a low at 3.3 per cent in the third quarter of 1988. The current account deficit as a percentage of GDP widened to its lowest point in 1989. Unemployment was now falling considerably, with over 500,000 fewer at Budget 1989 than in March the previous year. By the early part of 1989 the 12 month inflation rate was creeping up towards 7 per cent by Budget time. However, by 1989 growth was beginning to slow. In May 1989, shortly after the Budget, the National Institute Economic

<sup>705</sup> HC Deb 15 March 1988 vol 129 c1007

<sup>706</sup> HC Deb 15 March 1988 vol 129 c1001

<sup>707</sup> HC Deb 15 March 1988 vol 129 c1005

<sup>708</sup> Ibid.

Review wrote: “the behaviour of the UK economy, faced with a surge in domestic demand is all too consistent with past experience. Less has changed since the 1970s than might have been hoped”.<sup>709</sup> On monetary policy, Woodward (2004) notes that during 1988 the monetary policy had changed from shadowing the Deutschmark to fighting another inflationary boom; monetary policy sought to reign in consumer spending by keeping the exchange rate relatively high.<sup>710</sup>

### **Overall Budget Objective**

Some slowdown in demand was expected but “the question of just how ‘soft’ or ‘hard’ the so-called landing will be is not in the hands of Government alone. The Government’s task is to reduce inflation by acting, through monetary policy, to bring down the growth of national income in money terms. The task of business and industry is to control their pay and other costs. The more successfully they do so, the less costly in terms of output and employment the necessary adjustment will be... The best contribution the Government can make to this is to carry forward the process of supply-side reform”.<sup>711</sup> On fiscal policy “A balanced Budget is a valuable discipline for the medium term...Having achieved it, I intend to stick to it. In other words, henceforth a zero PSBR will be the norm”.<sup>712</sup> In weighing up debt repayments versus continuing to reduce the tax burden the Chancellor explained “it will not be possible in this year’s Budget to reduce the burden of taxation; that is to say, to reduce taxation as a share of national income”.<sup>713</sup> But in many ways this Budget then carried on the previous years’ work: fiscal policy was to support monetary policy together with supply-side reform of the tax system. Again, the reforms were all *exogenous, long-run or ideological*.

### **Major Budget Tax Measures**

The largest tax cut was from reforms to National Insurance from 5<sup>th</sup> October 1989. The rate of contributions below the lower earnings limit was reduced to 2 per cent: “This will abolish altogether the steps which at present exist at earnings, for 1989–90, of £75 and £115 a week, and thus remove a serious work disincentive from the system... This reform will significantly reduce the burden of employees’ National Insurance contributions across the board”.<sup>714</sup> I classify this as *exogenous, long-run*.

The major income tax allowances and thresholds rose with statutory indexation, but this implies no discretionary change in policy. Small deviations from this are discussed in a longer list of minor changes available on request. The other major remissions were the non-indexation of excise duties. There was no change in tobacco, alcohol and some fuel duties. No motivation is given for this, so I must assume that it was a political decision. I therefore classify it as *exogenous, ideological*. The above cuts accounted for 85 per cent of the remissions.

<sup>709</sup> Cited in Britton (1991), page 81.

<sup>710</sup> Woodward (2004), page 181.

<sup>711</sup> HC Deb 14 March 1989 vol 149 c295

<sup>712</sup> HC Deb 14 March 1989 vol 149 c297

<sup>713</sup> HC Deb 14 March 1989 vol 149 c298

<sup>714</sup> HC Deb 14 March 1989 vol 149 c309

Three groups of tax rises raised over 85 per cent of the increased revenue. Firstly, car scales were again raised from 6<sup>th</sup> April 1989 as “when I doubled the car scales in last year's Budget, I made it clear that this still left this benefit significantly undertaxed. Accordingly, I propose to increase the car scales by one third”.<sup>715</sup> I continue with the standard classification of this as an offsetting measure and thus *exogenous, long-run*.

Secondly, there were changes to the taxation of life insurance companies from 1<sup>st</sup> January 1990 as “there is clearly a powerful case for reform, with a view to securing a tax regime which is more equitable both within the industry and as between life assurance and most other forms of savings”.<sup>716</sup> I classify this as *exogenous, ideological*.

Thirdly, there were changes to the VAT tax regime as “Her Majesty's Government are obliged to implement the European Court's judgment that certain of our zero rates of VAT on supplies to business, notably on non-residential construction, but also on fuel and power and on water, are not lawful”.<sup>717</sup> This was to take effect from 1<sup>st</sup> April 1989 for construction, buildings and land and from 1<sup>st</sup> July 1989 for fuel, power and water. The Government made some changes to lighten this burden but the overwhelming effect of the originally enforced changes remained. I therefore classify this as *exogenous, external*.

## 1990: Budget 20<sup>th</sup> March 1990

*Chancellor:* John Major; *Prime Minister:* Margaret Thatcher (Conservative)

### Context

In 1989 inflation had hit 7.8 per cent. Real GDP growth also slowed to 2.3 per cent in 1989, although unemployment continued to fall up to March 1990. The figures suggested that the economy was turning down, although growth did not start falling until autumn 1990. Throughout 1989 interest rates were raised, reaching nearly 15 per cent by October 1989 and Lawson rejected early entry into the European Exchange Rate Mechanism (E.R.M.) as an alternative to high interest rates. The E.R.M. debate had its cost: Nigel Lawson resigned in October following considerable disagreements with Prime Minister Thatcher over her economic adviser Sir Alan Walters, who was publicly critical of Lawson's policies.

### Overall Budget Objectives

The Government's first objective was “to bring inflation down again... this Budget will take no risks with inflation. It will maintain a strong fiscal surplus”.<sup>718</sup> In addition the Budget was described as a Budget for savers: “It will provide a range of incentives to save and a novel incentive to give”.<sup>719</sup> On tax reform: “It will introduce important new measures for business and keep up the pace of supply-side reform. It will remove an old grievance from the tax

<sup>715</sup> HC Deb 14 March 1989 vol 149 c299

<sup>716</sup> HC Deb 14 March 1989 vol 149 c302

<sup>717</sup> HC Deb 14 March 1989 vol 149 c304

<sup>718</sup> HC Deb 20 March 1990 vol 169 c1011

<sup>719</sup> Ibid.



system and make the social security system fairer, and it will abolish two taxes”.<sup>720</sup> In many ways Major’s first Budget followed similar themes to Lawson’s. On the slowdown, Major argued “No one likes to see the economy slow, but it is inevitable if we are to push inflation downwards”.<sup>721</sup> In terms of the overall fiscal stance “a tight fiscal policy is also essential. It cannot do the work of monetary policy, but it can and must support it... fiscal policy is not, in my view, a flexible instrument which should be altered to meet short-term contingencies”.<sup>722</sup> The motivations were therefore multiple and so we must turn to the individual measures to unpick the motivations.

### Major Budget Tax Measures

Income tax allowances and thresholds were raised by statutory indexation with the exception of the basic rate limit. Failing to implement indexation in full is effectively a tax rise (and is a discretionary change given statutory indexation). No specific justification is given, although earlier comments about the need to fortify the surplus imply that the Chancellor did not believe he could afford all the statutory increases in allowances and limits. I therefore classify this change as *endogenous, deficit reduction* (or more precisely surplus fortification). Based on Major’s comments about not using fiscal policy as a short term instrument, I opt not to classify this as demand management. However, the tight fiscal stance is clearly motivated by current inflationary problems.

The scales for tax treatment of private use of company cars were again, as in previous years, increased from 6<sup>th</sup> April 1990 as “the tax treatment of this benefit remains generous”.<sup>723</sup> As in previous years, little further is said about this. I now choose to classify this as *endogenous, deficit reduction* as it raises a sizable amount of revenue given the Budget’s overall objectives.

The composite rate was abolished from 6<sup>th</sup> April 1991 as “independent taxation has thrown into sharp relief another aspect of the tax system that affects all savers, and which no longer deserves to survive... This change will significantly reduce the amount of tax paid by millions of married women, pensioners, children and others with small savings, and by removing the penalty of composite rate tax, it will play an important part in encouraging the savings habit”.<sup>724</sup> I classify this as *exogenous, ideological*.

There were some changes to the taxation of life insurance originally announced on 20<sup>th</sup> December 1989 and which took effect from 1<sup>st</sup> January 1990. These “put the taxation of life assurance companies’ unit trust holdings on a sounder footing, and make a number of technical improvements”.<sup>725</sup> Given that these were announced as part of a reform package months earlier, and on the strength of this statement, I classify this as *exogenous, ideological* in keeping with the life insurance reforms in the 1989 Budget.

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<sup>720</sup> Ibid.

<sup>721</sup> HC Deb 20 March 1990 vol 169 c1013

<sup>722</sup> HC Deb 20 March 1990 vol 169 cc1016-7

<sup>723</sup> HC Deb 20 March 1990 vol 169 c1022

<sup>724</sup> HC Deb 20 March 1990 vol 169 c1026

<sup>725</sup> HC Deb 20 March 1990 vol 169 c1019

Tax relief for doubtful sovereign debt was removed from 20<sup>th</sup> March 1990. This measure is first justified to “clarify the tax regime for banks”<sup>726</sup> but problems with the current arrangements are said to be an “extremely unsatisfactory position for the banks, for the Inland Revenue, and for the taxpayer”.<sup>727</sup> Little other direct justification is given, although it raises a considerable sum. I therefore classify this as *endogenous, deficit reduction* in line with the overall strategy of the Budget.

On consumption taxes: “Given the need to keep a tight fiscal position, I have decided that the excise duties, taken as a whole, must rise broadly in line with inflation”.<sup>728</sup> But within this total there were some changes. Vehicle Excise Duty (V.E.D.) changes “will greatly simplify the system”<sup>729</sup> and took effect from 21<sup>st</sup> March and 1<sup>st</sup> October 1990. In addition, some V.E.D. rates were again held fixed. To fund these “I will recoup the cost of this by increasing petrol and derv duties by rather more than strict revalorisation would justify”.<sup>730</sup> This rise therefore serves two purposes, to prevent a lower budget surplus from the V.E.D. changes and to fortify the surplus anyway. Alcohol and tobacco duties also increased. I therefore classify these duty changes as a package and as *endogenous, deficit reduction*. These increases took effect from 20<sup>th</sup> March 1990 (except rebated oils, from 1<sup>st</sup> July 1990).

There were three other sizable remissions. Firstly, Stamp Duty on share transactions was abolished from 1<sup>st</sup> January 1992. This decision was taken in the light of a new, forthcoming stock exchange share-dealing system known as TAURUS. “As we approach 1992, we can expect even sharper international competition in financial services, much of it from other European centres. Competitive and practical arguments point in the same direction”.<sup>731</sup> I classify this change as *exogenous, long-run*.

Secondly, there were a few changes to simplify V.A.T. registration requirements from 20<sup>th</sup> March 1990 and revised bad debt relief provisions from 6<sup>th</sup> April 1991. The justification for these changes stemmed from the observation that “cash flow is particularly important to new and growing companies of this size. I have two measures that should help to improve it”.<sup>732</sup> I therefore classify these changes as *exogenous, long-run*.

Finally, tax exempt special savings accounts (TESSAs) were introduced from 1<sup>st</sup> January 1991 as “I wish to do more to encourage the saving habit among taxpayers — all of them”.<sup>733</sup> I therefore classify this as *exogenous, ideological*.

Given the overall objectives and the desire to fortify the surplus to fight inflation, it is possible that the seemingly exogenous changes are in fact then offset by higher increases in the endogenous, revenue raisers. In addition to the specific motivations given below, I also provide an alternative classification for the exogenous measures of *endogenous, deficit reduction* – classifying the whole budget package together.

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<sup>726</sup> Ibid.

<sup>727</sup> Ibid.

<sup>728</sup> HC Deb 20 March 1990 vol 169 c1020

<sup>729</sup> Ibid.

<sup>730</sup> Ibid.

<sup>731</sup> HC Deb 20 March 1990 vol 169 c1019

<sup>732</sup> HC Deb 20 March 1990 vol 169 c1017

<sup>733</sup> HC Deb 20 March 1990 vol 169 c1026

These changes made up over 90 per cent of the remissions and 98 per cent of the tax rises.

### **1991: Budget 19<sup>th</sup> March 1991**

*Chancellor:* Norman Lamont; *Prime Minister:* John Major (Conservative)

#### **Context**

The second half of 1990 — the Government's 12<sup>th</sup> consecutive year in office — was a turbulent one. After considerable divisions within the Government the U.K. joined the E.R.M. in October. Geoffrey Howe's famous criticism of Margaret Thatcher and her subsequent resignation occurred in November. The first Gulf War began in January 1991. In the third quarter of 1990 real GDP started falling and was to continue to fall until the end of 1991. Unemployment, which was falling until June 1990, began rising again, hitting nearly 2.1 million again by the time of the 1991 Budget. Nor did this slowdown initially stem inflation, which hit nearly 10 per cent by the end of 1990. The public finances were also hit by the recession: in 1990 the budget surplus turned into a deficit and there was to be an annual budget deficit until 1998.<sup>734</sup>

#### **Overall Budget Objectives**

Despite the change of Chancellor this was a typically Conservative Budget: "My central economic aim is to bring inflation down and keep it down. Beyond that, my objective is to encourage enterprise by creating a broadly based tax system that allows markets to do their job with the minimum of distortion and Government interference".<sup>735</sup> However, not all the tax remissions were exogenous – "my Budget today will include measures to help business through the recession in the short term and to encourage it to invest for the longer term".<sup>736</sup> On monetary policy "squeezing out inflation means high interest rates, frustrated hopes, bankruptcies and lost jobs"<sup>737</sup> and the E.R.M. was seen as the appropriate monetary straightjacket to support this. However, on fiscal policy there was a decision to allow the budget deficit to help stabilise the economy – and this was a very different tone to Howe's 1981 Budget: "Those cyclical swings in the budget balance can play a useful role in offsetting the swings in private sector borrowing, and in stabilising the economy".<sup>738</sup> The Chancellor planned for the recovery and consequently the Budget measures were to be of "broadly neutral effect in the coming year, but will produce a modest increase in revenue in 1992–93".<sup>739</sup> The overall strategy appears to be continued supply-side reform, some measures to support the

<sup>734</sup> ONS (2010), series ANNX "Public Sector Finances: Net Borrowing" divided by YBHA, nominal GDP.

<sup>735</sup> HC Deb 19 March 1991 vol 188 c163

<sup>736</sup> Ibid.

<sup>737</sup> HC Deb 19 March 1991 vol 188 c166

<sup>738</sup> 168

<sup>739</sup> HC Deb 19 March 1991 vol 188 c168

economy during the downturn and tax increases to reduce the deficit in later years: there was a mixture of exogenous and endogenous measures.

### Major Budget Tax Measures

The biggest tax change was a shift from local to central taxation. In 1990 the Government had introduced the unpopular Community Charge – the ‘Poll Tax’. On this the Chancellor argued “I have concluded that local taxes are being asked to bear too large a burden and that the level of the Community Charge is still too high... I propose, therefore, to make a substantial switch from local taxation to central taxation”.<sup>740</sup> The charge was cut from 6<sup>th</sup> April 1991. This change was not correlated with macroeconomic changes (although it may well have reflected recent popular unrest over the ‘Poll Tax’) so I classify it as *exogenous, ideological*.

The cut in the Community Charge made up 70 per cent of all the tax cuts in the 1991 Budget. This sum was to be recuperated by raising consumption taxes, notably V.A.T., from 1<sup>st</sup> April 1991. The Chancellor argued “The switch requires a substantial increase in central taxation. I have decided that this should be achieved by raising indirect taxes — that is to say, taxes on spending... [and] Since much consumer spending is zero-rated, it bears less heavily on poorer households than on the better-off, so raising VAT is not only an efficient but also a fair way to raise the necessary finance”.<sup>741</sup> The motive for this change, like the Community Charge cut, was ideological – so I categorise the V.A.T. rise accordingly.

On income tax: “I know that there is a widespread view in the House and in the country that more should be done to help families with children. I propose to use the resources released by not increasing the married couple's allowance for that purpose”.<sup>742</sup> Consequently, child benefit was raised using these funds and so I classify this change as *endogenous, spending-driven*.

The final major cut was in the Corporation Tax rates both from 1<sup>st</sup> April 1990 and 1991. The Chancellor claimed that he was doing this as “My main concern in this Budget is to encourage profitable firms to go on investing in Britain's future. The best way in which to do that is to increase still further the post-tax return on successful investment projects”.<sup>743</sup> I therefore classify this as *exogenous, long-run*.

Putting aside the switch from local to central taxation, the increases largely offset the remissions. In general the Budget's tone was not one of deficit reduction – noting that it made sense to allow deficits in bad times. The revenue raisers were designed to reduce the deficit in the future – especially as many of them only yielded their full revenue in later years. The only major revenue raiser was on car scales. In setting the car scales (a measure which each year Chancellors had argued was still not tough enough and which raised a sizable sum of money) the Chancellor turned to avoidance of National Insurance payments as well. Company cars and fuel were now to be liable for National Insurance from 6<sup>th</sup> April 1991 and “this will reduce an anomaly in the National Insurance contributions system, making it more neutral between

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<sup>740</sup> HC Deb 19 March 1991 vol 188 c180

<sup>741</sup> Ibid.

<sup>742</sup> HC Deb 19 March 1991 vol 188 c179

<sup>743</sup> HC Deb 19 March 1991 vol 188 c172

different kinds of payment, and will widen the National Insurance contributions base”.<sup>744</sup> Based on the overall tenor of the comments above, I assume these revenue raisers were designed to offset the remissions in later years and I categorise this as *exogenous, deficit consolidation*. There are some more examples in the minor changes appendix.

These changes account for over 80 per cent of the total increases and remissions.

## **1992: Budget 10<sup>th</sup> March 1992**

*Chancellor:* Norman Lamont; *Prime Minister:* John Major (Conservative)

### **Context**

Real GDP fell in the first three quarters of 1991 and remained almost flat in the two quarters leading up to the 1992 Budget. Unemployment was nearly 600,000 higher than in the previous March. The 12-month inflation rate had, however, fallen to around 4 per cent by March 1992, providing some positive news albeit on the back of a recession. As expected, the budget deficit had taken a hit now reaching 3 per cent of GDP in 1991 – it was to hit nearly 8 per cent of GDP by 1993. Interest rates had been falling over 1991; however in December the German Bundesbank – a key force in the E.R.M. – raised rates to their highest level since 1931.<sup>745</sup> The diverging objectives between E.R.M. member states, particularly of post-unification Germany, put significant strain on the E.R.M. throughout 1992.

### **Overall Budget Objectives**

The Chancellor rejected the idea of a demand stimulus to deal with unemployment: “There are those who would put this at risk by seeking to pump up demand, but I am not prepared to take steps which would call into question the Government’s determination to match or better the inflation performance of our Community partners” indeed “it is not remotely feasible for Governments to try to target the level of demand month by month or quarter by quarter”.<sup>746</sup> The challenge, Lamont argued, was to “to continue the supply-side reforms of the 1980s. Low tax and light government have produced an economic environment which spurs competition and rewards enterprise. Our job now is to build on them to help people and businesses make the most of recovery”.<sup>747</sup> On fiscal policy, the budget deficit was defended “In a recession borrowing will tend to rise. But there is nothing wrong with that, providing that the underlying position is sound and the budget moves back towards balance as the economy recovers”.<sup>748</sup> So there was to be no large fiscal correction to deal with the rising deficit. The Budget in fact cut taxes, largely for supply-side reform and to provide supply-side help to businesses in the short-term. In total the tax changes provided a significant remission, though many of these remained exogenous changes.

<sup>744</sup> HC Deb 19 March 1991 vol 188 c176

<sup>745</sup> Woodward (2004), page 274.

<sup>746</sup> HC Deb 10 March 1992 vol 205 c748

<sup>747</sup> Ibid.

<sup>748</sup> HC Deb 10 March 1992 vol 205 c749

### Major Budget Tax Measures

The most significant remissions were on personal income tax. Income tax was cut by 5p to 20p in the pound from 6th April 1992 as “It is neither necessary nor desirable that anyone earning more than their personal allowances should start paying income tax at a rate of 25 per cent...I believe that we can and should reduce that burden... That will improve their work incentives and make it more worthwhile for those not currently in work to take lower paid jobs”.<sup>749</sup> In keeping with previous years, I classify this as *exogenous, long-run*.

There were also some more minor offsetting income tax increases. Income taxes were increased against indexation by not uprating the basic rate limit and not changing the married couples’ allowance for the over 65s, the additional personal allowance or the widows’ bereavement allowance. No justification is given for keeping these fixed but it saved a sizable amount to revenue. This partly offset the income tax remissions and I categorise this as part of that set of changes – *exogenous, long-run*.

The car tax was halved from 11th March 1992. The Chancellor motivated this change by explaining: “The motor industry is and will remain at the very heart of British manufacturing. Facing a sharp fall in domestic demand over the last year, the industry responded in exactly the right way, by switching production to exports... None the less, I recognise that the last year has been a difficult one, and the measures I am proposing today will help the industry...[The car] tax distorts consumer spending, and car manufacturers have long complained that our taxes on new cars are higher than those of other main European producers. This Government have always sought to reduce distortions in the tax system”.<sup>750</sup> I therefore classify this as *endogenous, supply stimulus*.

The final major remission was on business rates. The Chancellor explained “I am well aware that many of the businesses which face large increases [in business rates] next year have also been hard hit by the recession”.<sup>751</sup> As a consequence the Government announced relief which meant no real increases in rates for the year 1992-3. I classify this as *endogenous, supply stimulus*.

A loophole in the taxation of rent was closed from 10th March 1992 “to prevent the business tax rules from being manipulated to secure an unjustifiable tax deferment when rent is paid between connected persons. The manipulation which has already occurred has involved tax of some hundreds of millions of pounds. This loophole will be closed immediately”.<sup>752</sup> I classify this as *exogenous, ideological*.

The other major tax rises were on excise duties. Fuel duty on leaded petrol was raised by more than inflation from 10th March 1992 so as to “continue our long-standing and successful policy of encouraging motorists to move away from leaded petrol”.<sup>753</sup> Tobacco Duty was increased from the same date and Vehicle Excise Duty from 11th March 1982. On tobacco the Chancellor noted “Benjamin Franklin once remarked that nothing was certain

<sup>749</sup> HC Deb 10 March 1992 vol 205 c760

<sup>750</sup> HC Deb 10 March 1992 vol 205 cc756-7

<sup>751</sup> HC Deb 10 March 1992 vol 205 c751

<sup>752</sup> HC Deb 10 March 1992 vol 205 c755

<sup>753</sup> HC Deb 10 March 1992 vol 205 c757

except death and taxes, but for some people the latter may help to delay the former”.<sup>754</sup> These duty changes help offset the remissions. The total increases in taxation only partly offset the major income tax remissions. I therefore categorise these duty changes as offsetting the income tax cuts: *exogenous, long-run*. Based on their face-value motivations they would be exogenous anyway.

These changes account for over 90 per cent of the increases and of the remissions.

### **1993 (A): Budget 16<sup>th</sup> March 1993**

*Chancellor:* Norman Lamont; *Prime Minister:* John Major (Conservative)

#### **Context**

Output growth was just 0.15 per cent in 1992 and unemployment rose by around 300,000 over the previous 12 months. Unemployment did peak in January 1993 but remained near 3 million for much of 1993. The budget deficit was nearly 6.5 per cent of GDP in 1992 and was to hit nearly 8 per cent in 1993. Retail price inflation, however, fell to 3.7 per cent in 1992 and by the 1993 Budget the retail price index had only increased by about 1 per cent over the previous 12 months. 1992 was one of crisis for the Government. Despite winning the 1992 General Election, irreparable damage was to be done to the Government’s economic reputation later that year. Over the summer an exchange rate crisis was developing and on 9<sup>th</sup> September the Government had to borrow £7.2 billion to maintain sterling’s position within the E.R.M. On the 16<sup>th</sup> – Black Wednesday – Britain was forced to withdraw entirely.<sup>755</sup>

#### **Overall Budget Objectives and Motivation**

Mr Lamont opened his speech with two main objectives “first, to support the recovery in the year ahead; and secondly, to set out a clear medium-term strategy for bringing the borrowing requirement back towards balance”.<sup>756</sup> Inflation was a key concern and to that end inflation targeting was adopted as the new monetary regime. In terms of fiscal policy the Chancellor issued a warning about the deficit: “Unless action is taken, large deficits will continue over the medium term”.<sup>757</sup> The cause of this increased deficit “is largely due to the recession”.<sup>758</sup> Lamont argued that the greatest threat to sustained recovery was not a lack of demand but excessive Government borrowing.<sup>759</sup> However, tax reform remained firmly on the agenda: “The proposals I shall be announcing today are part of a continuing programme of tax reform — a programme which has strengthened work incentives and improved the efficiency of the economy”.<sup>760</sup> And, “In deciding where to look for additional revenue, I have been guided by a

<sup>754</sup> Ibid.

<sup>755</sup> In his Budget speech Mr Lamont defended the E.R.M. episode by saying that it helped get inflation down and then on exiting – having dealt with inflation – “we were right to take the opportunity that that gave us to relax policy and get interest rates down”. (c171).

<sup>756</sup> HC Deb 16 March 1993 vol 221 c169

<sup>757</sup> HC Deb 16 March 1993 vol 221 c174

<sup>758</sup> Ibid.

<sup>759</sup> Ibid.

<sup>760</sup> HC Deb 16 March 1993 vol 221 c175

number of principles: first, that, where possible, money should be raised in a way that will not damage the working of the economy; secondly, that in general this means that reducing the value of allowances and broadening the tax base is preferable to increasing marginal tax rates; thirdly, that taxation should support social, health and environmental objectives”.<sup>761</sup> Overall taxes were raised – increasing revenue significantly in later years. It is clear from the above comments that the slowdown had caused the worsening public finances and action to rectify this is then correlated with the slowdown itself. Many of the revenue raisers will therefore be classified as *endogenous, deficit reduction*.

### Major Budget Tax Measures

I first discuss measures dealing with the deficit and to fund support for the economy. Various allowances were not indexed. The Chancellor argued “With inflation down to levels not seen for a generation, I propose for the year ahead to freeze the personal allowances, the married couples’ and related allowances, the basic rate limit and the income limit for age-related allowances. The threshold for inheritance tax, the capital gains tax exempt amount and the earnings limits for tax relief on pension contributions will also remain unchanged”.<sup>762</sup> Being enacted immediately I classify these as *endogenous, deficit reduction*.

From 6<sup>th</sup> April 1994 the married couples’ allowance was to be restricted as was mortgage interest relief. The latter was restricted as “mortgage interest relief is expected to cost the Exchequer £4.3 billion next year alone”<sup>763</sup> but deferred as “the housing market remains fragile”.<sup>764</sup> Although a social objective was also given for the restriction of married couples’ allowance (“There is no good reason why an allowance intended to recognise the responsibilities of marriage should give least to those on low incomes”<sup>765</sup>), this measure is clearly signposted in the revenue raising section of the speech. I therefore classify these changes as *endogenous, deficit reduction*.

National Insurance contributions were to be increased from 6<sup>th</sup> April 1994. Benefits had been increased in the autumn and a Treasury grant was issued to finance this. However, “my right hon. Friend the Secretary of State for Social Security and I propose to place the finances of the National Insurance fund on a firmer footing”.<sup>766</sup> This is a future tax rise to offset previous spending decisions and so I classify this as *exogenous, deficit consolidation*.

Reforms to the taxation of dividends were to provide a boost to cash flow in the short term and, by restricting tax credits on dividends “will raise £900 million extra revenue for the Exchequer from 1995–96 onwards”.<sup>767</sup> This boosted firms’ cash flow in the short-run but liabilities changed from 6<sup>th</sup> April 1993. I therefore still classify this as *endogenous, deficit reduction*, even if the Exchequer did not feel the benefit until later.

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<sup>761</sup> Ibid.

<sup>762</sup> HC Deb 16 March 1993 vol 221 c176

<sup>763</sup> HC Deb 16 March 1993 vol 221 c181

<sup>764</sup> Ibid.

<sup>765</sup> HC Deb 16 March 1993 vol 221 c182

<sup>766</sup> HC Deb 16 March 1993 vol 221 c179

<sup>767</sup> HC Deb 16 March 1993 vol 221 c187



On green taxes, the Chancellor announced “Individual countries should... take their own measures to give people the right signals to encourage the efficient use of energy. Today, I shall propose measures designed to do just that, and to raise revenue at the same time”.<sup>768</sup> VAT was to be charged on domestic fuel and power from 1st April 1994. For the reasons discussed previously, this measure is classified *endogenous, deficit reduction*.

The major change on Excise Duty was the announcement that fuel duties would increase in real terms in future Budgets. The Chancellor said “The largest contribution to the growth in United Kingdom carbon dioxide emissions in the coming years is expected to come from the transport sector. I therefore propose to make clear today the Government’s long-term intention on road fuel duty”.<sup>769</sup> Assigning a ‘full year’ gain to this proposal is very difficult as the tax increases each year and I treat each year as a new implementation. Being intended to reduce the deficit in later years I classify this as *exogenous, deficit consolidation*.

There were also some remissions. Below I consider their specific motivation. However, all these remissions required offsetting in order to tighten the fiscal stance overall. I therefore assign an alternative classification of *endogenous, deficit reduction* for all the exogenous remissions. On personal income tax the lower rate band was increased from 6<sup>th</sup> April 1993. Lamont argued “the restrictions [in allowances] I have introduced will also allow me to make further progress in getting income tax rates down... I will have delivered on our promise of a 20p rate in the first Budget of the Parliament, and I will have done so by a sensible and fair reform of the tax system”.<sup>770</sup> In addition, from 6<sup>th</sup> April 1994 the band was to be widened further and “year by year, we will make our progress towards our objective: a 20p basic rate of tax for everyone”.<sup>771</sup> Over the previous 14 years the Government made lower income taxes a priority for the long-term economic performance. I take the above statements as a restatement of this goal and classify the changes as *exogenous, long-run*.

The Stamp Duty threshold was doubled from 16<sup>th</sup> March 1993 as “I am fully aware that, despite some encouraging signs of increasing activity, the housing market remains fragile.... With mortgage interest rates at their lowest level for decades, this reduction in Stamp Duty should provide a further stimulus to the housing market”.<sup>772</sup> I therefore classify this as *endogenous, demand management*.

The final remission was made in the Autumn Statement 1992. To stimulate the car industry car tax was abolished from 12<sup>th</sup> November 1992: “The motor industry lies at the heart of British manufacturing. In recent years it has seen a renaissance, with large increases in inward investment. However, the recession has brought a more difficult climate. I have considered what might best be done to help... I have decided nevertheless to continue with the tax reform begun in my last Budget and to abolish car tax altogether”.<sup>773</sup> I therefore categorise this as *endogenous, demand management* being to stimulate car purchases.

These changes accounted for over 80 of the increases and 85 per cent of the cuts.

<sup>768</sup> HC Deb 16 March 1993 vol 221 c182

<sup>769</sup> HC Deb 16 March 1993 vol 221 c182-3

<sup>770</sup> HC Deb 16 March 1993 vol 221 c196

<sup>771</sup> Ibid.

<sup>772</sup> HC Deb 16 March 1993 vol 221 c182

<sup>773</sup> HC Deb 12 November 1992 vol 213 c1000

## **1993 (B): Budget 16<sup>th</sup> March 1993**

*Chancellor: Kenneth Clarke; Prime Minister: John Major (Conservative)*

### **Context**

The budget deficit in 1993 hit nearly 8 per cent of GDP but output growth did begin to pick up through 1993 – overall it was just over 2.2 per cent. Unemployment had also fallen by about 130,000 since March. By November the 12-month inflation rate was only about 2 per cent and the current account was moving back from its huge deficit, although still about -2 per cent. The second Budget of 1993 was planned: the Government had decided the roll together the Autumn Statements and the March Budget into a single event. It was to stay this way until the Conservatives left office in 1997. Kenneth Clarke replaced Norman Lamont in June, heavily criticising Prime Minister Major in his resignation speech.<sup>774</sup>

### **Overall Budget Objectives**

The new Chancellor focused on the budget deficit: “The overriding need is to place the public finances on a sound footing. That is the immediate task of the Government, and it is the main theme of my Budget today”.<sup>775</sup> Clarke praised Lamont’s deficit reduction measures from March but argued “In my judgment, we now need to go further... the Budget must sort out the problem of public borrowing once and for all”.<sup>776</sup> There was a clear belief that sound public finances were needed to ensure long-term prosperity: the Chancellor explained that his first priority on becoming Chancellor was to sustain the economic recovery “and to create the right climate for growth and for jobs. I have been determined to take no risks with inflation”.<sup>777</sup> But, he noted, to achieve these objectives the task of this Budget must be to deal with the public finances. In introducing his tax measures the Chancellor explained “My task is simple. I need to raise revenue, but to do so in a way which does least damage to the economy”.<sup>778</sup> The ultimate cause of the worsening deficit was, however, contemporaneous – too little growth and insufficient fiscal tightening. Many of the measures below are therefore categorised as *endogenous, deficit reduction*.

### **Budget Tax Measures**

Following the previous statements, the Chancellor ran through all the revenue raising measures. On personal income tax, allowances were frozen and the basic rate limit was unchanged on 6<sup>th</sup> April 1994. There was also a reduction in the married couples’ allowance: “given the need to raise extra revenue, I propose to reduce the rate of relief further, to 15 per cent from April 1995” and “I propose to take a similar approach to mortgage interest relief”.<sup>779</sup> The freezing of allowances and thresholds was immediate so I classify these as *endogenous*,

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<sup>774</sup> Woodward (2004), page 275.

<sup>775</sup> HC Deb 30 November 1993 vol 233 c923

<sup>776</sup> Ibid.

<sup>777</sup> HC Deb 30 November 1993 vol 233 c921

<sup>778</sup> HC Deb 30 November 1993 vol 233 c933

<sup>779</sup> HC Deb 30 November 1993 vol 233 c935

*deficit reduction*. The changes to the married couples' allowance and mortgage interest relief were for the year starting 6<sup>th</sup> April 1995. I classify these as *endogenous, deficit reduction*.

On indirect consumption taxes the Government's policy "has always been to shift the burden of taxation, over time, from income to spending... In line with this policy, even in a very difficult year, I have been able to avoid any increase in income tax rates. But to do this I have had to raise further revenue from indirect taxation".<sup>780</sup> Following this statement Vehicle Excise Duty on cars increased from 1<sup>st</sup> December 1993; duty on wines and ciders from 1<sup>st</sup> January 1994; tobacco duties from 30<sup>th</sup> November 1993; and fuel duties from 30<sup>th</sup> November 1993; I categorise all these as *endogenous, deficit reduction*.

The rise in fuel duty included the confirmation of the 3 per cent real escalator announced in March 1993, classified as *exogenous, deficit consolidation*. The commitment was then increased to 5 per cent. Clarke noted that in March this was for environmental reasons and he strengthened this commitment "This will complete Britain's strategy for meeting our Rio commitment".<sup>781</sup> A similar escalator was also introduced for tobacco ("I believe that the approach we are adopting in Britain is the most effective way to reduce smoking"<sup>782</sup>), increasing duties by 3 per cent real each year in the future. The previous year I had taken the statements at face value. However, given the strength of the statements about deficit reduction, I will continue to categorise these as *exogenous, deficit consolidation* when they are confirmed in the future.

The tax base was also extended with an insurance premium tax ("I have decided to tackle one sector of this industry which is exempt from VAT"<sup>783</sup>) and an air passenger duty ("air travel is under-taxed compared to other sectors of the economy"<sup>784</sup>) from 1<sup>st</sup> October 1994. Both measures were listed with the revenue raisers and I classify these as *endogenous, deficit reduction*.

There were two sizable remissions. First, the Government decided to stop reimbursements to firms for statutory sick pay from April 1995. But "to ensure that business as a whole does not lose"<sup>785</sup> employers National Insurance contributions were reduced from 6<sup>th</sup> April 1995. This is *endogenous, spending-driven*. Second, there were changes to the foreign income dividend scheme from 1<sup>st</sup> July 1994 "to help reinforce Britain's place as Europe's most attractive location for international business".<sup>786</sup> I classify this as *exogenous, long-run*. However, as this remission required offsetting I provide an alternative classification of *endogenous, deficit reduction*.

These changes account for over 80 per cent of the increases and over 75 per cent of the cuts.

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<sup>780</sup> HC Deb 30 November 1993 vol 233 c938

<sup>781</sup> HC Deb 30 November 1993 vol 233 c939

<sup>782</sup> Ibid.

<sup>783</sup> HC Deb 30 November 1993 vol 233 c934

<sup>784</sup> Ibid.

<sup>785</sup> HC Deb 30 November 1993 vol 233 c928

<sup>786</sup> HC Deb 30 November 1993 vol 233 c935

## 1994: Budget 29<sup>th</sup> November 1994

*Chancellor: Kenneth Clarke; Prime Minister: John Major (Conservative)*

### Context

The first three quarters of 1994 saw strong output growth between 1 and 1.5 per cent quarter on quarter. Unemployment had fallen by over 200,000 since the previous November and the 12-month inflation rate was around 2 per cent, having edged up slightly. The public sector deficit had peaked in 1993 and was to fall over the next few years. The outlook facing the Chancellor in November 1994 was therefore one of the most optimistic since the late 1980s.

### Overall Budget Objectives

The favourable conditions were reflected in the tone of the speech. The successes from hard policy choices were emphasised but there was to be no let-up: “We must not now throw away the gains that have been made by turning to some short-term dash for yet faster growth. Growth will be sustained only if we keep the lid on inflation, get public borrowing down further, and push ahead with measures which strengthen the industrial economy”.<sup>787</sup> The previous year’s measures were credited with the improvement in the public finances “the public spending cuts and the tax increases that I announced last year remain, of course, quite essential to the strategy of achieving economic recovery”.<sup>788</sup> Overall the Budget did not seek to raise large amounts of tax: “Happily, in this year’s Budget, I have no need to raise revenue overall in order to secure the public finances”.<sup>789</sup> But the task was also to improve the longer term performance of the economy. The three priorities were to keep the economy on track; to use the economy wisely to create more jobs and prevent a deprived underclass; and to “strengthen the economy in the longer term”.<sup>790</sup> The Chancellor did, at various points note that unemployment was far too high and proposed measures to help. Excluding the confirmation of the duty escalators – announced the previous year, the 1994 Budget provided for a modest aggregate remission of taxation. The tax changes were therefore largely *exogenous, long-run or ideological*.

### Major Budget Tax Measures

In the field of personal income taxes, the personal allowance, the threshold for the higher rate tax and the income limit for the age-related allowance were indexed. But the Chancellor argued “I have been able to provide some additional help in two important areas. First, I want to do a little bit more for pensioners”<sup>791</sup> and the age related personal allowances increased by more than indexation. Secondly, the 20p lower income tax band was widened “One in five of all taxpayers will now only pay tax at the lowest rate of 20p”.<sup>792</sup> The former is a social

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<sup>787</sup> HC Deb 29 November 1994 vol 250 c1080

<sup>788</sup> HC Deb 29 November 1994 vol 250 c1082

<sup>789</sup> HC Deb 29 November 1994 vol 250 c1024

<sup>790</sup> HC Deb 29 November 1994 vol 250 c1079

<sup>791</sup> HC Deb 29 November 1994 vol 250 c1102

<sup>792</sup> HC Deb 29 November 1994 vol 250 c1102

objective and I classify this as *exogenous, ideological*. The latter follows many years of income tax reform to get marginal rates down to 20 per cent. I continue with previous categorisations of this goal as *exogenous, long-run*.

There was a tax remission on National Insurance contributions specifically “to encourage employers to look more favourably on people who have been out of work for some time”.<sup>793</sup> There was to be an employer N.I.C. rebate for the long-term unemployed from 6<sup>th</sup> April 1996. In addition, from 6<sup>th</sup> April 1995, there was a reduction in the lower rates of employer N.I.C.s as “it must make sense to keep on cutting the burden on employers who create jobs and in particular on those employers who provide jobs for less skilled people”.<sup>794</sup> Given the high level of unemployment at the time, and that these measures were designed to tackle it, I classify these as *endogenous, supply stimulus*.

Some income tax measures sought to raise savings and the supply of capital to businesses. Firstly, Venture Capital Trusts were introduced from 6<sup>th</sup> April 1995 as “one important way in which we can help small businesses is by encouraging the venture capital industry... I believe that venture capital trusts will make a successful contribution to filling a gap in our enterprise economy by encouraging more people to become venture capitalists”.<sup>795</sup> Secondly, TESSAs were extended from 6<sup>th</sup> April 1995 as “higher savings also have an important role to play in helping sustain growth, by providing additional resources for investment”.<sup>796</sup> In addition – and justified in the same way – Personal Equity Plans (PEPs) were extended from the same date. I classify these measures as *exogenous, long-run*.

However, there were also some sizable tax increases. Firstly, there were several anti-avoidance and loophole closing measures for V.A.T. relating to land and property, the restriction of VAT recovery on share issues and prevention of abuse of de minimis limits from 30<sup>th</sup> November and 1<sup>st</sup> December 1994. The Chancellor announced “I am delighted that there now appears to be a wide political consensus in the House on the need to close loopholes and to prevent the artificial avoidance of taxation”.<sup>797</sup> Being to contemporaneously offset the remissions I classify them in the same way: *exogenous, long-run*.

Secondly, the fuel duty increase of 5 per cent in real terms, announced in the previous year, was confirmed as “It is an essential part of the plans that I set out last year to deliver healthy public finances as quickly as possible”.<sup>798</sup> This justifies the previous categorisation as *exogenous, deficit consolidation*.

Thirdly, the differential between diesel and unleaded petrol “is becoming difficult to justify in economic, health or environmental terms”<sup>799</sup> and therefore they were taxed at the same rate from 29<sup>th</sup> November 1994. I focus more on the first comments “economic” rather than the latter given the overall budget objectives and categorise this as offsetting the other *exogenous, long-run* remissions.

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<sup>793</sup> HC Deb 29 November 1994 vol 250 c1090

<sup>794</sup> HC Deb 29 November 1994 vol 250 c1091

<sup>795</sup> HC Deb 29 November 1994 vol 250 c1099

<sup>796</sup> HC Deb 29 November 1994 vol 250 c1101

<sup>797</sup> HC Deb 29 November 1994 vol 250 c1094

<sup>798</sup> HC Deb 29 November 1994 vol 250 c1095

<sup>799</sup> Ibid.

Finally, the tobacco escalator increase of 3 per cent in real terms was confirmed. In the previous year this was categorised for future years as *exogenous, deficit consolidation*.

These major changes accounted for over 70 per cent of the cuts and of the increases.

## **1995: Budget 28<sup>th</sup> November 1995**

*Chancellor: Kenneth Clarke; Prime Minister: John Major (Conservative)*

### **Context**

By November 1995 unemployment had fallen by nearly 700,000 from its peak, although it remained above 2 million. Real output growth was strong in 1994 at 4.3 per cent, slowing in 1995 to just over 3 per cent. The 12-month inflation rate was fluctuating around 3 per cent during 1995 and the current account deficit remained around 1 per cent of GDP in 1994 and 1995. The budget deficit was now steady falling and would continue to do so year on year. In this speech the Chancellor noted “Few Chancellors have delivered their Budget against a background of such strong economic fundamentals”.<sup>800</sup>

### **Overall Budget Objectives**

The Chancellor argued that his Budget “keeps Britain on course to be the enterprise centre of Europe”, which involved “a Britain in which everyone can keep more of what they earn or save to spend as they choose, not as the state chooses”.<sup>801</sup> The goals of low inflation, control of public spending and reductions in borrowing were reiterated, “And we believe in the policies of low taxation, which all countries must follow if they want to be world-class economic powers”.<sup>802</sup> In short, this Budget continued the work of previous ones: budgetary control and supply-side reform. The path for borrowing was now acceptable and no major action was to be taken on the PSBR; spending and tax proposals were to be “broadly neutral” on the path of the PSBR.<sup>803</sup> Public expenditure was to be pushed below 40 per cent of GDP and “having carefully reviewed the latest projections for public borrowing in the light of those decisions, I have concluded that we can now return to the task of starting to cut taxes again.”<sup>804</sup> Long-term economic performance again motivated the tax cutting agenda with further shifts from direct to indirect taxes being “the best way to encourage enterprise and investment and it is the best way to improve the long-term performance of the British economy”.<sup>805</sup> The Budget provided some sizable remissions, the majority therefore being *exogenous, long-run* or *ideological*.

### **Major Budget Tax Measures**

The speech was broadly structured into indirect tax increases and direct tax cuts. As mentioned above, the Chancellor argued this was the way to improve long-term performance. The first of

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<sup>800</sup> HC Deb 28 November 1995 vol 267 c1055

<sup>801</sup> Ibid.

<sup>802</sup> Ibid.

<sup>803</sup> HC Deb 28 November 1995 vol 267 c1057

<sup>804</sup> HC Deb 28 November 1995 vol 267 c1063

<sup>805</sup> Ibid.

these packages introduced a Landfill Tax from 1<sup>st</sup> October 1996 “in order to enable me to reduce the tax on jobs [N.I.C.s]”.<sup>806</sup> There was then to be a cut in the main rate of employers’ NICs from 6<sup>th</sup> April 1997. Given the comments about direct versus indirect taxation above, I classify this package as *exogenous, long-run*.

The two duty escalators on fuel and tobacco were confirmed for this year, implemented on 28<sup>th</sup> November 1995. I stick with their original intention and classify these as *exogenous, deficit consolidation*.

In turning to direct taxation the Chancellor argued “In the post-war era, when Britain went into comparative economic decline, Britain had high rates of taxation on income. Those rates damaged the economy and stifled prosperity”.<sup>807</sup> The personal allowance was increased by more than indexation providing “an incentive to work to those at the bottom of the income scale”<sup>808</sup>; the higher rate threshold was raised by more than indexation to prevent more people paying higher rates of tax as their income grows; the 20 per cent band threshold was raised by more than indexation as “we have a clear and achievable goal for income tax — moving to a basic rate of 20 per cent as soon as we can”<sup>809</sup> and to help this the rate of tax on all savings income for basic rate payers was reduced to 20 per cent and the basic rate was reduced to 24 per cent. Furthermore, the age related allowances were raised by more than indexation and the married couples’ allowance and the limit for age related allowances were indexed. Based on the above statements, this package of income tax cuts, effective from 6<sup>th</sup> April 1996, is classified as *exogenous, long-run*.

The Inheritance Tax threshold was also increased above indexation from 6<sup>th</sup> April 1996 as “Many people who do not consider themselves rich work hard and save for their families throughout their whole lives. They pay their taxes when they work. They want to pass on their family capital without having it taxed again when they die. Many people want to pass on an inheritance to their children and their grandchildren to give them a better start in life than they had”.<sup>810</sup> I therefore classify this as *exogenous, ideological*.

The final major measure was a cut in the rate of N.I.C.s paid by the self-employed together with the removal of relief from Class 4 N.I.C.s. The FSBR explains “these changes will simplify self- assessment tax returns for the self-employed”.<sup>811</sup> I take this at face value, classifying the change as *exogenous, long-run*.

These changes accounted for over 90 per cent of the increases and over 80 per cent of the remissions.

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<sup>806</sup> Ibid.

<sup>807</sup> HC Deb 28 November 1995 vol 267 c1071

<sup>808</sup> Ibid.

<sup>809</sup> Ibid.

<sup>810</sup> HC Deb 28 November 1995 vol 267 c1070

<sup>811</sup> FSBR November 1995, page 98.

## 1996: Budget 26<sup>th</sup> November 1996

*Chancellor: Kenneth Clarke; Prime Minister: John Major (Conservative)*

### Context

The trends of the previous two years continued. Output growth was around 3 per cent in 1995 and 1996. Unemployment fell another 300,000 from the time of the previous Budget and the 12-month RPI inflation rate slowed in the middle of 1996 (but was picking up by November). There were further improvements in the budget deficit, falling to below 4 per cent of GDP in 1996. For another year the Chancellor's prospects were good.

### Overall Budget Objectives

Facing good economic performance the Chancellor's tone was buoyant: "The British economy is today prosperous and successful".<sup>812</sup> Indeed, more of the same was needed: vigilance on inflation, a determination to reduce government borrowing and more of "this Government's commitment to raise the wealth-creating potential of the British economy, by improving incentives, reducing the role of the state and creating a climate for enterprise".<sup>813</sup> Specifically on borrowing, however, progress "has not been as fast as I expected. The Budget therefore targets public sector borrowing again".<sup>814</sup> This reflected some shortfalls in tax revenue, particularly on V.A.T. The exploitation of loopholes was singled out and "I will propose a number of measures to stem tax leakage".<sup>815</sup> The Chancellor highlighted the need to secure the tax yield. In this Budget, "I am plugging some loopholes to raise revenue, I am ending some tax reliefs that have done their job to raise revenue and I am adjusting some indirect tax rates".<sup>816</sup> The overall motivation is therefore similar to previous years: tax rises to make progress on the deficit and supply-side reform. However, there is one comment which requires more discussion: "the reason why I am tightening fiscal policy now is to reduce the risk of having to tighten monetary policy excessively as I set policy to hit my inflation target".<sup>817</sup> This may seem like the closest resemblance to demand management for nearly two decades, but it appears to be linked more to the deficit than to too much demand (especially as unemployment was over 2 million). On balance I will classify the revenue raisers as *deficit reduction* rather than demand management.

### Major Budget Tax Measures

The Chancellor argued that "special tax reliefs can be a powerful tool"<sup>818</sup> but "we owe it to the ordinary taxpayer to keep each and every special tax relief under constant review to determine whether it is still justified, or whether it has now served its useful purpose".<sup>819</sup> Three sizable

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<sup>812</sup> HC Deb 26 November 1996 vol 286 c153

<sup>813</sup> HC Deb 26 November 1996 vol 286 c154

<sup>814</sup> HC Deb 26 November 1996 vol 286 c156

<sup>815</sup> HC Deb 26 November 1996 vol 286 c157

<sup>816</sup> HC Deb 26 November 1996 vol 286 c164

<sup>817</sup> Ibid.

<sup>818</sup> HC Deb 26 November 1996 vol 286 c164

<sup>819</sup> HC Deb 26 November 1996 vol 286 c165



reliefs were reduced. Firstly, relief for profit-related pay was phased out starting from 1<sup>st</sup> January 1998 as “I can no longer justify the ever increasing cost”.<sup>820</sup> Secondly, capital allowances for long-life assets were reduced from 26<sup>th</sup> November 1996. Thirdly, the 100 per cent Corporation Tax deduction for intangible costs of drilling most production oil wells was withdrawn from 26<sup>th</sup> November 1996. Following the above discussion, I classify these as *endogenous, deficit reduction*.

For other revenue raisers the Chancellor turned to indirect taxes. The Insurance Premium Tax was increased from 1<sup>st</sup> April 1997 as “Insurance remains undertaxed for consumers compared with other services in this country”.<sup>821</sup> As “Air travel has also been undertaxed”<sup>822</sup> the Air Passenger Duty was also increased from 1<sup>st</sup> November 1997. Again, in light of the above comments, these are classified as *endogenous, deficit reduction*.

A large portion of the increased revenue also came from confirming the fuel and tobacco escalator increases. However this year they were motivated differently, originally being for deficit reduction. The 5 per cent real fuel duty rise “will encourage fuel efficiency and help to control harmful pollution” and on the 3 per cent tobacco duty rise “I believe and accept that that is a fair and effective way to hammer home the message that smoking can seriously damage one's health”. However, given the overall objectives, I continue with the original *exogenous, deficit consolidation* classification.

There were some sizable income tax remissions in line with the Government's ongoing supply-side reform philosophy: “low direct taxes are the most effective way to encourage enterprise and hard work”.<sup>823</sup> The personal allowance went up more than indexation, as did the age related allowances and the lower rate band. The basic rate limit, the married couples' allowance and the income limit for age related allowances were all indexed as statutory indexation required. Finally, the basic rate of income tax was cut to 23 per cent. I classify all these as *exogenous, long-run*. However, these remissions had to be offset to raise taxes overall and I therefore provide an alternative classification of *endogenous, deficit reduction*.

These changes account for nearly 80 per cent of increases and over 80 per cent of the cuts.

## **1997: Budget 2<sup>nd</sup> July 1997 and Pre-Budget Report 25<sup>th</sup> November 1997**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

The Labour Party came to power in May 1997 after 18 years in opposition, 18 years where the Conservatives had redefined the use of taxation policy: taxes should be cut to stimulate long-run growth and ensure sound public finances. During the 1990s the Labour Party came to

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<sup>820</sup> Ibid.

<sup>821</sup> HC Deb 26 November 1996 vol 286 c166

<sup>822</sup> Ibid.

<sup>823</sup> HC Deb 26 November 1996 vol 286 c170

embrace much of this philosophy. Furthermore, they accepted monetary policy as the key stabilisation instrument — making the Bank of England and monetary policy independent in May 1997. Labour’s inheritance was considerably better than the economy they had last managed in the late 1970s. The economy had been growing for 5 years – and GDP growth was just under 3 per cent in 1996. Retail price inflation was around 3 per cent. The claimant count was at its lowest since October 1980 at around 1.5 million. The current account was near balance in 1997 and the annual budget deficit appeared to be moving in the same direction.

### **Overall Budget Objectives**

The 1997 Budget — entitled “Equipping Britain for Our Long-Term Future” – was billed to improve long- term economic performance, employment and opportunity for all. The first tenet of policy was ensuring stability. Monetary policy was the principal short-term reactive instrument and much was made of stable, long-term fiscal policy. The ‘Golden Rule’ was introduced to ensure that, over the cycle, Government only borrowed to invest and that public finances were sustainable over the long-term. There was also a rule for the overall debt to GDP ratio and “To implement those rules, I am announcing today a five-year deficit reduction plan”.<sup>824</sup> Much was made of this new long-term fiscal stance and the goal of deficit reduction. However, the Chancellor also argued for a tight fiscal stance as “our sustainable rate of growth is too low for growth to continue at its current pace without the risk of more inflation”.<sup>825</sup> In fact the FSBR describes the environment as a “cyclical conjuncture”<sup>826</sup> and emphasises that “Fiscal consolidation at a time of strengthening demand should help to encourage a more balanced recovery and help to offset some of the pressures on monetary policy”.<sup>827</sup> Many Budget decisions were tax increases and whether or not these were endogenous is complicated by the emphasis on long-term growth: “raising the long-term growth rate of our economy is our major challenge”. Consequently, the main priorities were “to invest for the long-term, particularly in skills, to modernise the welfare state and to maximise opportunity for all — the modern route to economic success”.<sup>828</sup> Indeed, many of the Budget measures were introduced as long-term reforms to boost performance, encourage stability or for social objectives. But, on balance, these measures appear to be *endogenous, deficit reduction* — designed to tighten policy when the economy was above trend.

### **Objectives and Motivations given in the Pre-Budget Report**

The November 1997 PBR did not contain any major tax announcements (although some in Budget 1998 were trailed). There were, however, some spending decisions, particularly supporting the Government’s social objectives. The PBR was generally a restatement of the Government’s policies. The Chancellor argued that the 1998 Budget would have to tackle three challenges: increasing the UK’s productivity, the 3.5 million workless households and

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<sup>824</sup> HC Deb 02 July 1997 vol 297 c304

<sup>825</sup> HC Deb 02 July 1997 vol 297 cc304-5

<sup>826</sup> FSBR July 1997, page 12

<sup>827</sup> FSBR July 1997, page 13.

<sup>828</sup> HC Deb 02 July 1997 vol 297 c305

economic stability”.<sup>829</sup> There were also clearer statements that the tax rises in July 1997 were to offset current economic risks, not just to sow the seeds for future long-term growth. The Chancellor claimed that the economy had been overheating: “When we came to power, the economy was already facing yet again the very pressures that have produced the boom-bust instability of the past”.<sup>830</sup> He argued that “hard decisions have had to be made on both interest rates and deficit reduction and I am now more optimistic that we are on course to put the economy on track for stable and sustainable growth”.<sup>831</sup> The Pre-Budget Report itself also noted “On some occasions, discretionary changes in fiscal policy may provide a useful support to monetary policy —for instance, the fiscal tightening in the July Budget is helping to offset some of the pressures on monetary policy”.<sup>832</sup> In this sense fiscal policy was to play more of a role. I will classify many of the 1997 measures as *endogenous, deficit reduction* because of the specific focus on bringing down the debt. I opt for this over demand management although, as presented here, they are closely related.

### Major 1997 Budget Tax Measures

I initially deal with the revenue raisers. First, the Chancellor claimed “I will not allow house prices to get out of control and put at risk the sustainability of the recovery... I have therefore decided that it is right to take two measures aimed at stability in the housing market”.<sup>833</sup> Mortgage interest relief was restricted from 6<sup>th</sup> April 1998. Stamp duty was also increased on properties over £250,000 from 8<sup>th</sup> July 1997. These measures were designed to cool down the housing market. I therefore classify them as *endogenous, demand management*.

Secondly, there was a windfall on the profits of private utilities for the four years following privatisation. It was to be paid on 1<sup>st</sup> December 1997 and 1998. The date of privatisation varies by company and it is difficult to identify retrospective implementation dates. I therefore use the dates for payment, treating this as levies on each date (both being reversed the following quarter). This was specifically motivated as “our reform of the welfare state — with the programme to move the unemployed from welfare to work — is funded by a new and one-off windfall tax on the excess profits of the privatised utilities”.<sup>834</sup> I therefore categorise this as *endogenous, spending-driven*.

Thirdly, the payment of tax credits for both pension funds and on dividends were abolished from 2<sup>nd</sup> July 1997. Some were maintained until 6<sup>th</sup> April 1999 for Personal Equity Plan holders, non-tax payers and charities. To deal with this dual implementation I use the 1998/99 revenue change as an approximation of the ‘full year’ cost of the first change and the difference between the 1998/99 and 1999/00 revenue yields as the gain from the second change. It was claimed that this system was not the “best way of encouraging investment for the long-term”. But there were presumably other possible reforms and this raised nearly 50 per cent of the total revenue. Based on the overall Budget objectives, the overarching purpose of

<sup>829</sup> HC Deb 25 November 1997 vol 301 c773

<sup>830</sup> HC Deb 25 November 1997 vol 301 c773

<sup>831</sup> HC Deb 25 November 1997 vol 301 c774

<sup>832</sup> PBR 1997, page 16.

<sup>833</sup> HC Deb 02 July 1997 vol 297 c313

<sup>834</sup> *Ibid.*

these measures appears to be to maintain a tight fiscal stance. I classify these as *endogenous, deficit reduction*.

Finally, the 5 per cent fuel duty escalator was confirmed by the new Government, but the commitment was extended to a 6 per cent real increase from 2<sup>nd</sup> July 1997 “In line with the environmental objectives that I have set out”.<sup>835</sup> However, in light of the overall deficit reduction plan and the comments about tightening fiscal policy, for this year I classify these changes as *endogenous, deficit reduction*.

I now turn to the major tax cuts. The main rate of Corporation Tax was cut from 33 to 31 per cent from 1<sup>st</sup> April 1997: “This is a long-term commitment which will increase both inward investment and domestic investment to the benefit of the whole country”.<sup>836</sup> I therefore classify this as *exogenous, long-run*. In addition, the small companies’ rate was cut from 23 to 21 per cent. The Chancellor noted “new jobs are more likely to come from a large number of small businesses than from a small number of large businesses. The route to success is not for the Government to try to pick winners, but to create an environment in which more firms have more chances, by their own efforts, to succeed”.<sup>837</sup> I classify this as *exogenous, long-run*.

The Labour Party had opposed the Conservative’s V.A.T. on fuel and power and in this Budget the rate was reduced from 8 to 5 per cent from 1<sup>st</sup> September 1997. The Chancellor argued: “the principle of fairness in taxation will guide all my Budget decisions. I can announce today that at this, the first opportunity, the Government will honour their pledge to cut value-added tax on fuel and power. To help to pay for that, we will withdraw tax relief for private medical insurance for the over-60s [from 2<sup>nd</sup> July 1997]”.<sup>838</sup> I classify both the cut in V.A.T. and the offsetting removal of relief as *exogenous, ideological*. To cut fuel bills further, the gas levy was reduced to zero from 6<sup>th</sup> April 1998. The Chancellor argued “To cut fuel bills further, I intend to make a further tax cut. The gas levy imposed by the previous Government has pushed prices for domestic consumers higher than they would otherwise be...Eighteen and a half million domestic customers will benefit from the change”.<sup>839</sup> I classify this as *exogenous, ideological*.

Finally, following a World Trade Organisation agreement in March 1997, the Information Technology Agreement took effect from 1<sup>st</sup> July 1997. This change cut import duties. I classify this as *exogenous, external*.

As the overall objective appears to be a fiscal tightening, I provide an alternative classification of *endogenous, deficit reduction* for the exogenous remissions in case the tax increases were designed to offset them.

These changes account for nearly 90 per cent of the cuts and over 90 per cent of the total tax rises.

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<sup>835</sup> HC Deb 02 July 1997 vol 297 c311

<sup>836</sup> HC Deb 02 July 1997 vol 297 c306

<sup>837</sup> HC Deb 02 July 1997 vol 297 c307

<sup>838</sup> HC Deb 02 July 1997 vol 297 c312

<sup>839</sup> Ibid.

## 1998: Budget 17<sup>th</sup> March 1998 and Pre-Budget Report 3<sup>rd</sup> November 1998

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### Context

Real output growth was 3.3 per cent in 1997 and unemployment fell a further 190,000 between July 1997 and March 1998. Inflation, however, had edged up to just over 3 per cent in 1997 and in March 1998 the retail price index was nearly 3.5 per cent higher than in the previous March. Interest rates had been raised 5 times to 7.25 per cent in November 1997 and they were to peak at 7.5 per cent in June 1998. However, by the time of the Pre-Budget Report in November, there were concerns about the world economic downturn — with the effects of the East Asian financial crisis now being felt. The PBR noted “prospects for the world economy have deteriorated over the last six months following the crisis in East Asia and Russia and recent turbulence in Latin America and other emerging markets”.<sup>840</sup> The IMF revised down its forecast for world growth from 4 per cent to 2.5 per cent. The PBR also notes “slower world growth therefore makes it inevitable that growth in the UK next year will be lower than expected at the time of the March Budget”.<sup>841</sup>

### Overall Budget Objectives

The 1998 Budget continued the focus on economic stability. This required vigilance “at home in the face of inflationary pressures”<sup>842</sup> but also “prudence in fiscal policy”.<sup>843</sup> Brown noted “The five-year deficit reduction plan that I put in place last July is not only on track, but is being achieved more quickly than expected...[but] at this stage of the cycle it is important to come down on the side of caution, my Budget will lock in this fiscal tightening for 1998–99”.<sup>844</sup> The FSBR notes a positive output gap<sup>845</sup>, although signals a slowing of both demand and growth over the coming year. Fiscal policy was therefore kept tight to prevent overstimulating the economy. On one hand the tone is not one of new action, in several places it is noted “by 1997, the economy had largely used up its spare capacity and was growing at an unsustainable rate...the policy actions taken since last May have put the economy back on track for sustainable growth”.<sup>846</sup> On the other hand, there were sizable tax rises as policy was kept tight. Later Budgets reflect on this period as one where fiscal policy was kept tight as the economy was above trend. The Budget also emphasised reform to raise productivity: “Stability and prudence are merely the preconditions for success — the platform from which success can be built. It is time now to show similar ambition and determination in the pursuit of long-term increases in productivity”.<sup>847</sup> On social objectives there were reforms to make work pay and promote employment and “fairness measures will help to support families with children, tackle

<sup>840</sup> PBR November 1998, paragraph 1.9

<sup>841</sup> PBR November 1998, paragraph 1.13

<sup>842</sup> HC Deb 17 March 1998 vol 308 c1098

<sup>843</sup> HC Deb 17 March 1998 vol 308 c1099

<sup>844</sup> *Ibid.*

<sup>845</sup> FSBR 1998, paragraph 1.05.

<sup>846</sup> FSBR 1998, Annex A.

<sup>847</sup> *Ibid.*

child poverty, improve public services and the environment and ensure that people and companies pay a fair share of tax by tackling avoidance”.<sup>848</sup>

The November PBR was bullish “the UK is better placed, because of the decisive action the Government has taken domestically and internationally, to steer a course of stability in an uncertain and unstable world”.<sup>849</sup> The success of past fiscal tightening (including the March 1998 budget) was highlighted: the “tightening has continued throughout our second year... So, fiscal policy has played its full part with interest rate policy in tackling inflationary pressures”.<sup>850</sup> However, there were to be no tax changes in the PBR. There was discussion of future aspirations – largely supply-side reforms: “we now need to push ahead with modernisation in each of the following areas — improving productivity, expanding opportunity and investing in our future”.<sup>851</sup> Concrete tax measures were not announced, although some changes were trailed and I discuss them in the next Budget.<sup>852</sup> The lack of countercyclical action in November was not lost on the Conservative Opposition. In response to the Chancellor’s statement Francis Maude argued “he [the Chancellor] offers nothing serious to prevent higher unemployment and more business failures — not a single measure that will save a single job... For the Chancellor and the Prime Minister — who are smugly and arrogantly sitting there exchanging complacent grins — any talk of downturn is ‘idiotic hysteria’”.<sup>853</sup>

### Major Budget Tax Measures

First I deal with the remissions, the most sizable of which was the abolition of the entry rate for employee NICs from April 1999. The FSBR argued “The NICs reform will improve work incentives and make it more attractive to employ those moving off welfare and into work”.<sup>854</sup> I classify this as *exogenous, long-run*.

As part of the Government’s “proposals to help businesses invest and grow. To encourage long-term investment, today we will put in place the company taxation reform that we started last year, by abolishing one tax in its entirety”. Advance Corporation Tax (A.C.T.) was abolished. The current system often led to surplus A.C.T. and overpayments “This distorted business decisions and led to inefficient investment”.<sup>855</sup> The removal of A.C.T. “will eliminate surplus A.C.T. for the future and reduce the complexity of the current system”. The system was to be replaced by one of quarterly instalments to be phased in from 1<sup>st</sup> July 1999. Looking at the revenue forecasts, this actually produces a revenue increase. However, given the motivation, I still categorise it as *exogenous, long-run*. In addition, there was to be a 1 per cent cut in the main Corporation Tax rate and the small companies’ rate from 1<sup>st</sup> April 1999

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<sup>848</sup> FSBR 1998, paragraph 1.01.

<sup>849</sup> FSBR 1998, paragraph 1.19

<sup>850</sup> PBR speech 682

<sup>851</sup> HC Deb 03 November 1998 vol 318 c683

<sup>852</sup> There were also some extra expenditure measures.

<sup>853</sup> HC Deb 03 November 1998 vol 318 c688

<sup>854</sup> FSBR 1998, paragraph 3.33.

<sup>855</sup> FSBR 1998, paragraph 4.11

which provides “further tax reform to promote enterprise and encourage investment”.<sup>856</sup> I classify this as *exogenous, long-run*.

The Budget also extended enhanced capital allowances for one year for investment in machinery or plant from 1<sup>st</sup> July 1998, “this will assist cash flow and encourage SMEs to invest and modernise”<sup>857</sup> and “continuing our commitment to boosting long-term investment”.<sup>858</sup> I categorise this as *exogenous, long-run*.

There was also a freeze (cut against indexation) in V.E.D. This “further shifts the taxation of motor vehicles away from ownership and towards use”.<sup>859</sup> I therefore classify this as *exogenous, ideological*.

Given the overall fiscal tightening, these remissions needed to be offset. I therefore assign an alternative classification of *endogenous, deficit reduction* to all these exogenous remissions.

The major tax increases included cutting the married couples’ allowance from 6<sup>th</sup> April 1999. The Government increased benefits aimed at children in poverty and introduced the Working Families’ Tax Credit, these “measures to increase support for children will be partly funded by reducing the rate of relief on the Married Couple's Allowance”. I therefore classify this as *endogenous, spending-driven*.

The rate of Stamp Duty was increased from 17<sup>th</sup> March 1998. This was described as part of the “Creating a Fairer Society” chapter of the EFSR which argued “This Budget will help make the United Kingdom a fairer country”.<sup>860</sup> However, given the need to maintain a tight fiscal stance I take this as a secondary objective and categorise this as *endogenous, deficit reduction*.

Finally, the two escalators on fuel and tobacco were confirmed. The fuel escalator date was brought forward to the 17<sup>th</sup> March 1998 and increased by 6 per cent in real terms as announced in July 1997. The Chancellor explained “There is agreement that only with the use of an escalator can emission levels be reduced by 2010 towards our environmental commitments”.<sup>861</sup> In addition “To reflect concerns over local air quality, and to encourage the manufacture and use of ultra-low sulphur diesel” the duty on ultra-low diesel was increased by less than on ordinary diesel and the differential between diesel and unleaded petrol was widened. These changes were planned to occur in stages over the next few years and I include a new change for each increase. The tax on super-unleaded petrol was also increased from 17<sup>th</sup> March 1998 and “this will give non-essential users an incentive to switch to less harmful fuels”.<sup>862</sup> On tobacco “The Government maintains its commitment to protecting health by increasing the duties on tobacco by at least 5 per cent in real terms”. As such, tobacco duties were to rise on 1<sup>st</sup> November 1998. The original intention of these escalators was to tackle the deficit and, given the desired tight fiscal stance this year, I take the above motives as

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<sup>856</sup> FSBR 1998, paragraph 4.01

<sup>857</sup> FSBR 1998, paragraph 4.19

<sup>858</sup> HC Deb 17 March 1998 vol 308 c1101

<sup>859</sup> FSBR 1998, paragraph 5.33

<sup>860</sup> FSBR 1998, paragraph 5.03

<sup>861</sup> HC Deb 17 March 1998 vol 308 c1110

<sup>862</sup> FSBR 1998, paragraph C.39

secondary. I opt for the *endogenous, deficit reduction* classification for the fuel increases as they were brought forward. I opt for the *exogenous, deficit consolidation* classification for the tobacco increases as they went ahead as previously announced.

These changes account for over 90 per cent of the cuts and nearly 85 per cent of the increases.

### **1999: Budget 9th March 1999 and Pre-Budget Report 1st November 1999**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

#### **Context**

Labour had previously committed itself to the previous administration's spending plans for two years. This attempt to earn financial credibility partly lay behind the tighter fiscal stances in 1997 and 1998. However, as I have mentioned above, statements made by Labour in the first year imply it also reflected a view that growth was above trend. Over the previous year world growth had slowed and in March 1999 UK growth was also forecast by the Treasury to slow to 1 - 1½ per cent in 1999, rebounding to 2¼ - 2¾ per cent in 2000. These estimates were revised upwards in November. The fall in unemployment had slowed – perhaps due to the slowing growth, although in 1999 it was the lowest for nearly 20 years. Inflation was also within the new target range. The March Budget reported also a surplus on the current budget in 1998/9.

#### **Overall Budget Objectives in March 1999**

Having until now been wedded to Conservative spending plans, in 1999 the Government more vigorously set about its programme to raise long-term economic growth, improve public services and target support on the poorest. The tone of the March and November Budgets was notably more relaxed on the macroeconomic conditions, giving the impression that stability was largely on track without the need for significant corrective measures. The March Budget argued, rather confusingly, that “the Budget both continues to lock in the fiscal tightening and can provide discretionary support – some £6 billion – to the economy during the below trend phase of the cycle”.<sup>863</sup> A glance at the list of discretionary measures clarifies this claim. Firstly, the £6 billion was over 3 years. Secondly, what pushed the net balance into negative was largely spending commitments: introduction of the Children's Tax Credit, other spending on families and children and payments to pensioners (nearly £4 billion in 2001/02). Once we also exclude tax rises for specific spending commitments and the previously announced escalators, the Budget tax measures are largely neutral. Thus, whilst the Chancellor noted “I am determined to continue locking in this fiscal tightening for the years to come so that we continue to meet our fiscal rules and so deliver sound public finances. I have had to offset the impact of slower world growth on corporate tax revenues and lower indirect tax revenues”,<sup>864</sup> the majority of the March Budget concentrates on the key themes of promoting enterprise,

<sup>863</sup> EFSR 1999 page 15.

<sup>864</sup> HC Deb 09 March 1999 vol 327 c175



making progress on the environment, helping families and the elderly, making work pay, helping people back into work and modernising public services. This marks a change in emphasis from strict fiscal control towards more spending and long-term reform for improving economic performance. In fact, the March 2000 Budget notes that 1997-98 saw the fiscal tightening and Budget 1999 “locked in that tightening”<sup>865</sup> – the language implies that Budget 1999 did not continue with further *discretionary* tightening. Furthermore, the Chancellor argued: “in a better deal for Britain that puts work, enterprise and families first, this Budget will cut tax rates and at the same time boost public investment”.<sup>866</sup> Many of the tax cuts are for *exogenous, long-run* or *ideological* purposes. The tax rises – with the already mentioned exceptions – then largely pay for these.

### **The November Pre-Budget Report**

This change in emphasis continued in the November PBR. The successes of macroeconomic policy decisions were emphasised and the growth forecasts were revised upwards. There was no discussion of fortifying the budget against a slowdown in receipts; nor was there a discussion of discretionary action to support the economy. Furthermore, “the British economy is clearly on track to meet our fiscal rules”.<sup>867</sup> The aim of the Budgets were now to target long-term growth: “In the past, as figures for surpluses and deficits were reported, Budget debates too complacently focused on dividing up the national wealth. Today, in a competitive global economy, Budgets must meet the long-term challenge of helping to expand the national wealth. Indeed, living standards can continue to rise only if Britain continues modernising. Therefore, on the foundation of monetary and fiscal reform, we must build a pro-investment, pro-competition, pro-enterprise Britain to meet our first ambition to raise our productivity to the world’s best”.<sup>868</sup> As was common for PBRs at this time, there were to be relatively few Budget measures – although these were for *exogenous* reasons.

### **Major 1999 Tax Measures**

Employer’s N.I.C.s were reduced by 0.5 per cent from 6<sup>th</sup> April 2001. This offset the introduction of the Climate Change Levy which came into effect from the same date. The package “will ensure that the introduction of the levy entails no increase in the burden of tax on business as a whole. This shift of the tax burden from employment to environment should promote employment opportunities and the efficient use of energy”.<sup>869</sup> This is *exogenous* and part *long-run*, part *ideological*. I classify it as *exogenous, long-run* as its focus is more on business and employment performance than on environmental measures. These two measures offset each other in terms of revenue.

The consumption tax escalators were again confirmed. The planned car fuel scale rise is not motivated so I continue with the original classification. The fuel duty escalator is also simply confirmed for 9<sup>th</sup> March 1999 and I maintain the classifications as *exogenous, deficit*

<sup>865</sup> EFSR 2000, paragraph 2.23

<sup>866</sup> HC Deb 09 March 1999 vol 327 c174

<sup>867</sup> HC Deb 09 March 1999 vol 327 c885

<sup>868</sup> Ibid.

<sup>869</sup> EFSR 1999, paragraph 4.63

*consolidation*. There is confirmation that the tobacco duty escalator is to be used to pay for spending. The Chancellor announced a package of support for the elderly “a better deal for the elderly that makes the typical pensioner household £240 pounds a year better off... To help pay for this, from today excise duty on tobacco will rise by the normal escalator, 5 per cent above inflation”.<sup>870</sup> This year I therefore classify the change as *endogenous, spending-driven*.

There were two big cuts in income tax in March 1999. Firstly, a new 10 per cent rate was introduced from 6<sup>th</sup> April 1999 “to put work first in the tax and benefit system... The new 10p band will help to ease the poverty trap whereby people on low pay are discouraged from climbing the earnings ladder”.<sup>871</sup> However – characteristically leaving the announcement until the very end of the speech – the Chancellor went further, “in fact, to reward work and ensure that working families are better off”<sup>872</sup> the basic rate was reduced to 22 per cent from 6<sup>th</sup> April 2000. I classify both these measures as *exogenous, ideological*.

There were two sizable remissions on National Insurance. Firstly, the threshold above which employees pay N.I.C.s was aligned with the single person’s tax allowance; “it will be particularly valuable to the low paid, many of whom currently earn too little to pay income tax, but still have to pay National Insurance contributions. This move will take around 900,000 people out of N.I.C.s altogether, of whom 560,000 will be women, and will significantly improve work incentives”.<sup>873</sup> I classify this as *exogenous, ideological*. Secondly, the National Insurance Upper Earnings Limit was raised as part of the National Insurance reforms. Little is said about this although it is mentioned as helping those who want to work and to make work pay.<sup>874</sup> However, against the indexed base this raises revenue – implying that the limit was not fully indexed. As this appears to help pay for other *exogenous, ideological* changes, I classify it accordingly.

There were a number of other income tax reforms. Firstly the married couples’ allowance was abolished from 6<sup>th</sup> April 2000 in favour of a new Children’s Tax Credit; the EFSR argued “The MCA does not serve its purpose in recognising marriage because it is possible for twice the normal level of allowances to be paid in the year a married couple with children separate”.<sup>875</sup> Being a shift from an income tax allowance to expenditure it is correlated with changes in spending, therefore *endogenous, spending-driven* (although an ideological change). Secondly, mortgage interest relief was abolished from 6<sup>th</sup> April 2000 “to improve the functioning of the housing market and to contribute to the long-term stability of the economy”.<sup>876</sup> I classify this as *exogenous, long-run* as this appears to offset other exogenous measures.

These changes account for over 80 per cent of the cuts and 70 per cent of the increases in 1999.

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<sup>870</sup> HC Deb 09 March 1999 vol 327 c185

<sup>871</sup> EFSR 1999, paragraphs 4.49-4.51

<sup>872</sup> HC Deb 09 March 1999 vol 327 c190

<sup>873</sup> EFSR 1999, paragraph 4.55

<sup>874</sup> HC Deb 09 March 1999 vol 327 c186

<sup>875</sup> EFSR 1999, paragraph 5.10

<sup>876</sup> EFSR 1999, paragraph 5.37

## **2000: Budget 21<sup>st</sup> March 2000 and Pre-Budget Report 8<sup>th</sup> November 2000**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

Real output growth was 3.5 per cent in 1999 and unemployment fell towards 1 million through 2000. The 12-month inflation rate in March 2000 was around 2.5 per cent, although it edged up to just over 3 per cent by the November PBR. The Budget was in surplus and the Treasury's growth forecasts were again revised upwards for 2000, assuming the economy would grow between 2¾ and 3¼ per cent in 2000. In summary, the prospects in 2000 looked promising.

### **Overall Budget Objectives**

Long-term expansion and fairness were the themes in 2000. The Chancellor argued that, having made tough decisions on inflation and debt, the Government had achieved stability, strong growth, low inflation, falling unemployment and low interest rates. Both in March and in November 2000 the Government repeated its adherence to the new fiscal rules. There was to be no large scale fiscal loosening. In March Brown explained: "I have decided to lock in a greater fiscal tightening next year and the year after than we promised in last year's Budget and pre-Budget report".<sup>877</sup> In practice this meant continuing with budget surpluses – though the net effect of all the discretionary policy decisions in the Budget in March and November was expansionary.

What were these policy decisions? The Government turned its sights to its long-term objectives. In March the Chancellor argued the next steps could now be taken towards "a Britain of opportunity and security not just for a few but for all: with stability locked in and enterprise growing, we can meet our prosperity goal — to close the productivity gap; with 800,000 more people in jobs and the work ethic being restored in every community, our full employment goal — employment opportunity for all; with 50,000 more students already and standards rising, our education goal — 50 per cent of young people in higher education by 2010; with 800,000 children already lifted out of poverty and Britain's civic society renewing itself, we can meet our anti-poverty goal — to halve child poverty by 2010, on the way to ending it by 2020".<sup>878</sup> The November PBR was, in places, more workmanlike but reiterated this theme: "This hard won and newly won stability now gives Britain an opportunity that we can either seize or squander. It is the opportunity to achieve high levels of productivity growth, and so to ensure long-term prosperity not just for some, but for all...The risk for Britain is to repeat the 1980s mistake of taking economic strength for granted when we still have a large productivity gap with our competitors, and trying to run the economy at a capacity not yet achieved".<sup>879</sup> Supply-side and social reforms were therefore central to the Government's economic policy and, as such, the Budget measures were largely *exogenous* and I confirm this below.

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<sup>877</sup> HC Deb 21 March 2000 vol 346 c859

<sup>878</sup> HC Deb 21 March 2000 vol 346 c860

<sup>879</sup> HC Deb 08 November 2000 vol 356 c315

### Major Budget Tax Measures in March 2000

There were a number of major remissions, the first of which was a new all-employee share plan from 6<sup>th</sup> April 2000 “to support firms' own efforts to foster a more enterprising and productive relationship with their employees”.<sup>880</sup> I classify this as *exogenous, long-run*.

Secondly, there was reform of Capital Gains Tax from 6<sup>th</sup> April 2000. The original taper was designed “to create incentives for long-term investment in assets generating sustained growth, with particular support for entrepreneurial investment”<sup>881</sup> and the reforms took this further.<sup>882</sup> I classify this as *exogenous, long-run*.

Thirdly, first year capital allowances for SMEs were modified from 1<sup>st</sup> April 2000: “To encourage all SMEs, manufacturing and services, companies and unincorporated, to invest from their own resources in capital stock, the Government introduced enhanced capital allowances for SMEs' plant and machinery investment in July 1997”<sup>883</sup> and this year these were made permanent. I classify this as *exogenous, long-run*.

Fourthly, there was a reduction in employer National Insurance contributions by 0.1 per cent from 6<sup>th</sup> April 2002 ensuring that “revenues from the aggregates levy will be recycled through a further reduction in the rate of employer National Insurance contributions”.<sup>884</sup> Policies to cut employers N.I.C.s were noted as having “reduced the NICs burden on employers”.<sup>885</sup> I categorise this change as *exogenous, long-run*.

Fifthly, a graduated V.E.D. system for new cars was introduced from 1<sup>st</sup> March 2001: “The graduated V.E.D. system will therefore encourage the purchase of: new cars as opposed to older cars; cars with lower carbon dioxide emissions and better fuel efficiency; and cars using fuels and technology which are better for local air quality”.<sup>886</sup> Being for environmental objectives, I classify this as *exogenous, ideological*.

Sixthly, there was an increase in the threshold for reduced V.E.D. rates from 1<sup>st</sup> March 2001 which “will provide an incentive for motorists to make their next second-hand car purchase a smaller, more environmentally-friendly model”.<sup>887</sup> I also classify this as *exogenous, ideological*.

There were also a number of major tax increases. The first of these was the introduction of the Aggregates Levy from 1<sup>st</sup> April 2002 which “will ensure that the environmental impacts of aggregates production not already addressed by regulation are more fully reflected in prices, encouraging a shift in demand away from virgin aggregate towards alternative materials such as recycled aggregate”.<sup>888</sup> I classify this as *exogenous, ideological*.

Secondly, rates for Stamp Duty were introduced from 28<sup>th</sup> March 2000. The EFSR noted “The Government is committed to addressing unfairness in the taxation system.

<sup>880</sup> EFSR March 2000, paragraph 3.37

<sup>881</sup> EFSR March 2000, paragraph 3.34

<sup>882</sup> EFSR March 2000, paragraph 3.37

<sup>883</sup> EFSR March 2000, paragraph 3.32

<sup>884</sup> EFSR March 2000, paragraph 4.57

<sup>885</sup> Ibid.

<sup>886</sup> EFSR March 2000, paragraph 6.62

<sup>887</sup> EFSR March 2000, paragraph 6.60

<sup>888</sup> EFSR March 2000, paragraph 6.91

Measures in Budget 2000 to help promote a fair and efficient tax system include: an increase in the rates of stamp duty”.<sup>889</sup> I categorise this as *exogenous, ideological*.

Thirdly, a package of anti-avoidance measures was implemented from 21<sup>st</sup> March 2000. These were introduced by arguing “Tax-driven schemes, devices and structures, if allowed to flourish unchecked, not only cause ordinary taxpayers to have to make good the resultant loss of revenue but can also give one business an unfair competitive advantage over another”.<sup>890</sup> I classify these as *exogenous, ideological*.

Fourthly, there were changes to double taxation relief from 6<sup>th</sup> April 2000 and 1<sup>st</sup> June 2000 as it is “important that the UK tax system is competitive in the global arena, ensuring that the UK is seen as a productive place for businesses to operate, and a favourable base from which to invest abroad”.<sup>891</sup> Without a way to split the revenue change over the two dates, I use the former date. I classify this as *exogenous, long-run*.

Fifthly, there were changes to the taxation of insurance companies and Lloyd’s from 1<sup>st</sup> January 2000 and 2001. An Inland Revenue press release explains “The Government considers that the current treatment of both general insurance companies and Lloyd’s members needs reform”.<sup>892</sup> The details are somewhat technical and contained in the press release. I classify this as a long-term reform to the tax system and *exogenous, long-run*.

Sixthly, the 5 per cent real increase in tobacco duty from 21<sup>st</sup> March 2000 was confirmed as “The Government believes that there is a strong health case for year-on-year real terms increases in the price of cigarettes and tobacco...This [increase] will release extra resources which will be included in the extra £2 billion for the National Health Service in 2000-01”.<sup>893</sup> I classify this as *endogenous, spending-driven*.

Finally, there was an increase in car fuel scales, as announced in 1998, from 6<sup>th</sup> April 2000. In 1998 when this escalator was introduced it was categorised as aiding deficit reduction. Given this implementation is several years later I classify this as *exogenous, deficit consolidation*.

### **Major November Tax Measures (and other changes in 2000)**

Firstly there were changes to unapproved share options from 6<sup>th</sup> April 1999 and 19<sup>th</sup> May 2001 as “The rapid growth in the stock market since April 1999 has led to concerns by companies with volatile share prices that their exposure to an unpredictable NICs liability could endanger their investment strategies and damage their future growth by deterring investors”.<sup>894</sup> This follows measures already enacted from 19<sup>th</sup> May 2001. I classify this as *endogenous, supply stimulus* being to support growth.

Secondly, the ISA limit was extended for 5 years from 6<sup>th</sup> April 2001 as “Individual Savings Accounts (ISAs) were introduced in April 1999 to encourage tax-free saving,

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<sup>889</sup> EFSR March 2000, page 9.

<sup>890</sup> EFSR March 2000, paragraph 5.116

<sup>891</sup> EFSR March 2000, paragraph 3.52

<sup>892</sup> Technical Notes/Press Release: REVBN2L, March 2000.

<sup>893</sup> EFSR March 2000, paragraphs 5.101-104

<sup>894</sup> PBR November 2000, paragraph 3.56

particularly among lower-income savers” and “To build on the success of ISAs”.<sup>895</sup> I classify this as *exogenous, ideological*.

Thirdly, there was a one year nominal freeze in all fuel duties from 7<sup>th</sup> March 2001. The Chancellor explained: “At the time of the November 1999 Pre-Budget Report, the price of oil was around \$22 a barrel. By the time of Budget 2000, it had risen to \$30 a barrel. As a result, the Chancellor froze fuel duty in real terms in Budget 2000. The price since Budget 2000 has averaged over \$28 a barrel....Taking account of these factors, and of the other measures being taken to tackle climate change, the Government has decided to freeze duties on petrol, diesel, other road fuels, and non-road fuel oils (such as red diesel) in cash terms in Budget 2001”.<sup>896</sup> This must also be set against the fuel protests that occurred in the UK during 2000. This change followed lengthy political pressure after oil price increases. While correlated with oil prices, it appears more political and I therefore classify this as *exogenous, ideological*.

Fourthly, Stamp Duty exemptions were granted from 6<sup>th</sup> April 2001. “This will bring benefits to both households and enterprises in these areas and will encourage the refurbishment and return to use of existing properties as well as new developments. This measure will help stimulate this poorly performing segment of the property market, attracting enterprise and business into local communities”.<sup>897</sup> I classify the change as *exogenous, long-run*.

Finally, tax relief was granted for residential conversions from 7<sup>th</sup> March 2001. Bringing “vacant and under-utilised properties back into use will help relieve pressure on greenfield development and provide a more diversified use of land at the heart of our towns and cities”.<sup>898</sup> I classify this as *exogenous, ideological*.

These changes made up over 90 per cent of the PBR tax remissions (with no tax increases).

## **2001 (A): Budget 7<sup>th</sup> March 2001**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

Growth in 2000 was nearly 4 per cent<sup>899</sup> and strong growth continued into the first quarter of 2001. Slowing growth in the United States and Japan was identified as a downside risk in March and the Treasury estimated that output growth would be between 2¼ and 2¾ per cent in 2001 and for the following two years. Unemployment fell below 1 million in February 2001 and continued downwards. Inflation was on target with retail prices being 2.3 per cent higher in March 2001 than 12 months earlier.

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<sup>895</sup> PBR November 2000, paragraphs 5.69-70

<sup>896</sup> PBR November 2000, paragraphs 6.44-6.46

<sup>897</sup> PBR November 2000, paragraph 6.78

<sup>898</sup> PBR November 2000, paragraph 6.80

<sup>899</sup> Though in March 2001, the statistics revealed a 3 per cent growth rate for 2000.

### Overall Budget Objectives

The longer-term emphasis continued: “stability built in the first years will be our foundation for building opportunity and prosperity for all in the years to come... We know as a nation that, after a generation of under-investment in both industry and our public services, the ambitions that we have for our country — high productivity and full employment, education opportunity for all and an end to child poverty, a modern NHS and modernised public services — can only be realised if we make the choice to invest for the long-term”.<sup>900</sup> The Chancellor noted the slowdown in the U.S. and Japan but the EFSR noted: “policy is well placed to respond proactively given sound public finances and low inflation”. The Budget did not, however, claim to provide discretionary short term fiscal support; the tone was long-term: “we lock in stability for the long-term and, by striking the right balance between long-term investments and affordable tax cuts, we not only boost enterprise and savings, but meet the needs of not just some but all Britain's families”.<sup>901</sup> The EFSR summarises the March discretionary fiscal changes as “targeted tax cuts for productivity, work, savings and families... and an additional £2 1/3 billion over the next three years to boost education and health, and to tackle drugs and crime”.<sup>902</sup> As such, the 2001 Budget measures were all *exogenous*.

### Major Budget Tax Measures

There was a package of consumption tax cuts to improve environmental incentives. Firstly, there were cuts from 7<sup>th</sup> March 2001 in the duty rate for ultra-low sulphur petrol and diesel: “Ultra-low sulphur petrol (ULSP) offers environmental benefits over ordinary unleaded petrol when used in modern cars fitted with three-way catalytic converters... ULSD provides particulate emission savings from existing diesel vehicles and allows the use of advanced emission-abatement technology such as particulate traps, which reduce emissions by up to 90 per cent”.<sup>903</sup> Secondly, following consultation since the PBR 2000, there was to be reform of the V.E.D. system for lorries from 1<sup>st</sup> December 2001 “to reflect better the environmental and track costs of different lorries. The Government’s proposals have been warmly welcomed by the industry”.<sup>904</sup> Thirdly, there were cuts to V.E.D. for vehicles with small engine sizes from 1<sup>st</sup> July 2001. There was to be a rebate for cars purchased after 1<sup>st</sup> November 2000 and “this will mean that around a third of existing cars in total will qualify for the lower rate of V.E.D. for smaller engine cars”.<sup>905</sup> I classify all these environmental incentives as *exogenous, ideological*. I treat 1<sup>st</sup> July 2001 as the implementation date. I then use the extra cost in the current year to determine the approximate size of the rebate. It is stated that the rebate would be paid in July and I treat this as a levy paid on 1<sup>st</sup> July 2001 – removing it the following quarter.

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<sup>900</sup> HC Deb 7 March 2001 c295

<sup>901</sup> HC Deb 7 March 2001 cc295-6

<sup>902</sup> EFSR 2001, paragraph 2.53

<sup>903</sup> EFSR 2001, pages 111-2

<sup>904</sup> EFSR 2001, page 115

<sup>905</sup> EFSR 2001, page 113

On income tax, the 10 per cent starting rate band was increased above indexation from 6<sup>th</sup> April 2001. Justifying this the Chancellor argued “To achieve our goal of full employment, I have previously cut the basic rate of income tax and I have introduced a 10p tax rate... To reward savers, pensioners and hard-working families, my aim now and in the next Parliament is to ensure that more of savers', pensioners' and working people's incomes, now taxed at the 22p rate, should be taxed at the lower 10p rate”.<sup>906</sup> I take the statement at face value and classify this as *exogenous, long-run*.

There were also a few small tax increases. First, the two escalators were confirmed: the Landfill Tax and car fuel scales increased from 6<sup>th</sup> April 2001. These are not mentioned in the speech but I stick with their original classifications from previous years. The car fuel scales were for deficit reduction, the Landfill tax —having a deferred start date — was *exogenous, ideological*. Given that that year’s confirmation is many years after the original announcement, I classify the car fuel escalator as *exogenous, deficit consolidation*. Secondly, a measure was introduced from 7<sup>th</sup> March 2001 “to close a loophole in the Controlled Foreign Companies provisions”. I classify this as *exogenous, long-run*. Thirdly, there were changes to the treatment of insurance policies from 6<sup>th</sup> April 2002 “to clarify and simplify the tax treatment of transfers of shares in life insurance products”.<sup>907</sup> I classify this as *exogenous, long-run*.

These changes account for nearly 80 per cent of the cuts and 100 per cent of the increases.

## **2001 (B): Pre-Budget Report 27st November 2001**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

In 2001, growth slowed and unemployment starting rising towards the end of the year. Inflation fell through 2001 and in November retail prices were only 1 per cent higher than 12 months earlier. The Bank of England had kept interest rates at 6 per cent since February 2000 but started cutting from February 2001 to 3.75 per cent by the end of 2001. Of course, the major shock in 2001 was the terrorist attacks of September 11<sup>th</sup> but growth had slowed even before then. The PBR noted that “The world economy has slowed more sharply this year than at any time over the past two decades” and “The events of 11 September in the US have further weakened demand, delayed the global recovery and intensified the risks to global growth”.<sup>908</sup> The Treasury’s UK growth forecast was downgraded to 2¼ per cent for 2001.

### **Overall PBR Objectives**

The PBR opens: “While no country can fully insulate itself from the slowdown in the world economy, the macroeconomic framework the Government has put in place has allowed monetary policy to respond pro-actively to the downturn while enabling fiscal policy to

<sup>906</sup> HC Deb 07 March 2001 vol 364 c307

<sup>907</sup> REV BN 19, March 2001.

<sup>908</sup> PBR November 2001, paragraph 1.1.



support monetary policy”.<sup>909</sup> In terms of fiscal policy the objective was “to allow the automatic stabilisers to play their role in smoothing the path of the economy”.<sup>910</sup> In his speech the Chancellor argued “interest rates have been cut seven times in nine months.... With public spending and public investment increasing this year, our fiscal policy is — at the right time of the economic cycle — complementing and supporting monetary policy”.<sup>911</sup> Discretionary action in the PBR continued long-term reforms already in progress: “far from deferring our enterprise agenda — this is exactly the right time to press ahead with supply-side reforms to encourage new investment and higher productivity”.<sup>912</sup> In short “The Pre-Budget Report describes the next steps in the Government’s strategy for meeting its long-term goals — combining a stronger, more enterprising economy with a fairer, more just society”.<sup>913</sup> The measures were therefore all *exogenous, long-run or ideological*.

### Major PBR Tax Measures

There were a number of changes to provide long-term support to business; I therefore classify all these *as exogenous, long-run*. Firstly, there were changes to the Capital Gains Tax business assets taper relief from 6<sup>th</sup> April 2002 “to promote a stable and attractive environment for enterprise and investment across the economy, supporting business in a period of slower global growth”.<sup>914</sup>

Secondly, there was the removal of the Crown’s preferential right to recover unpaid taxes from 7<sup>th</sup> November 2002 as “A modern and flexible bankruptcy regime which reduces the cost of financial failure and enhances the prospects for rescue of insolvent companies can therefore play an important role in stimulating enterprise and entrepreneurship”.<sup>915</sup>

Thirdly, the limit for the Enterprise Management Initiative was increased from 1<sup>st</sup> January 2002 — “The change will be of particular help to small, dynamic manufacturing enterprises, which are more likely to have assets in excess of the current limit”.<sup>916</sup>

Fourthly, a flat rate scheme of VAT for small businesses was implemented from 25<sup>th</sup> April 2002 “to allow small and newly-registered businesses to manage their entry into the VAT system, reduce the administrative burden of VAT and improve their cash flow”.<sup>917</sup>

The only tax increase was to “to counter avoidance schemes involving premiums and discounts on currency contracts, convertible, exchangeable, and asset-linked securities, reset bonds and relevant discounted securities”.<sup>918</sup> This had multiple implementation dates: 26<sup>th</sup> July 2001, 19<sup>th</sup> December 2001 and 26<sup>th</sup> March 2002. The yield over the forecast years in the FSBR is roughly constant, so I assign this to the first date. I classify this change as *exogenous, ideological*, being to counter avoidance.

<sup>909</sup> PBR November 2001, paragraph 1.9.

<sup>910</sup> PBR November 2001, paragraph 2.6.

<sup>911</sup> HC Deb 27 November 2001 vol 375 c829

<sup>912</sup> HC Deb 27 November 2001 vol 375 c831

<sup>913</sup> PBR November 2001, paragraph 1.5.

<sup>914</sup> PBR November 2001, page 40.

<sup>915</sup> PBR November 2001, page 43.

<sup>916</sup> PBR November 2001, page 42.

<sup>917</sup> Ibid.

<sup>918</sup> FSBR March 2002, page 165.

## 2002 (A): Budget 17th April 2002

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### Context

Output growth slowed in 2001 to 2.5 per cent, reflecting the world economic downturn, although there was some pickup in the first quarter of 2002. Unemployment, which had risen slightly near the end of 2001, started falling again from January 2002, although modestly. Inflation remained low — in April 2002 the 12-month inflation rate was 1.5 per cent. The Treasury's growth forecast for 2002 was optimistic — 2 to 2½ per cent — compared with G7 GDP growth of 1½ per cent.<sup>919</sup> The slowdown had, however, affected the public finances, largely through a fall in receipts, although there remained a budget surplus.<sup>920</sup>

### Overall Budget Objectives

The 2002 Budget maintained the previous long-term view. The Chancellor argued: “our task is to address, through reform, three major long-term challenges: the challenge of enterprise, with new incentives to raise investment and to reward entrepreneurship; the challenge of family prosperity for all... the challenge of renewing our public services, with, for a reformed NHS, a secure long-term financial foundation”<sup>921</sup> Despite the slowdown's effects on the public finances, there was to be more public expenditure – particularly on the National Health Service (NHS), reflecting the Government's long-term goals. £4 billion (0.4 per cent of GDP) was to be added to ‘Department Expenditure Limits’ in 2003-04. The Government also took some action to “ensure sound public finances over the medium-term”.<sup>922</sup> This appears to have been for funding extra spending and meeting the long-term fiscal goals, not to offset any slowdown induced loss of revenue. Importantly, there is no discussion of a demand stimulus or an attempt to balance the budget, offsetting the budgetary effects of the recession. The Budget's overall objectives were therefore longer-term, for example: “our first long-term challenge is, through higher productivity and investment and a stronger national consensus on the importance of enterprise, to build a more prosperous Britain”<sup>923</sup> and while some changes were clearly *spending-driven*, most were *exogenous, long-run or ideological*.

### Major Budget Tax Measures

There was a freeze in personal allowances and National Insurance thresholds from 6<sup>th</sup> April 2003: “Given its other priorities, and the need to meet its strict fiscal rules, the Government is raising National Insurance contributions (N.I.C.s) from April 2003, and freezing the personal allowance for those aged under 65 in 2003-04, so that it can deliver over five years the 7.4 per

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<sup>919</sup> HC Deb 17 April 2002 vol 383 c578

<sup>920</sup> EFSR 2002, paragraph 1.11

<sup>921</sup> HC Deb 17 April 2002 vol 383 c577

<sup>922</sup> EFSR 2002, paragraph 1.14

<sup>923</sup> HC Deb 17 April 2002 vol 383 c580

cent annual real growth in spending planned for the NHS”.<sup>924</sup> The November 2002 PBR reiterated this: “As announced in Budget 2002, to deliver the largest ever sustained increase in NHS spending, while meeting other priorities and ensuring sound public finances over the medium term, the income tax personal allowance for those aged under 65 and the National Insurance contributions (N.I.C.s) threshold will be frozen in 2003-04”.<sup>925</sup> I therefore classify these tax increases as *endogenous, spending-driven*.

On introducing a tax avoidance package the EFSR explains: “The Government is committed to creating a modern and fair tax system which encourages work, saving and investment, raises sufficient revenue to pay for investment in public services, and in which everyone – households and businesses alike – pays their fair share...loopholes, which give scope for avoidance, must be closed so that the burden of tax does not fall unfairly on compliant taxpayers”.<sup>926</sup> Given the overall Budget’s focus on public services, I take this statement to imply these measures may well have been *endogenous, spending-driven*. Indeed, in later years the anti-avoidance measures are more closely tied to providing revenue for public services.

Turning to the remissions, firstly there was a cut in the small companies’ rate of Corporation Tax to 19 per cent and starting rate to 0 per cent from 1<sup>st</sup> April 2002. The Chancellor argued “This Budget seeks to build from this a culture of entrepreneurship in every community... And to send out the strongest signal about the importance that we attach to small businesses and the creation of wealth I propose to reduce the 10p starting rate of corporation tax...from 10p to zero... this is now the most favourable Corporation Tax regime for small companies in any of the advanced industrial countries”.<sup>927</sup> I therefore classify this as *exogenous, long-run*. Secondly, the taxation of intellectual property was reformed and exemptions were granted for gains of substantial shareholdings from 1<sup>st</sup> April 2002 “to build a corporate tax regime which recognises the realities of the modern business environment and competes with the best in the world”.<sup>928</sup> I classify this as *exogenous, long-run*. Thirdly, a R&D tax credit was introduced from 1<sup>st</sup> April 2002 as “By international standards, levels of innovation in the U.K. have historically been low...Budget 2000 introduced an R&D tax credit for small and medium-sized companies... and is now introducing an R&D tax credit for large companies”.<sup>929</sup> I classify this as *exogenous, long-run*. Fourthly, fuel duties were frozen from 17<sup>th</sup> April 2002. In his speech the Chancellor argued “I said in the 2000 pre-Budget report that I would respond to rises in oil prices and, given the high and volatile oil price”.<sup>930</sup> I will classify this as *endogenous, demand management*, being to affect fuel consumption.

These changes account for over 80 per cent of increases and over 70 per cent of the cuts.

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<sup>924</sup> EFSR 2002, paragraph 6.41

<sup>925</sup> PBR November 2002, paragraph 5.74

<sup>926</sup> EFSR 2002, paragraph 5.75

<sup>927</sup> HC Deb 17 April 2002 vol 383 c581

<sup>928</sup> EFSR 2002, page 48

<sup>929</sup> EFSR 2002, paragraph 3.53

<sup>930</sup> HC Deb 17 April 2002 vol 383 c591

## **2002 (B): Pre-Budget Report 27st November 2002**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

GDP growth slowed to 2.1 per cent in 2002 and, while unemployment fell, it was only about 20,000 lower in December than in January. The PBR was upfront about the global position: “The United States, Japan, much of Europe and Latin America — have been or are in recession after what has been the sharpest slowdown in global economic activity for almost 30 years”.<sup>931</sup> The U.K.’s GDP growth forecasts were revised down to 1.6 per cent for 2002 and 2.5 to 3 per cent for 2003.<sup>932</sup> The PBR notes: “the recovery appears to have less momentum than anticipated earlier in the year, and prospects for the world economy seem weaker than at the time of the Budget”.<sup>933</sup> The projections for the current budget and net borrowing were also “temporarily weaker than projected at the time of the Budget”.<sup>934</sup>

### **Overall PBR Objectives**

The PBR acknowledged the effect of the further slowdown on the finances, although seemed relaxed about allowing the automatic stabilisers to work: “An alternative approach has been put: that, instead of our holding firm to this long-term course, this stage of the economic cycle would be the time to cut spending and borrowing. I have examined such an approach. It would lead directly to depressed demand, rising unemployment, and the old familiar boom-and-bust approach”.<sup>935</sup> There was not to be a discretionary fiscal stimulus – the PBR estimated that the majority of the changes to the budget position were accounted for by automatic stabilisers.<sup>936</sup> Nor was there to be any major tightening to offset the effect on the public finances of the slowdown: “the automatic stabilisers are operating freely, as a cyclical shortfall in receipts this year and over the next two years helps to support monetary policy in maintaining economic stability while the economy is below trend. In the medium term, the public finances return towards the Budget 2002 profile as the economy returns to trend”.<sup>937</sup> Once again, the rhetoric was long-term: “As Britain meets the challenges of the wider global economy, the pre-Budget report will also outline further labour market, capital market and product market reforms to improve British science, skills and enterprise, and I will outline proposals for continuing public service reform and tax and benefit modernisation showing that, both in Britain and abroad, strong economies and fair societies advance together... If stability is the precondition for economic progress, enterprise is its driving force”.<sup>938</sup> The policy decisions were again grouped into: meeting the productivity challenge, increasing employment opportunity for all, building a

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<sup>931</sup> HC Deb 27 November 2002 vol 395 c318

<sup>932</sup> HC Deb 27 November 2002 vol 395 c320

<sup>933</sup> PBR November 2002, paragraph 1.9

<sup>934</sup> PBR November 2002, paragraph 2.40

<sup>935</sup> HC Deb 27 November 2002 vol 395 c321

<sup>936</sup> PBR November 2002, paragraph 2.43

<sup>937</sup> PBR November 2002, Chapter 2: Introduction.

<sup>938</sup> HC Deb 27 November 2002 vol 395 cc318-322

fairer society, delivering high quality public services and protecting the environment. The measures were thus a mix of exogenous changes and measures to fund public services.

### **November Tax Measures (and others before Budget 2003)**

There were a number of exogenous reforms. Firstly, changes were made to the taxation of share schemes from 1<sup>st</sup> January 2003. The PBR explains “to maintain and build upon the U.K.’s position as an internationally competitive location for business, and to make further progress in removing tax distortions to business decision making, the Government has recently consulted on further reform of the corporation tax system... In the meantime, [this change is] to enable and encourage companies to offer equity remuneration schemes to their employees... removing existing complexity and duplication in the tax treatment of these schemes”.<sup>939</sup> I classify this as *exogenous, long-run*.

Secondly, a V.A.T. exemption for services provided by state regulated welfare agencies was granted from 31 January 2003. The FSBR 2003 explains that this was to make it “consistent with the V.A.T. treatment of similar services provided by charities and public bodies”.<sup>940</sup> I classify this as *exogenous, ideological*.

Thirdly, North Sea Royalty was abolished from 1<sup>st</sup> January 2003. The PBR explains “This decision recognises the important contribution that mature fields can make to the future of the North Sea and will deliver a significant boost to companies investing in these fields”.<sup>941</sup> I classify this as *exogenous, long-run*.

Fourthly, the Landfill Tax Credit Scheme was reformed from 1<sup>st</sup> April 2002. While the system achieved many community and environmental objectives “there is less evidence that the LTCS has delivered a step change towards more sustainable waste management, and it has also been criticised for its administrative complexity and for failing to deliver value for money for the tax which is forgone.... The Government has therefore decided to reform the LTCS”.<sup>942</sup> I classify this as *exogenous, ideological*.

There was also a sizable package of anti-avoidance measures as “A modern and fair tax system encourages work and saving, keeps pace with developments in business practice and the global economy and raises sufficient revenue to fund the Government’s objective of establishing world-class public services. To ensure that the burden of tax does not fall unfairly on compliant taxpayers, loopholes giving scope for avoidance must be closed”.<sup>943</sup> The set of measures included tackling abuse of Employee Benefit Trusts from 1<sup>st</sup> November 2002; “artificially accelerated capital allowances with effect from 27 November 2002”<sup>944</sup>; closing loopholes in derivatives contracts from 30<sup>th</sup> September 2002; anti-avoidance measures for Controlled Foreign Companies (CFC) from 27<sup>th</sup> November 2002 and CFC measures for Northern Ireland from 11<sup>th</sup> October 2002; measures aimed at dealing with VAT avoidance

<sup>939</sup> PBR November 2002, paragraphs 3.49-50

<sup>940</sup> FSBR 2003, page 195

<sup>941</sup> PBR November 2002, page 103

<sup>942</sup> PBR November 2002, paragraphs 7.52-3

<sup>943</sup> PBR November 2002, page 105

<sup>944</sup> FSBR 2003, page 193

from 27<sup>th</sup> November 2002.<sup>945</sup> Given the statement about financing public services – a statement which becomes clearer in relation to anti-avoidance measures in later Budgets – I classify these measures as *endogenous, spending-driven*.

These changes account for nearly 100 per cent of both the tax increases and remissions.

### **2003 (A): Budget 9th April 2003**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

#### **Context**

Growth was weak in 2002 at 2.1 per cent. This reflected sluggish world growth prospects — the G7 growth forecast for 2003 was 1¾ per cent. Unemployment fell in the 12 months to April 2003 but only by about 20,000. Furthermore, the war in Iraq was producing additional economic uncertainty.<sup>946</sup> The global slowdown and the extra defence commitments continued to exert pressure on the public finances and a £3 billion contingency fund had to be assigned to Iraq expenditure. The 2002-3 estimated out-turn for the public sector current budget was double the deficit forecast in the 2002 PBR.<sup>947</sup> Inflation, however, remained low and on target; the 12 month inflation rate had edged up but stood at around 3 per cent in April.

#### **Overall Budget Objectives**

The themes in 2003 followed previous years with the majority of the Budget documents devoted to tackling long-term challenges and goals: “The Budget sets out the next steps in the Government's programme of economic reform to build a stronger, more enterprising economy based on dynamic and flexible markets and underpinned by fairness and social justice”.<sup>948</sup> There were measures “to promote enterprise, innovation and skills, and support to help people find and succeed in work... further steps to advance flexibility and fairness together...[and] reforms to tackle avoidance and advance fairness in the tax system, to ensure that everyone contributes fairly to the public services from which they benefit”.<sup>949</sup> The Chancellor argued in his speech “Having reformed the economy since 1997, the Budget marks the next stage; it is to achieve, in our time, a more flexible, more enterprising, full employment Britain: a Britain of economic strength and social justice”.<sup>950</sup> There was also the usual emphasis on productivity, with the Chancellor arguing that “despite the progress made, Britain and the rest of Europe still have a productivity gap... our Budget reforms will learn from American innovation, competition and enterprise”.<sup>951</sup> On the use of fiscal policy, again automatic stabilisers were a crucial support to monetary policy: “In the short term, the operation of the automatic stabilisers means that fiscal policy is supporting monetary policy in maintaining

<sup>945</sup> See FSR 2003 pages 192-4 and 196.

<sup>946</sup> EFSR 2003 paragraph 1.3

<sup>947</sup> EFSR 2003 paragraph 2.32

<sup>948</sup> EFSR 2003 paragraph 1.4

<sup>949</sup> EFSR 2003 paragraph 1.13

<sup>950</sup> HC Deb 09 April 2003 vol 403 c272

<sup>951</sup> HC Deb 09 April 2003 vol 403 cc275-6

economic stability as the economy remains below trend”<sup>952</sup> but there was no action to stimulate the economy or significantly tighten policy in response to short term changes in the public finances. As in the previous year, there were sizable remissions to support long-term goals - these will largely be classified as *exogenous* – and a major anti-avoidance package to help fund public services.

### Major Budget Tax Measures

The 2003 Budget’s major changes were more numerous and smaller in size in usual. The remissions were:

- Improvements to the R&D tax credit from 9<sup>th</sup> March 2003 as “Innovation is an increasingly important source of productivity growth”.<sup>953</sup> I classify this as *exogenous, long-run*.
- Reform of North Sea infrastructure taxation from 1<sup>st</sup> January 2004 which was “the result of constructive dialogue between the Government and industry, who have made it clear that the benefits of the change will be passed on to infrastructure users”.<sup>954</sup> This measure is therefore designed to support business and the industry in general; I classify this as *exogenous, long-run*.
- Changes to policyholder rate and apportionment of profits for life companies from 1<sup>st</sup> January 2003, 6<sup>th</sup> April 2003, 6<sup>th</sup> April 2004. These help “to simplify and rationalise the taxation of life insurance companies”.<sup>955</sup> The 2003-4 cost is £25 million and the 2004-5 cost is £40 million. I therefore assign £25m to 1<sup>st</sup> January 2003 and £15m (the difference) to 6<sup>th</sup> April 2004. There is no simple way of splitting the cost across the two 2003 dates. I classify these changes as *exogenous, long-run*.
- Introduction of gross profits tax for bingo (abolishing bingo duty) from 4<sup>th</sup> August 2003. The EFSR explains “This will benefit players, through higher prizes or lower prices, and bingo clubs, by promoting increased participation in bingo”.<sup>956</sup> I classify this change as *exogenous, ideological*.
- Revalorise beer and wine, freeze other rates from 13<sup>th</sup> April 2003 “To increase fairness in the alcohol duty regime”.<sup>957</sup> Little further justification is given. I therefore classify this as a political decision – being a remission against indexation – and designate it *exogenous, ideological*.
- Introduce a new duty rate for bioethanol from January 2005 “to offset the additional production costs of bioethanol and allow the UK to benefit from the reduction in greenhouse gases and local pollution that it can offer”.<sup>958</sup> I classify this as *exogenous, ideological*.

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<sup>952</sup> EFSR 2003, chapter 2: introduction.

<sup>953</sup> EFSR 2003, page 61

<sup>954</sup> EFSR 2003, page 71

<sup>955</sup> EFSR 2003, pages 187 and 192

<sup>956</sup> EFSR 2003, page 123

<sup>957</sup> Ibid.

<sup>958</sup> EFSR 2003, page 160

- Freeze air passenger duties from 9<sup>th</sup> March 2003. Discussions with industry on the most effective means of taxing aviation were mentioned but little justification is given. I therefore classify this as a political objective and *exogenous, ideological*.
- 100 per cent first year capital allowances for ICT were introduced from 1<sup>st</sup> April 2003 as part of the “steps the Government is taking to strengthen the drivers of productivity growth”.<sup>959</sup> I classify this as *exogenous, long-run*.

The increases were:

- A much discussed compliance and anti-avoidance package. The EFSR repeats the comments made in previous Budgets about public service funding. Furthermore, in the introduction, the EFSR announces “reforms to tackle avoidance and advance fairness in the tax system, to ensure that everyone contributes fairly to the public services from which they benefit”.<sup>960</sup> The anti-avoidance measures included: avoidance related equity remuneration from 9<sup>th</sup> April 2003 and 10<sup>th</sup> July 2003 – I assign this to the first date as there is no way to split the yield; loopholes in chargeable gains rules, capital gains tax, loan relationships and avoidance involving sale and repurchase agreements, all from 6<sup>th</sup> April 2003; avoidance of income tax through relevant discounted securities from 27<sup>th</sup> March 2003. Furthermore, the Government “is applying its approach to tackling tobacco and other excise fraud”.<sup>961</sup> This involved two measures, the first from 10<sup>th</sup> April 2003 and 10<sup>th</sup> July 2003, the second from 10<sup>th</sup> April 2003 and 16<sup>th</sup> April 2003. Without a good way to split the yield I use the 10<sup>th</sup> April 2003 for both. I classify this package as *endogenous, spending-driven*. Excluding this package, remaining policy changes provide a net remission, mostly for long-run or ideological purposes.
- The Landfill tax was increased from 6<sup>th</sup> April 2005 “to minimise the amount of waste generated and to develop more sustainable waste management techniques”.<sup>962</sup> I classify this as *exogenous, ideological*.
- Changes to the company car tax from 6<sup>th</sup> April 2005 which improved on previous measures. The EFSR explains “The Government’s long-term goal is to support the switch to a low-carbon economy, including zero emissions transport.... Since April 2002 the system of company car taxation has been based on carbon dioxide emissions”.<sup>963</sup> I classify this as *exogenous, ideological*.
- Increases in the duty on rebated oils by 1p above revalorisation from 9<sup>th</sup> April 2003 as “Duty incentives have been effective in encouraging an early switch to environmentally-friendly road fuels, but rebated gas oil and fuel oil continue to contribute to local air quality problems”.<sup>964</sup> I classify this as *exogenous, ideological*.

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<sup>959</sup> EFSR 2003, chapter 3: introduction.

<sup>960</sup> EFSR 2003, paragraph 1.13

<sup>961</sup> EFSR 2003, page 121

<sup>962</sup> EFSR 2003, page 164

<sup>963</sup> EFSR 2003, page 161

<sup>964</sup> EFSR 2003, page 161



- Confirmation of the Landfill Tax escalator increase from 1<sup>st</sup> April 2003. I stick with the original classification as *exogenous, ideological*.

These changes account for nearly 80 per cent of the increases and over 70 per cent of the cuts.

## **2003 (B): Pre-Budget Report 10th December 2003**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

By December 2003 the economic prospects had improved — between the first and third quarters of 2003 real GDP grew by 1.7 per cent and the fall in unemployment picked up pace again. The EFSR argued “While risks remain there are now clear signs that world economic activity is strengthening”<sup>965</sup> The Treasury’s growth forecasts were in line with those from April<sup>966</sup> but the public finance estimates were slightly weaker – reflecting weaker tax receipts: “Projections for the current budget and net borrowing are now weaker, reflecting the changed pattern of growth compared with Budget 2003”.<sup>967</sup>

### **Overall PBR Objectives**

Supply-side reform continued in the PBR: “the Government is determined to build prosperity by promoting a wider and deeper entrepreneurial culture across the whole country, and to increase the flexibility of the labour market to build full employment in every region. Flexibility must be matched with fairness, so that everyone has the opportunity to fulfil their potential in the economy”.<sup>968</sup> Again, the role of fiscal policy was seen as a combination of long-term discipline with automatic stabilisers, not discretionary stimuli or short term consolidations: “the Government’s fiscal policy objectives are: over the medium term, to ensure sound public finances and that spending and taxation impact fairly within and between generations; and over the short term, to support monetary policy and, in particular, to allow the automatic stabilisers to help smooth the path of the economy”.<sup>969</sup> The PBR was again largely made up of *exogenous, long-run* or *ideological* policy changes with some measures raising revenue to fund public service expenditure.

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<sup>965</sup> PBR 2003, paragraph 1.3

<sup>966</sup> PBR 2003, paragraph 1.17

<sup>967</sup> PBR 2003, paragraph 2.49

<sup>968</sup> PBR 2003, paragraph 1.3

<sup>969</sup> PBR 2003, paragraph 2.13

**Major November Tax Measures (and others before Budget 2004)**

First I deal with the tax remissions, these were:

- Improvements to the VAT flat-rate scheme from 1<sup>st</sup> January 2004 as part of the “[next] steps the Government is taking to strengthen the drivers of productivity growth”.<sup>970</sup> I classify this as *exogenous, long-run*.
- Improvements to the R&D tax credit schemes from 1<sup>st</sup> April 2004 as “The Government is committed to ensuring that the tax credits are soundly based, internationally competitive and will deliver a real incentive for new R&D”.<sup>971</sup> I classify this as *exogenous, long-run*.
- Increases in the thresholds defining SMEs for capital allowances from 30<sup>th</sup> January 2004 “providing a cash flow benefit for smaller firms investing in plant and machinery of nearly £400 million over the next three years”. Being to support business, I classify this as *exogenous, long-run*.
- Corporation Tax reform: the extension of relief for management expenses from 1<sup>st</sup> April 2004 as part of the Government’s response to “consultation on reform of the Corporation Tax system aimed at removing tax distortions, assisting business decision-making and ensuring that the UK remains an attractive place for business to locate”. I therefore classify this as *exogenous, long-run*.
- Bringing medium term products into ISAs from 6<sup>th</sup> April 2005 “to help remove unnecessary barriers between different forms of pooled investment”. This falls under the heading of “promoting saving and asset ownership”. I classify this as *exogenous, ideological*.
- Changes to V.A.T. treatment of cultural bodies from 1<sup>st</sup> June 2004. Certain cultural bodies were to be required to exempt admission charges from 1<sup>st</sup> June 2004 “giving many attractions scope to reduce their admission charges”.<sup>972</sup> I classify this as *exogenous, ideological*.
- Exempting sub-contracted fund management services from V.A.T. from 1<sup>st</sup> August 2003. Little is said of this measure. However, being to help business, I classify this as *exogenous, long-run*.

The major tax increases were:

- Reforms were made to the Construction Industry Scheme (CIS) from 6<sup>th</sup> April 2006 which would “reduce the regulatory burden on the industry, improve compliance, help to get the status of workers right, and replace the present cards, certificates and vouchers with an Inland Revenue verification service and monthly returns”. I therefore classify this as *exogenous, long-run*.
- Again, there was a package of anti-avoidance measures, explained in the following way: “Tax avoidance and evasion distort the incentives that the tax system aims to

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<sup>970</sup> PBR 2003, page 57

<sup>971</sup> PBR 2003, page 63

<sup>972</sup> PBR 2003, page 121

deliver and unfairly shift a greater tax burden onto honest and compliant taxpayers. They also reduce the revenue available to the Government for delivering its objective of providing world-class public services”.<sup>973</sup> I therefore classify these as *endogenous, spending-driven*. The measures included, firstly, modernising the taxation of trusts from 10<sup>th</sup> December 2003, 6<sup>th</sup> April 2004, 6<sup>th</sup> April 2005. Without a way of splitting the yield from the first two, I assign both to 10<sup>th</sup> December 2003. I use the difference in the yield from the 2004-5, 2005-6 to split up this composite and the latter measure. Secondly, a package containing measures on life policies, introduced from 3<sup>rd</sup> March 2004; on abusive grouping for V.A.T. from 1<sup>st</sup> August 2004; on the assignment of bad debts for V.A.T. from 11<sup>th</sup> December 2003; on partial exemption special methods for V.A.T. from 1<sup>st</sup> January 2004; and on tackling alcohol fraud from 1<sup>st</sup> October 2006.

These changes account for 100 per cent of the remissions and nearly 90 per cent of the increases.

## **2004 (A): Budget 17th March 2004**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

The U.K. had weathered the global downturn, being the only G7 economy not to have experienced at least one quarterly contraction in the previous three years.<sup>974</sup> Growth picked up in 2003 at 2.9 per cent; inflation remained low — the 12-month rate to March 2004 was 1.1 per cent (CPI) - and unemployment had fallen by another 60,000. The Chancellor reported to the House of Commons that this was now the longest sustained period of economic growth for more than 200 years.<sup>975</sup> The outlook was also good. Global demand was strengthening and the Treasury forecast growth between 3 and 3½ per cent in 2004 and 2005.<sup>976</sup>

### **Overall Budget Objectives**

The usual comments were once again made about allowing the automatic stabilisers to work.<sup>977</sup> The Budget claimed that the fiscal rules were on track to be met over the cycle. There was to be no discretionary fiscal stimulus – indeed the effect of the Budget measures was largely neutral.<sup>978</sup> The estimated deficit was slightly higher than forecast, but there was to be no balancing of the budget. The Chancellor argued “Rigidly balancing the budget year on year means that fiscal policy could not support monetary policy over the cycle and, even in low debt countries, the debt to GDP ratio would fall year on year even when it is obvious that more investment is important to the long-term strength of the economy”.<sup>979</sup> Discretionary policy was

<sup>973</sup> PBR 2003, paragraph 5.88

<sup>974</sup> EFSR 2004, paragraph 2.1

<sup>975</sup> HC Deb 17 March 2004 vol 419 c301

<sup>976</sup> EFSR 2004, paragraph 1.11

<sup>977</sup> EFSR 2004, paragraph 2.8

<sup>978</sup> EFSR 2004, table 2.7

<sup>979</sup> HC Deb 17 March 2004 vol 419 c324

again focused on the long-term: “Within this disciplined framework, Budget 2004 shows the Government can meet its public spending commitments and announces further decisions to create a Britain of stability and strength”.<sup>980</sup> The goals were familiar: raising productivity growth by promoting enterprise, flexibility, science, innovation and skills; providing employment opportunity for all by promoting a flexible labour market; fairness, tackling child and pensioner poverty; world class public services; and the environment.<sup>981</sup> While the discretionary changes were largely neutral<sup>982</sup> overall, tax increases offset spending commitments. Again the Budget was a mix of exogenous tax changes and those to finance extra expenditure.

### Major Budget Tax Measures

I first deal with the tax cuts. On the consumption tax side there was a decision to postpone revalorisation of fuel duties until 1<sup>st</sup> September 2004. Revalorisation was the default each year and so this represented a temporary tax cut; the new policy action was postponement. A differential was also introduced between sulphur-free and other main road fuels, so in part this action was environmental. However, the postponement is not explicitly discussed. In July 2004 the implementation was postponed until the PBR and the December 2004 PBR, while discussing fiscal projections, notes that this took account of “a continuation of the freeze on the main road fuel duties, in response to the sustained volatility in the oil market”.<sup>983</sup> I therefore classify this deferment in the same way as the one in 2003, *endogenous, demand management*.

Turning to other duties, there was a freeze on Vehicle Excise Duty. The environmental merits of the Government’s reform of V.E.D. are discussed, but then it is simply announced that V.E.D. rates are to be frozen.<sup>984</sup> As in previous years, I assume it was a politically motivated remission and without any obvious correlation with current conditions I classify this as *exogenous, ideological*.

Spirits Duty was also frozen until the end of the Parliament. There was to be a new alcohol fraud strategy and the introduction of tax stamps from 2006-07. However, “in order to minimise and offset the compliance costs to the legitimate trade”, the duty on spirits was frozen “helping to absorb the costs associated with tax stamps”.<sup>985</sup> I therefore classify this as *exogenous, long-run*, being to support the industry.

Another measure to help business was the recycling of Landfill Tax revenues. This followed the Budget 2003 announcement that “increases in the standard rate of landfill tax would be introduced in a way that is revenue neutral to business as a whole and to local government. Since the 2003 Pre-Budget Report, the Government has published research on the recycling options and has consulted stakeholders on these”.<sup>986</sup> The FSBR includes the cost of

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<sup>980</sup> EFSR 2004, paragraph 2.47

<sup>981</sup> EFSR 2004, paragraph 1.6

<sup>982</sup> EFSR 2004, table 2.7

<sup>983</sup> PBR December 2004, page 26

<sup>984</sup> EFSR 2004, page 165

<sup>985</sup> EFSR 2004, page 122

<sup>986</sup> EFSR 2004, page 168

this tax remission beginning in 2006-07; I therefore assign the implementation date as 6<sup>th</sup> April 2006. As part of the Landfill Tax package I classify it, together with previous justifications for the tax, as *exogenous, ideological*.

Finally, improvements were to be made to Venture Capital Trusts, including a temporary increase in the level of income tax relief for two years as “Venture capital is the seed bed of future enterprise”,<sup>987</sup> along with the measures to stimulate productivity growth. I classify this as *exogenous, long-run*.

The major revenue raiser was, again, a package of anti-avoidance and loophole-closing measures. In the introduction the EFSR argued that these would promote “fairness in the tax system by ensuring that everyone contributes to the extra investment in public services”<sup>988</sup> and later argued “A tax system in which everyone pays or claims what is due forms the basis for the Government’s objectives of stable public finances and world-class public services. Tax avoidance and evasion undermine these objectives”.<sup>989</sup> Included in this ‘package’ were changes to finance leasing and life companies from 17<sup>th</sup> March 2004 and the payment of V.A.T. on commercial buildings from 18<sup>th</sup> March 2004. There was also an increase in rebated oils duty from 1<sup>st</sup> September 2004 “which will, when combined with the ongoing impact of other strategy measures, further reduce the potential for oils fraud and reinforce the approach to tackling it”.<sup>990</sup> Furthermore, a minimum rate for distributed profits was introduced from 1<sup>st</sup> April 2004 “to address a trend to tax-induced incorporation by the self-employed, and to ensure low rates of corporation tax are focused on those businesses adopting the corporate legal form in order to invest in, and grow their business”.<sup>991</sup> Based on the above statements, I classify this group of changes as *endogenous, spending-driven*.

The Landfill Tax escalator was again confirmed from 1<sup>st</sup> April 2004. There appears no reason to deviate from the original classification of *exogenous, ideological* as it “encourages efforts to minimise the amount of waste generated and to develop more sustainable waste management techniques”.<sup>992</sup>

## **2004 (B): Pre-Budget Report 2nd December 2004**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

The economic prospects looked strong: growth in 2004 was 3 per cent and unemployment had fallen another 55,000 since March. Inflation was low at 1.7 per cent (CPI), having edged up over the year – though this may have reflected the large rise in oil prices. Growth was now forecast at 3 to 3½ per cent for 2005.

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<sup>987</sup> HC Deb 17 March 2004 vol 419 c327

<sup>988</sup> EFSR 2004, page 1

<sup>989</sup> EFSR 2004, page 118

<sup>990</sup> EFSR 2004, page 122

<sup>991</sup> EFSR 2004, page 58

<sup>992</sup> EFSR 2004, page 168

### Overall Objectives and Motivation

Little had changed in tone since March. The emphasis on automatic stabilisers was reiterated in the EFSR - often word for word, with it being argued that “fiscal policy supported monetary policy as the economy moved below trend: between 2000-01 and 2003-04”.<sup>993</sup> As explained previously, this was not a discretionary stimulus. Expenditure increases were announced in the 2004 Spending Review for the years 2005-06 to 2007-08 and the vision was again longer-term: “The measures that I now announce for this pre-Budget report are informed by the Treasury’s assessment, published today, of long-term global economic challenges to 2015. To succeed in the global economy, Britain should build on our strengths — our stability, our scientific genius and our world-class universities and our global reach — with a concerted national mission to invest long-term and establish world leadership in science, education and skills, and enterprise”.<sup>994</sup> There were also the familiar themes of opportunity for all; fairness and support for families, children and pensioners; delivering high quality public services; and protecting the environment. The discretionary measures were negative overall, though this was mainly due to extra spending commitments.<sup>995</sup> On the tax side there was a net increase but this appears, in part, to have been designed to finance the expenditure commitments. The PBR was therefore a familiar mix of *exogenous*, *long-run* and *ideological* changes and some *spending-driven* ones.

### Major PBR Tax Measures

First I deal with the remissions, the most significant of which was a continued freeze in fuel duties “in response to the continued volatility in the oil market”.<sup>996</sup> I therefore classify this as *endogenous*, *demand management*. In addition, the differential between rebated oils and main road fuels — which was deferred in July 2004 to the PBR — was now to be implemented as “part of a package of measures that aim to reduce further oils fraud in the U.K.”.<sup>997</sup> Following previous years, I classify this as *exogenous*, *ideological*. The tax series also includes a correction for the postponed revalorisation of fuel duties announced in March and to be originally implemented on 1<sup>st</sup> September 2004.

Turning to the tax increases, there was reform of the Company Car Tax diesel supplement from 1<sup>st</sup> June 2006. This was a waiver for cars meeting certain emissions standards, however “Euro IV emissions standards will become mandatory for all new diesel cars registered from 1 January 2006”<sup>998</sup> and so the waiver was to be removed. I therefore classify this as *exogenous*, *ideological*.

There was also reform of the taxation of leasing from 19<sup>th</sup> July 2004. The PBR explains “As part of the Government’s continuing commitment to modernise the Corporation Tax system, it has considered the tax treatment of leased plant and machinery... Leasing is an

<sup>993</sup> PBR December 2004, paragraph 2.18

<sup>994</sup> HC Deb 2 December 2004 c782

<sup>995</sup> On Incapacity Benefit reform, tax credits, payments to the over 70s, local authority spending and additions to the reserve to fund on-going military commitments.

<sup>996</sup> PBR December 2004, page 147

<sup>997</sup> PBR December 2004, page 139

<sup>998</sup> PBR December 2004, page 149

important source of finance for small businesses, who typically use shorter leases”.<sup>999</sup> I therefore classify this as *exogenous, long-run*.

Finally, there was another package of anti-avoidance measures. A now familiar justification was given: “A modern and fair tax system encourages work and saving, keeps pace with developments in business practices and the global economy and provides the foundation for the Government’s objective of building world-class public services”.<sup>1000</sup> Consequently changes were made relating to: capital gains options from 2<sup>nd</sup> December 2004; remuneration from 2<sup>nd</sup> December 2004; tax reliefs for film production from 2<sup>nd</sup> December 2004; life insurance companies from 1<sup>st</sup> January 2005; Controlled Foreign Companies from 2<sup>nd</sup> December 2004 and 31<sup>st</sup> May 2005. The yield in 2004-05 is zero and so there is no easy way to split up the later yields across these dates. I therefore assign the latest year yield to the first implementation date and double tax relief from 2<sup>nd</sup> December 2004 and 16<sup>th</sup> March 2005 — although for the same reasons just mentioned I assign the yield to the first date. Changes were also made to: V.A.T. input tax rules from 3<sup>rd</sup> December 2004; and loans and financial instruments from 2<sup>nd</sup> December 2004 and 10<sup>th</sup> February 2005 but in this case I used the first date for reasons discussed before. As in previous years I classify these changes as *endogenous, spending-driven*.

## **2005 (A): Budget 16th March 2005**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

Growth in 2004 was nearly 3 per cent and unemployment was 50,000 lower than the previous March.<sup>1001</sup> Inflation was near target - the CPI was 1.9 per cent higher in March 2005 than 12 months earlier. The Treasury expected growth of between 3 and 3½ per cent in 2005 falling back to 2½ - 3 per cent in 2006. The risk to global output of higher oil prices seemed to have diminished since the PBR 2004.<sup>1002</sup> Finally, the public sector net borrowing for 2004-5 was very close to that forecast at the PBR and Budget 2004.

### **Overall Budget Objectives**

The usual role for the automatic stabilisers was emphasised and the effect of the discretionary changes was largely neutral, although higher spending was partly offset by increased taxes.<sup>1003</sup> Discretionary fiscal policy was therefore neither tightened to close the deficit nor loosened to stimulate the economy. The Chancellor argued his Budget met his fiscal rules and was defiant: “Those in this House who have forecast recession and those who have called our public

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<sup>999</sup> PBR December 2004, page 111

<sup>1000</sup> PBR December 2004, page 108

<sup>1001</sup> Although it had started to rise in March 2005 and was to increase until the autumn of 2006 (by about 130,000)

<sup>1002</sup> EFSR 2005, paragraph 2.30

<sup>1003</sup> EFSR 2005, table 2.6

spending plans unaffordable have been consistently wrong”.<sup>1004</sup> The Budget’s goals were both longer term and familiar. The Chancellor began his argument stating “Facing a future of intense global competition, Britain must be prepared and be equipped: long-term prosperity secured only if we make the right decisions to be world leaders in science, enterprise and education; family prosperity secured only if we also match a strong economy with investments to help parents balance work and family life, to give every child the best possible start in life, and to deliver a fair deal for pensioners”.<sup>1005</sup> Many of the policy decisions were on spending: on schools and education, on Child Tax Credits, for pensioners and the disabled and on-going military commitments. However, the normal emphasis on raising productivity and its growth, providing employment for all, fairness, world-class public services and tackling the environmental challenge remained.<sup>1006</sup> This was a familiar Labour Budget focusing on social objectives and the delivery of long-term economic growth. The tax measures were again a mix of *exogenous long-run* and *ideological* changes, with some tax increases to meet long-term spending commitments; as in previous years the spending remissions were largely offset by a tax avoidance package.

### Major Budget Tax Measures

Firstly, I deal with the major tax remissions. The Stamp Duty Land Tax threshold was increased from 17<sup>th</sup> March 2005 “With both our economy and public finances strong, I can afford tax cuts for hard-working families. For home buyers, I propose to set a new threshold for stamp duty from midnight tonight”.<sup>1007</sup> It is, of course, worth bearing in mind that the General Election followed the March Budget in May 2005. I classify this as *exogenous, ideological*.

The Chancellor argued that ISAs had been a considerable success: “The household savings ratio is now 5.6 per cent — four times that of the USA and Canada — and 16 million people now have individual savings accounts. The decision that I have to make is whether to extend the tax-free advantages for the first £7,000 of savings in ISAs. I propose to extend that exemption for the whole of the next five years”.<sup>1008</sup> The original extension to £7,000 was for a social objective and, given this statement, I continue with the *exogenous, ideological* classification.

The inheritance tax threshold was to rise by more than indexation in each of the three years starting 6<sup>th</sup> April 2005, 2006 and 2007. I use the difference between the three revenue costs over these three years in the FSBR to approximate the cost of each change. This was “To provide a fair and targeted inheritance tax system, with certainty for families”.<sup>1009</sup> I therefore classify it as *exogenous, ideological*.

Fuel duties were to be revalorised from 1<sup>st</sup> September 2005. However, given that revalorisation was the default, this registers as a temporary tax cut in the FSBR revenue tables.

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<sup>1004</sup> HC Deb 16 March 2005 c260

<sup>1005</sup> HC Deb 16 March 2005 257

<sup>1006</sup> EFSR 2005, pages 2-3

<sup>1007</sup> HC Deb 16 March 2005 c265

<sup>1008</sup> Ibid.

<sup>1009</sup> EFSR 2005, page 125



I therefore assign the discretionary policy implementation – ‘the freeze’ – to Budget day with an end date of 1<sup>st</sup> September 2005. The deferment is justified in the EFSR: “Owing to the sustained volatility in the oil market, the changes in rates will be deferred”.<sup>1010</sup> I classify this as *endogenous, demand management*.

There were also changes to V.E.D. from 1<sup>st</sup> April 2005 which “will align V.E.D. lettering with the new energy efficiency labelling scheme to be introduced by industry into car showrooms later this year, ahead of E.U. proposals for such labels. This will help consumers to make fully-informed vehicle choices”. As this relates to earlier environmental reforms and help for consumers, I classify this as *exogenous, ideological*.

I now turn to the major tax increases. The commercial disadvantaged areas relief for Stamp Duty Land Tax was ended from 16<sup>th</sup> March 2005 which “will better target support to drive forward local enterprise development and business regeneration”. I classify this as *exogenous, long-run*.

Another anti-avoidance package was introduced. The EFSR argues “For the tax system to be effective, everyone needs to pay their fair share of taxes and receive the tax credits they are entitled to. Tax avoidance and tax or tax credit fraud undermine the ability of the tax system to deliver its objectives, imposing significant costs on society. The Government has always made clear its determination to ensure that the tax system is fair and is seen to be fair”.<sup>1011</sup> Consequently there were changes relating to: Capital Gains, Stamp Duty Land Tax, financial products, double taxation relief, intangible assets and avoidance through arbitrage, all from 16<sup>th</sup> March 2005 except the SDLT changes which were from 17<sup>th</sup> March 2005. As in previous years, and because the anti-avoidance increases largely offset the spending increases (and given the previous year’s comments), I classify these measures as *endogenous, spending-driven*.

There were also reforms to the North Sea Corporation Tax regime but these changed the payments profile and not liabilities. In his speech the Chancellor said “I am aligning the timing of oil companies’ Corporation Tax payments more closely with petroleum revenue tax”.<sup>1012</sup> I therefore exclude this change.

Finally, the Landfill Tax escalator was confirmed from 1<sup>st</sup> April 2005 and I continue with the original classification of this as *exogenous, ideological* for environmental reasons.

The changes account for over 90 per cent of the increases and nearly 90 per cent of the remissions.

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<sup>1010</sup> EFSR 2005, page 160

<sup>1011</sup> EFSR 2005, page 123

<sup>1012</sup> HC Deb 16 March 2005 c264

## 2005 (B): Pre-Budget Report 5th December 2005

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### Context

Growth slowed to 2.2 per cent in 2005 and the claimant count was nearly 80,000 higher in December than in March. The PBR noted that “World growth in 2005, while still robust, is judged to have moderated compared with 2004, due to a combination of high oil and petroleum product prices, structural difficulties adjusting to higher energy prices and other shocks, and cyclical slowdowns following above potential growth in some economies”.<sup>1013</sup> The U.K.’s growth forecast was reduced significantly to 1¾ per cent for 2005 and below trend in 2006.<sup>1014</sup> On the public finances, the budget deficit was now to be over 3 per cent of GDP in 2005<sup>1015</sup> and the PBR noted the role of the slowdown in this.<sup>1016</sup>

### Overall PBR Objectives

PBR 2005 was titled “Britain meeting the global challenge: Enterprise, fairness and responsibility” and again focused on longer term challenges, despite the cyclical pressures. The same six long-term goals were reiterated as they had been in the previous Budgets and the Chancellor argued “the task of this pre-Budget report is to meet and master global economic challenges and to make the critical decisions to secure Britain's long-term economic future. The theme of this report is that by combining our enterprise with investments in skills and science, in infrastructure and in housing, at every point matching investment with reform, Britain can lead in the world's most wealth-generating and dynamic sectors... With fiscal discipline, and by matching investment with reform in welfare and in public services, we can combine a strong economy with opportunity and security for all”.<sup>1017</sup> The stabilising role of automatic stabilisers was reiterated and these were shown to be responsible for most of the changes in the deficit, with discretionary measures providing some discretionary tightening.<sup>1018</sup> The Budget measures were mostly tax increases, with a few discretionary spending remissions for pensioners. Whilst this raised a sizable amount of revenue, there is little overall discussion of a major fiscal tightening although the PBR does note: “In 2005-06 and 2006-07 there is expected to be a modest tightening in the impact of fiscal policy with the effect of the tighter fiscal stance just outweighing the effect of the automatic stabilisers”.<sup>1019</sup> I therefore categorise measures which are obviously revenue raisers as *endogenous, deficit reduction*. I provide an alternative classification of *endogenous, deficit reduction* for the other exogenous measures.

<sup>1013</sup> PBR December 2005, paragraph 1.10

<sup>1014</sup> PBR December 2005, paragraph 1.11

<sup>1015</sup> As measured by public sector net borrowing, ONS series ANNX.

<sup>1016</sup> PBR December 2005, paragraph 2.38

<sup>1017</sup> HC Deb 5 December 2005 c605

<sup>1018</sup> PBR December 2005, table 2.4

<sup>1019</sup> PBR December 2005, page 32.

### Major December Tax Changes

The biggest remission was a freeze in the main fuel duties “In response to the continuing volatility in the oil market”.<sup>1020</sup> This followed a postponement of the Budget 2005 rise for September 2005 and I include a correction for this in the series. The PBR announcement postponed the decision until Budget 2006. As in previous years I classify this as *endogenous, demand management* as it is to affect the affordability of fuel.

The V.A.T. threshold was also increased – initially planned for the 1<sup>st</sup> April 2006 but the actual implementation was on 1<sup>st</sup> April 2007 due to requiring E.U. approval. I use the latter date. This measure was “to help small businesses with cash flow difficulties and reduce administrative burdens”.<sup>1021</sup> This change is not described as offsetting the current slowdown and I classify it as *exogenous, long-run*.

The major tax rise was on North Sea oil, from 1<sup>st</sup> January 2006. The PBR argued “In striking the right balance between producers and consumers, the North Sea oil taxation regime needs to promote investment and ensure fairness for taxpayers. In response to the recent significant rises in oil prices which are now expected to be sustained in the coming years, the Government will, with effect from 1 January 2006, increase the rate of supplementary charge to 20 per cent to maintain this balance”.<sup>1022</sup> This change is therefore *endogenous*; I classify it as *deficit reduction* as it aims to raise revenue.

There were a number of further anti-avoidance measures. The PBR explains “For the tax system to be effective, everyone needs to pay their fair share of taxes and receive the tax credits they are entitled to. Tax avoidance and tax or tax credit fraud undermine the ability of the tax system to deliver its objectives, imposing significant costs on society”.<sup>1023</sup> Consequently measures were introduced on: financial avoidance using stock lending arrangements from 5<sup>th</sup> December 2005, life assurance companies from 29<sup>th</sup> September 2005, corporate intangible assets, corporate capital losses, capital gains and tobacco smuggling all from 5<sup>th</sup> December 2005. Finally, there were increases in rebated oil duty to tackle fraud from 6<sup>th</sup> December 2005. I classify all these as *endogenous, deficit reduction*.

Finally, the Government also tackled tax-motivated incorporation from 1<sup>st</sup> June 2006 as “The zero per cent and minimum rates of Corporation Tax were introduced to encourage small companies to retain and reinvest their profits for growth. However, many self-employed and employed people are being advised to incorporate simply to reduce their tax and NICs liability”. I classify this change as *endogenous, deficit reduction*.

These changes account for over 90 per cent of the remissions and for the increases in the 2005 PBR.

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<sup>1020</sup> PBR December 2005, page 160

<sup>1021</sup> PBR December 2005, page 52

<sup>1022</sup> PBR December 2005, page 118

<sup>1023</sup> PBR December 2005, page 115

## **2006 (A): Budget 22rd March 2006**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

Growth had slowed in 2005, although it picked up in the first quarter of 2006. The claimant count continued to rise until October 2006 but was still below 1 million and inflation remained close to the target 2 per cent. The EFSR notes the strengthening of the economy and the Treasury forecast growth for 2006 of 2 - 2½ per cent, rising above trend in 2007 and 2008.<sup>1024</sup> The effect of the slowdown on the budget deficit was also noted.

### **Overall Budget Objectives**

The overview in the 2006 Budget focuses on long-term spending objectives and on tax, “further measures to boost productivity and growth, to build on the UK’s position as a leading location for inward investment, advance the science and innovation ten-year framework, and to reduce further the burden of regulation on business; steps to tackle the global challenge of climate change... measures to modernise the tax system, and to tackle tax fraud and avoidance... and defers the inflation-based increase in main road fuel duties”.<sup>1025</sup> In addition to the usual six long-term themes, there were also extra funds for education (and some for the police) – a key theme in this Budget. In conclusion the Chancellor declared “Excellence in education, my priority; more investment and reform, not less; a strong and strengthening economy; this is a Budget for Britain’s future”.<sup>1026</sup> Standard comments were made about the role of automatic stabilisers. The EFSR estimated that the 2006 discretionary measures were, in the aggregate, largely neutral<sup>1027</sup> and it does not seem these changes were to offset any cyclical movements in the budget deficit. Discretionary policy was again not being used to either stimulate or consolidate. However, a tax avoidance and fraud package offset some of the spending decisions. The remaining decisions were largely neutral and mostly *exogenous*.

### **Major Budget Tax Measures**

Firstly I deal with the remissions. The scope of R&D tax credits was extended from 6<sup>th</sup> April 2006 as “only companies with up to 250 employees can qualify for higher relief under R&D tax credits...the Government has noted evidence of lower levels of innovation among companies with 250-500 employees. In the light of the recommendations of the Cox Review, the Government wishes to better support for R&D investment in growing firms”.<sup>1028</sup> I classify this as *exogenous long-run*.

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<sup>1024</sup> EFSR 2006, paragraph 1.11

<sup>1025</sup> EFSR 2006, chapter 1: introduction.

<sup>1026</sup> HC Deb 22<sup>nd</sup> March 2006 c302

<sup>1027</sup> EFSR 2006, table 2.6

<sup>1028</sup> EFSR 2006, page 62

The threshold for Stamp Duty Land Tax was raised from 23<sup>rd</sup> March 2006 “to promote opportunity and fairness”.<sup>1029</sup> This follows the previous year’s increase to help first-time buyers and those on low incomes. I classify this as *exogenous, ideological*.

There was a freeze on duty on spirits, cider and sparkling wine and revalorisation of beer and wine from 26<sup>th</sup> March 2006. As revalorisation was the default, the Budget’s policy decisions table shows this as a tax cut. Again little is said of this, only “The Government remains committed to creating a fairer balance of taxation on different alcoholic drinks”.<sup>1030</sup> As last year, I classify this as *exogenous, ideological*. There was also a freeze on Air Passenger Duty as “decisions on APD rates need to be considered in the context of wider social and economic factors, particularly the current volatile oil market”. I classify this as *endogenous, demand management*.

The biggest tax remission was the deferral of the revalorisation of fuel duty to 1<sup>st</sup> September 2006 “because of continuing oil market volatility”.<sup>1031</sup> As revalorisation was the default, this is a temporary tax cut from 22<sup>nd</sup> March 2006. I classify this as *endogenous, demand management*.

There were changes to group relief in Corporation Tax from 1<sup>st</sup> April 2006 as “The Government is determined to maintain the overall competitiveness of the UK business tax system and will continue its constructive dialogue with business on international tax issues”.<sup>1032</sup> I classify this *exogenous, long-run*.

Turning to the increases, there was another package of anti-avoidance measures. The EFSR argues “tax fraud and avoidance distort markets and add no value to the UK economy. They are also unfair on the majority who do pay their fair share and can undermine the funding of public services”.<sup>1033</sup> Consequently there were measures to tackle avoidance relating to: financial productions from 22<sup>nd</sup> March 2006, C.G.T. from 22<sup>nd</sup> March 2006, employment-related securities from 2<sup>nd</sup> December 2004, V.A.T. from 1<sup>st</sup> September 2006 and changes to rebated oils to tackle fraud from 1<sup>st</sup> April 2007. Further measures also sought to tackle V.A.T. fraud from 1<sup>st</sup> June 2007 “In order to strengthen further the Government’s strategy to combat V.A.T. fraud...Missing Trader Intra-Community (MTIC) fraud is an EU-wide, criminal attack on the V.A.T. system”.<sup>1034</sup> I therefore classify all these as *endogenous, spending-driven*. The duty differential for rebated oils was maintained following the fuel duty rise on 1<sup>st</sup> September 2006 as “Maintenance of the differential between main and rebated fuel duty rates supports the Oils Strategy to tackle fraud”. I classify this with the anti-avoidance package.

The Government was to create Real Estate Investment Trusts (REITs) from 1<sup>st</sup> January 2007 “to improve the efficiency of both the commercial and residential property investment markets by providing liquid and publicly available investment vehicles”.<sup>1035</sup> I classify this as *exogenous, long-run*.

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<sup>1029</sup> EFSR 2006, page 8

<sup>1030</sup> EFSR 2006, page 119

<sup>1031</sup> EFSR 2006, page 164

<sup>1032</sup> EFSR 2006, page 116

<sup>1033</sup> EFSR 2006, page 119

<sup>1034</sup> EFSR 2006, page 120

<sup>1035</sup> EFSR 2006, page 70

There were changes to North Sea Oil taxation from 1<sup>st</sup> July 2006 which “will remove or refine rules that are distorting the tax system and ensure a level playing field for all North Sea oil companies”.<sup>1036</sup> I classify this *exogenous, long-run*.

Finally, the Landfill Tax escalator increase was confirmed from 1<sup>st</sup> April 2006. I continue with its original justification from 1999 as *exogenous, ideological*.

These changes account for over 80 per cent of the remissions and nearly 80 per cent of the increases.

## **2006 (B): Pre-Budget Report 6th December 2006**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

Growth in 2006 was stronger at 2.9 per cent and the PBR notes the improvement since March.<sup>1037</sup> Unemployment was also now falling again. However, the consumer price index had edged up to 3 per cent in December, the higher point of the target band. Public sector net borrowing had turned out higher than forecast – partly due to higher than expected inflation<sup>1038</sup> and the expected borrowing outturn for 2006-7 was 2.8 per cent of GDP.<sup>1039</sup>

### **Overall PBR Objectives**

From the outset the PBR 2006 emphasises the long-term global challenges and opportunities facing Britain: rapid changes in technology, globalisation, terrorism, world poverty and the environment. The theme in 2006 was ‘investing in Britain’s potential’ – the PBR’s title. Competing in the new age of globalisation and the need to invest in education and knowledge were placed centre stage. As in March, education was emphasised and the Chancellor concluded “Stability is our foundation, education our No. 1 priority — education first now and into the future”.<sup>1040</sup> In planning for the long-term challenges, the Chancellor rejected balancing the budget: “One choice for Britain would be to adopt a balanced budget policy, but to achieve that by cutting back on essential investment in schools and infrastructure would in my view weaken us for the global challenges ahead”.<sup>1041</sup> Rather, “The 2006 Pre-Budget Report projections for the public finances show that the Government is meeting its strict fiscal rules”,<sup>1042</sup> in other words, no balanced budget today but still balance over the cycle. The role of automatic stabilisers was unchanged. The highlighted discretionary policy changes were: an increase in Air Passenger Duty, further expenditure on schools and action to modernise the tax system, protect revenue and tackle avoidance.<sup>1043</sup> Most of these were tax increases and overwhelmingly offset the remissions, including the extra spending for schools. It seems need

<sup>1036</sup> FSBR 2006, page 198

<sup>1037</sup> PBR December 2006, paragraph 2.22

<sup>1038</sup> PBR December 2006, table 2.4

<sup>1039</sup> PBR December 2006, paragraph 2.43

<sup>1040</sup> HC Deb 6 December 2006 c314

<sup>1041</sup> HC Deb 6 December 2006 c313

<sup>1042</sup> PBR December 2006, page 13

<sup>1043</sup> PBR December 2006, paragraph 2.51

for fiscal fortification was, to some extent, recognised and the PBR shows that the discretionary measures did tighten policy – introducing some discord between the Chancellor’s statements and the PBR detail. I continue to classify the anti-avoidance measures as *endogenous, spending-driven*. I will take the other changes at face value but will provide an alternative classification of *endogenous, deficit driven* for the other exogenous changes.

### **Major PBR Tax Measures (and other changes before Budget 2007)**

I first deal with the revenue raisers. In the section on protecting tax revenues the PBR argues “A fair and modern tax system encourages work and saving, responds to business developments and globalisation and supports the provision of world-class public services... tax avoidance and tax fraud undermine the ability of the system to deliver its objectives, imposing significant costs on the rest of society”.<sup>1044</sup> I continue with the classification of these measures as *endogenous, spending-driven*, though given the circumstances there is a case to be made that these are *endogenous, deficit reduction* – either way they are endogenous. The major changes were, firstly, changes for Managed Service Companies from 6<sup>th</sup> April 2007 and 6<sup>th</sup> August 2007, responding “to evidence of significant growth in Managed Service Company (MSC) schemes which are used to avoid paying employed levels of tax and NICs”.<sup>1045</sup> Without a way to split the yield, I assign it to the first date. Secondly, there were changes to the Controlled Foreign Companies rules following the European Court of Justice (ECJ) judgment in the Cadbury Schweppes case and to remove the public quotation exemption to prevent specific avoidance.<sup>1046</sup> Thirdly, there were measures “to prevent avoidance of [Corporation] Tax using schemes involving financial products”<sup>1047</sup>, implemented on 6<sup>th</sup> December 2006, 6<sup>th</sup> and 7<sup>th</sup> March 2007. I use the 2006-07 revenue figure for the first date and the difference between this and the most recent year as the effect for the latter measures, assigning them to the 6<sup>th</sup> March 2007.

There were two further major revenue raisers. Firstly, Air Passenger Duty rates were to rise from 1<sup>st</sup> February 2007 as part of the “next stage in the Government’s strategy for tackling climate change both domestically and globally”.<sup>1048</sup> I take this at face value and classify it as *exogenous, ideological*. Secondly an attempt was made “to simplify the tax treatment of general insurance reserves”<sup>1049</sup> from 19<sup>th</sup> July 2007. I take this at face value and classify it as *exogenous, long-run*.

There were five major remissions. First, transition arrangements for film tax reliefs were introduced “To ensure continuity in film tax relief during the transition to the new system”<sup>1050</sup>, which I classify as *exogenous, ideological*. Second, deduction rates for the new Construction Industry Scheme, which began on 6<sup>th</sup> April 2007, were set. The new scheme was to “reduce regulatory burdens and help the construction industry comply with its tax

<sup>1044</sup> PBR December 2006, pages 121 and 125

<sup>1045</sup> PBR December 2006, page 122

<sup>1046</sup> FSB 2007, page 224

<sup>1047</sup> FSB 2007, page 225

<sup>1048</sup> PBR December 2006, page 155

<sup>1049</sup> PBR December 2006, page 124

<sup>1050</sup> PBR December 2006, page 123

obligations”.<sup>1051</sup> I classify this as *exogenous, long-run*. Third, there was an extension to the existing sunset clause of the Landlords’ Energy Saving Allowance from 6<sup>th</sup> April 2009 to 2015 as part of the “next stage in the Government’s strategy for tackling climate change both domestically and globally”.<sup>1052</sup> I classify this as *exogenous, ideological*. Fourthly, the travellers’ allowance from outside the EU was raised from 1<sup>st</sup> December 2008 following a “recent decision by EU Member States”.<sup>1053</sup> I classify this as *exogenous, external*. Finally, there were reforms to life assurance companies’ taxation from 1<sup>st</sup> January 2007 “to amalgamate five business categories into one, simplify the rules applying on a transfer of insurance business and modernise the Crown option”.<sup>1054</sup> I classify this as *exogenous, long-run*.

These changes account for 95 per cent of the increases and 100 per cent of the remissions.

## **2007 (A): Budget 21st March 2007**

*Chancellor: Gordon Brown; Prime Minister: Tony Blair (Labour)*

### **Context**

Growth had picked up in 2006 and “the world economy grew at a faster rate in 2006 than at any time since 1990”.<sup>1055</sup> Between December 2006 and March 2007 the claimant count fell by another 35,000 or 0.2 percentage points. However, in March, the 12-month inflation rate moved outside the target range, hitting 3.1 per cent, although it was to fall back a bit in the following months. In March the Treasury forecast “the small negative output gap is expected to have closed early in 2007 and growth is forecast to continue at close-to-trend rates throughout the forecast horizon”.<sup>1056</sup> Interestingly, the EFSR notes the large and rapid fluctuations in the value of financial assets in early 2007, though there is little sense of high risk.<sup>1057</sup>

### **Overall Budget Objectives**

The Chancellor argued “this Budget will set out the long-term reforms that we must now make to meet the global challenges ahead and to build a Britain of high aspiration and high achievement for the years to come”.<sup>1058</sup> These were “reforms to simplify the tax system, to provide help for pensioners, support for families and make work pay”, a major package of reforms to the corporate tax system, further measures to tackle fraud and avoidance and steps to tackle climate change.<sup>1059</sup> The Budget also set the expenditure envelope for the autumn

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<sup>1051</sup> Ibid.

<sup>1052</sup> PBR December 2006, page 155

<sup>1053</sup> PBR December 2006, page 125

<sup>1054</sup> PBR December 2006, page 124

<sup>1055</sup> EFSR 2007, paragraph 2.25

<sup>1056</sup> EFSR 2007, paragraph 2.26

<sup>1057</sup> EFSR 2007, paragraph 2.37

<sup>1058</sup> HC Deb 21 March 2007 c815

<sup>1059</sup> EFSR 2007, paragraph 1.12



spending review – increasing real total public spending by an average of 2 per cent per year.<sup>1060</sup> Despite slightly higher than forecast borrowing: “Budget 2007 projections for the public finances show that the Government is meeting its strict fiscal rules”.<sup>1061</sup> The role of the automatic stabilisers was emphasised and there was no discretionary stimulus or consolidation. The discretionary measures were focused on long-term objectives and were, in the aggregate, neutral on the fiscal stance.<sup>1062</sup> However, 2007 contained sizable tax reforms: some very significant remissions were offset by other increases. I discuss the measures in detail below and they were largely *exogenous, long-run or ideological*.

### Major Budget Tax Measures

The most significant reform was a cut in the basic rate of income tax to 20 pence<sup>1063</sup> from 6<sup>th</sup> April 2008. At the same time, the starting rate of income tax – the 10p rate – was removed altogether for non-savings income. The net effect of this was an income tax cut, although it obviously affected parts of the distribution differently. The EFSR explains: “the Government will simplify the tax system by removing the starting rate and cutting the basic rate of income tax from 22 pence to 20 pence from April 2008, creating a simpler structure of two rates: a 20 pence basic rate and a 40 pence higher rate. This is the lowest basic or standard rate of income tax for over 75 years”.<sup>1064</sup> In his speech the Chancellor, somewhat rhetorically, finished his speech “to reward work, to ensure working families are better off and to make the tax system fairer, I will from next April cut the basic rate of income tax from 22p to 20p, the lowest basic rate for 75 years. I commend this Budget to the House”.<sup>1065</sup> In part these stem from a desire to lower income tax for the poorest – although this is clearly offset by the removal of the lower rate. It also seems to be playing to middle income tax payers (and this is how it was seen by the media). I classify the reforms as *exogenous, ideological*. In addition, there was an above-inflation increase in age-related allowances. The Chancellor explained: “I am also able today to take several hundred thousand of today’s pensioners out of income tax”.<sup>1066</sup> I classify this in the same way as the other income tax changes.

The other big change in personal taxation was a further alignment of the income tax and National Insurance thresholds, described as “part of the next stage of reform”,<sup>1067</sup> building on the 2001 changes (categorised at the time as *exogenous, ideological*). The EFSR explains: “These reforms will mean that there are only two main rates of income tax, and that income tax and NICs rates will apply to the same bands of income”.<sup>1068</sup> I classify these changes as I did in 2001.

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<sup>1060</sup> EFSR 2007, paragraph 1.13

<sup>1061</sup> EFSR 2007, page 17

<sup>1062</sup> EFSR 2007, table 2.6

<sup>1063</sup> Interestingly, this finally fulfilled a key goal of the previous Conservative Government, yet achieved 10 years later by a different administration.

<sup>1064</sup> EFSR 2007, paragraph 5.55

<sup>1065</sup> HC Deb 21 March 2007 c828

<sup>1066</sup> HC Deb 21 March 2007 c826

<sup>1067</sup> EFSR 2007, page 106

<sup>1068</sup> *Ibid.*

There were two major remissions for businesses. Firstly, the main rate of Corporation Tax was reduced to 28 per cent from 6<sup>th</sup> April 2008 “because our goal is and will continue to be the most competitive business tax regime of the major economies”.<sup>1069</sup> Secondly, there was to be a new annual investment allowance (AIA) from 1<sup>st</sup> April 2008: “this will target support on all businesses that are investing for growth. The AIA will be particularly beneficial to small and medium-sized businesses”.<sup>1070</sup> I classify both these changes as *exogenous, long-run*.

Turning to the tax increases, general capital allowances for plant and machinery were reduced from 25 per cent to 20 per cent from 6<sup>th</sup> April 2008. This was billed as part of a package of reforms to create “a simpler two-rate system of capital allowances... [with the reduction of the rate] bringing it closer into line with economic depreciation”.<sup>1071</sup> I classify the change as *exogenous, long-run*. The net effect was a tax rise, very closely offsetting the Corporation Tax cut (although not discussed). Even if it were part of the Corporation Tax package, it would still be classified as *exogenous, long-run*.

The final major increase was a ‘rationalisation’ of empty property relief from 1<sup>st</sup> April 2008 “in response to these recommendations [of Sir Michael Lyons’ Inquiry into Local Government Finance] and those of the Barker Review of Land Use Planning”.<sup>1072</sup> I therefore classify this as a long-term reform to the tax system and *exogenous, long-run*.

These changes account for nearly 80 per cent of the increases and over 90 per cent of the remissions.

## **2007 (B): Pre-Budget Report 9th October 2007**

*Chancellor:* Alistair Darling; *Prime Minister:* Gordon Brown (Labour)

### **Context**

Gordon Brown became Prime Minister in the summer of 2007 and Alistair Darling replaced him as Chancellor. Opening his statement the new Chancellor explained that “The background to this year’s report and spending review is a time of increased international economic uncertainty and a more fragile global environment which has already seen turbulence in America, Asia and Europe”<sup>1073</sup> though the PBR still stated that “In 2007, the UK economy has continued to perform strongly”.<sup>1074</sup> Indeed, by October 2007 consumer price inflation was around target and claimant unemployment had fallen by 0.2 percentage points. However, “Growth in the G7 economies in 2007 is expected to slow to 2 per cent, due in particular to the ongoing slowdown in the US”.<sup>1075</sup> The Treasury noted the future risks but still forecast 2 to 2½ per cent growth for 2008. There was also an important political backdrop to the PBR. In the autumn of 2007 there was considerable speculation that Brown might call a General Election.

<sup>1069</sup> HC Deb 21 March 2007 c820

<sup>1070</sup> EFSR 2007, page 49

<sup>1071</sup> EFSR 2007, page 51

<sup>1072</sup> EFSR 2007, page 73

<sup>1073</sup> HC Deb 9 October 2007 c167

<sup>1074</sup> PBR December 2007, page 15

<sup>1075</sup> PBR December 2007, paragraph 2.20

Furthermore, just before the PBR the Conservative Party announced a series of new economic policies, cutting Inheritance Tax and clamping down on non-domiciles.

### **Overall PBR Objectives**

The Comprehensive Spending Review (CSR) accompanied the October PBR and there was considerable emphasis on specific spending decisions — although the overall envelope had been set in March. The Government also set out 30 Public Service Agreements (PSAs) to articulate the Government’s highest priorities. These were grouped under familiar long-term objectives.<sup>1076</sup> The Chancellor noted: “I will set out how we will maintain that stability and strong economy, meet our international obligations, improve our public services and invest more in the highest standard of education and health care, and equip our country for the future as we meet these new global challenges”.<sup>1077</sup> There was some recognition of the slowdown and the role of automatic stabilisers was emphasised – with higher than expected borrowing justified this way with “the public finances accommodating the impact of financial market disruption with borrowing increasing in 2007-08 and with modest discretionary fiscal loosening in 2007-08 and 2008-09 helping to smooth the path of the economy. From 2008-09 borrowing falls year on year, supported by discretionary fiscal tightening from 2009-10, the impact of which builds towards the end of the projection period”.<sup>1078</sup> However, the major ‘loosening’ was a cut in inheritance tax – which appeared electorally motivated (as well as tax increases on non-domiciles). The ‘future tightening’ was also largely offset by increased public investment in 2010-11. This implies the PBR was for long-term and political motives, not cyclical ones; on balance, the PBR was a mix of exogenous and spending-driven actions.

### **Major PBR Tax Measures**

There was one major remission, a change to inheritance tax allowances for married couples and civil partners from 9<sup>th</sup> October 2007. The PBR explained: “The Government will therefore make the IHT system fairer by ensuring that if a person’s tax-free allowance is not used on their death, it can be transferred to their surviving spouse or civil partner, enabling every married couple or civil partnership to benefit from double the tax-free allowance – £600,000 this year – in addition to spouse relief. Furthermore, to ensure that people who have lost a spouse or civil partner prior to today can also benefit, the Government will extend this entitlement to the three million existing widows, widowers and bereaved civil partners”.<sup>1079</sup> Being the only tax remission, this would seem an unusual choice for a discretionary stimulus – and there was no overall discussion of such a policy. The political dimension is also important. Philip Webster and Gary Duncan writing in *The Times* on the 10th October 2007 explained: “Alistair Darling raided the Conservative election locker yesterday, stealing proposals to exempt the vast majority of families from Inheritance Tax”. Other commentary echoed this feeling. It is also worth noting that, in the speech itself, the Chancellor directly discussed his

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<sup>1076</sup> PBR December 2007, chapter 1

<sup>1077</sup> HC Deb 9 October 2007 c167

<sup>1078</sup> PBR December 2007, paragraph 2.39

<sup>1079</sup> PBR December 2007, paragraphs 5.76-7

versus the Conservative proposal, explaining that his approach allowed for more spending on public services.<sup>1080</sup> The change therefore appears political and I classify it as *exogenous, ideological*.

There were five major tax increases. Firstly, the residence and domicile taxation was ‘modernised’ as “reforms are required to make the current arrangement operate fairly”.<sup>1081</sup> Interestingly, like the inheritance tax changes, this must also be set against the political backdrop. In his response the Shadow Chancellor George Osborne argued: “For 10 years, he [the Chancellor] could have reformed air passenger duty. For 10 years, he did nothing on non-doms...Now, a week after we introduced our plans, the Prime Minister and the Chancellor scrabble around in a panic trying to think of something to say. The Prime Minister talks about setting out his vision of the country, but he has to wait for us to tell him what it is”.<sup>1082</sup> I therefore classify this change as *exogenous, ideological*.

Secondly, Capital Gains Tax reform set a single 18 per cent rate from 6<sup>th</sup> April 2008 and “this will put the C.G.T. regime on a more sustainable footing and help investors plan for the long-term”.<sup>1083</sup> The yield would build up over several years and nothing further is said. I err on the side of caution, assuming that it was to offset higher spending and classify this as *endogenous, spending-driven*. This is also alluded to in the speech: “I can tell the House that the changes that I propose to Capital Gains Tax also, taken together with the tax loopholes that I am closing, will ensure that those working in private equity pay a fairer share”.<sup>1084</sup>

There was another package of anti-avoidance measures. The PBR noted “avoidance of tax by a minority leads to distortion in competitive markets, unfairness between individuals and pressure on the public finances”.<sup>1085</sup> In previous years these measures have been classified as spending-driven and, given both this comment in the PBR and the increases in expenditure announced, the classification would again appear prudent. The changes were: the removal of the N.I.C.s exemption for holiday pay from 30<sup>th</sup> October 2007 as “the Government has become aware that the exemption is now being used by employers outside construction solely to reduce their and their employees’ N.I.C.s liability, contrary to the original policy intention”;<sup>1086</sup> action on ‘income shifting’ from 6<sup>th</sup> April 2008 as “The Government believes it is unfair that some individuals arrange their affairs to gain a tax advantage by shifting part of their income, from dividends or partnership profits, to another person who is subject to a lower rate of tax”;<sup>1087</sup> measures tackling life insurance companies’ avoidance from 9<sup>th</sup> October 2007; measures to counter interest relief exploitation by individuals from 9<sup>th</sup> October 2007 and changes to Vehicle Excise Duty enforcement from 1<sup>st</sup> September 2008.

Finally, Air Passenger Duty was replaced by Aviation Duty from 1<sup>st</sup> November 2009 “to send better environmental signals and ensure aviation makes a greater contribution to

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<sup>1080</sup> HC Deb 9 October 2007 c174

<sup>1081</sup> PBR December 2007, page 91

<sup>1082</sup> HC Deb 9 October 2007 c175

<sup>1083</sup> PBR December 2007, page 90

<sup>1084</sup> HC Deb 9 October 2007 c171

<sup>1085</sup> PBR December 2008, paragraph 5.93

<sup>1086</sup> PBR December 2007, page 94

<sup>1087</sup> PBR December 2007, page 93

covering its environmental costs”.<sup>1088</sup> This raised a considerable amount of revenue. As the primary motivation, I take this comment at face value and (given Osborne’s comments about political motives) treat it as *exogenous, ideological*. To deal with the possibility that this is also correlated with the other revenue raisers (to offset spending) I assign an alternative motivation of *endogenous, spending-driven*.

These changes account for over 95 per cent of the remissions of the tax increases.

## **2008 (A): Budget 12th March 2008**

*Chancellor:* Alistair Darling; *Prime Minister:* Gordon Brown (Labour)

### **Context**

Growth had slowed slightly in 2007 to 2.6 per cent, although the first quarter of 2008 was a respectable 0.7 per cent. Unemployment continued to fall — in March 2008 the claimant count was over 110,000 less even than the previous PBR, standing at only 2.4 per cent. The EFSR claimed “The Budget reports that the economy is stable and resilient, and continuing to grow, and that the Government is meeting its strict fiscal rules for the public finances”.<sup>1089</sup> However, over the previous year the world economy had been shocked by disruption in global financial markets triggered by the U.S. sub-prime mortgage market in July 2007. In the U.K. the Government was forced to nationalise failing bank Northern Rock. The Treasury’s forecasts did reflect this turbulence, with growth expected to slow to 1¾ to 2¼ per cent in 2008 before picking up again.

### **Overall Budget Objectives**

The March EFSR noted the previous PBR’s measures as “modest discretionary fiscal loosening in 2007-08 and 2008-09, followed by fiscal policy tightening in the medium term”,<sup>1090</sup> although this was “to accommodate the impact of financial market disruption”,<sup>1091</sup> and, given the actual PBR measures, this may be more of a retrospective reflection. The public finances had been affected by this downturn in the economy but, reflecting on the past 11 years’ emphasis on automatic stabilisers, “This increase in borrowing supports economic stability, in line with one of the key purposes of the fiscal framework”.<sup>1092</sup> However, it continued “The Government is also taking action in Budget 2008 to maintain sound public finances in the medium term”.<sup>1093</sup> Consequently, of the discretionary measures the EFSR explains: “Budget changes are fiscally neutral in 2008-09 and 2009-10. As the economy returns to trend, discretionary tightening reduces the deficit in later years of the projection period”.<sup>1094</sup> There was still the focus on the longer term and the Government published an

<sup>1088</sup> PBR December 2007, page 123

<sup>1089</sup> EFSR 2008, chapter 1: introduction.

<sup>1090</sup> EFSR 2008, page 14

<sup>1091</sup> *Ibid.*

<sup>1092</sup> *Ibid.*

<sup>1093</sup> *Ibid.*

<sup>1094</sup> EFSR 2008, page 35

analysis of long-term performance and strategic challenges alongside the Budget. The Chancellor explained “Even in today’s difficult and uncertain times, we are determined that we will not be diverted from our long-term aim: to equip our country for the challenges of the future, to confront climate change and to end child poverty in a generation”.<sup>1095</sup> In short, there was no discretionary stimulus in the aggregate and policy was still focused on the familiar longer term objectives but there was to be some discretionary fiscal consolidation over the medium term to offset the effects of the current slowdown – in fact, the net effect of the tax changes was to raise revenue even in 2008-09. Many of the measures I therefore categorise as for deficit reduction. Measures with a deferred implementation date will be treated as future changes to offset current remissions and therefore *exogenous, deficit consolidation*.

### Major Budget Tax Measures

The only major remission was a temporary deferment of the fuel duty increases from 1<sup>st</sup> October 2008. The EFSR explains that this is “consistent with the Government’s overall stance of ensuring stability for the long-term, while maintaining responsiveness to short-term conditions”.<sup>1096</sup> I therefore classify this as *endogenous, demand management*. However, this was coupled with the announcement that fuel duties would rise with inflation on 1<sup>st</sup> April 2009 and above-inflation from 1<sup>st</sup> April 2010. The inflation rise reflected the existing “policy that fuel duty rates should rise each year at least in line with inflation”<sup>1097</sup> and is therefore excluded. However, I treat the above-inflation rise in 2010 as a separate announcement. Given the overall objectives discussed above — and for lack of a more detailed justification — I classify this as *exogenous, deficit consolidation*. There were consequential changes in the rebated oil duty as the Government had committed itself to a fixed differential. I classify this with the changes in fuel duty.

I now turn to the major increases in revenue. Firstly, Excise Duty on alcohol was raised 6 per cent above inflation from 17<sup>th</sup> March 2008. It was then to be increased by 2 per cent above indexation in the subsequent years up to and including 2013. The EFSR explains “As incomes have risen, alcohol has become increasingly more affordable”.<sup>1098</sup> The initial rise will be correlated with the other contemporaneous changes and so I classify this as *endogenous, deficit reduction*. I therefore use the 2008-09 figure in the tax series. The latter increases introduce another escalator. I will treat this as a new measure each year when confirmed and will assign the classification *exogenous, deficit consolidation*.

The biofuels duty differential was to cease from 6<sup>th</sup> April 2010 “and the Renewable Transport Fuel Obligation will provide the total support for biofuels ... The existing duty differential for biofuels has limited scope to recognise different biofuels, whereas the newer RTFO will provide a sharper environmental focus through its sustainability criteria”.<sup>1099</sup> This does not appear part of the deficit consolidation plan; I therefore classify this as *exogenous, ideological*.

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<sup>1095</sup> HC 12 March 2008, c285

<sup>1096</sup> EFSR 2008, page 97

<sup>1097</sup> *Ibid.*

<sup>1098</sup> EFSR 2008, page 69

<sup>1099</sup> EFSR 2008, page 98

There was also to be reform of the V.E.D. structure. This had two implementation dates: 1<sup>st</sup> April 2009 and 1<sup>st</sup> April 2010. I use the change in yield between the dates to distinguish the two implementations. Environmental reasons were given for this change “V.E.D. will be restructured with new bands, based on carbon dioxide so that people gain financially by choosing the car with the best environmental performance in a given group”.<sup>1100</sup> However, these changes provide an increasing yield and, given the overall objectives in future years, I classify this as *exogenous, deficit consolidation*.

Finally, the Government announced a package of tax avoidance measures to be implemented from 12th March 2008. These were introduced by arguing “Protecting tax revenues against fraud and artificial avoidance schemes is essential if the tax system is to support the Government’s objectives. The vast majority of taxpayers seek to contribute their fair share towards funding public services. However the minority who do not put pressure on the public finances and impose costs on others, that undermine fairness and economic performance”.<sup>1101</sup> As in previous years, I classify these changes as *endogenous, spending-driven*. These were avoidance measures aimed at disguising interest, Controlled Foreign Companies, intangible assets, North Sea oil and gas, double taxation treatise, sideways loss relief and Stamp Duty Land Tax. Being contemporaneous, and given the overall Budget objectives, the other possible classification would have been *endogenous, deficit reduction* – but either way the change is still endogenous.

These changes account for over 80 per cent of the increases and of the remissions.

## **2008 (B): Pre-Budget Report 24th November 2008**

*Chancellor:* Alistair Darling; *Prime Minister:* Gordon Brown (Labour)

### **Context**

The UK was in recession by November 2008: growth in the second and third quarters was negative and the Treasury’s March forecast appeared hopelessly off the mark. Unemployment had also been rising since March, being 3.4 per cent by the PBR. Inflation had also badly breached the target — the 12-month CPI rate was 4.1 per cent in November. The Government had announced an increase in the income tax personal allowance by £600 in May 2008 delivering “support to the economy”.<sup>1102</sup> The Treasury’s growth forecast was now for a fall of ¼ per cent (on a year earlier) in the second half of 2008, still leaving output up as a whole by ¾ per cent on a year earlier, with growth in 2009 forecast to be negative -1¼ to -3/4 per cent.<sup>1103</sup>

### **Overall PBR Objectives**

Given the context, it is no surprise that the PBR 2008 was called ‘Facing global challenges: Supporting people through difficult times’. Indeed the PBR was to reverse 11 years of reliance

<sup>1100</sup> EFSR 2008, page 121

<sup>1101</sup> EFSR 2008, page 71

<sup>1102</sup> PBR November 2008, page 14

<sup>1103</sup> PBR November 2008, paragraph 2.17

on automatic stabilisers and monetary policy. With the Bank Rate headed towards zero this was a Budget with a significant discretionary fiscal stimulus – and in many places it is directly referred to as such. The Chancellor opened: “These are extraordinary, challenging times for the global economy, and they are having an impact on businesses and families right across the world. In these exceptional economic circumstances, I want to take fair and responsible steps to protect and support businesses and people now, while putting the public finances on the right path for the future. That is what I will do today... My central objective is to respond to the consequences of this global recession on our country, both now and in the future”.<sup>1104</sup> The PBR summary explains that it “Announces discretionary fiscal policy to support the economy through these difficult times followed by a sustained fiscal consolidation from 2010-11”.<sup>1105</sup> The net total of discretionary measures was also directly cited: “discretionary action of £16 billion will deliver a fiscal stimulus package of around 1 per cent of GDP in total in 2009-10”.<sup>1106</sup> Even sections of the PBR reminiscent of the Government’s long-term objectives – such as “improving public services” or “helping people fairly” – are focused on the fiscal stimulus or the future consolidation.<sup>1107</sup> I therefore classify all the cuts as stimulus measures. Many of the rises will then be *exogenous, deficit consolidation*, i.e. future tax rises to pay for current commitments.

### Major PBR Tax Measures

The centrepiece of the tax stimulus was the £7.8 billion (0.5 per cent of GDP) V.A.T. cut. The Chancellor argued “to prevent the recession from deepening, we also need to take action to put money into the economy immediately... I have decided that the best and fairest approach is a measure which will help everyone, including millions of households that pay no direct tax at all, and it is to deliver a much-needed extra injection of spending into the economy right now. I therefore propose to cut V.A.T.”.<sup>1108</sup> I classify this as *endogenous, demand management*.

The Government had, however, already taken action, announcing on 13<sup>th</sup> May 2008 a £600 increase in the personal allowance. In the PBR this was made permanent with a further rise above indexation from 6<sup>th</sup> April 2008. The EFSR motivates these changes as “The Government has already taken action to help people through the current global economic difficulties. Building on this, the Government announces further packages of targeted support, providing additional help to those who need it most now”.<sup>1109</sup> I therefore classify this as *endogenous, demand management*.

Now I turn to the future tax increases. There was an increase in the rates of alcohol and tobacco duties “to offset the effects of the temporary reduction in VAT, increasing alcohol and tobacco duties, maintaining these increases after December 2009 to support fiscal

<sup>1104</sup> HC Deb 24 November 2008 c489

<sup>1105</sup> PBR November 2008, page 1

<sup>1106</sup> PBR November 2008, paragraph 2.39

<sup>1107</sup> For example, in the “Improving Public Services” chapter, the introduction explains “In the short term, the Government is focused on providing targeted support to the individuals and businesses most affected by the global economic shocks” announcing measures to provide short term support as well as efficiency savings targets to aid the consolidation (p.107).

<sup>1108</sup> HC Deb 24 November 2008, c495

<sup>1109</sup> PBR November 2008, page 83



consolidation”.<sup>1110</sup> There are two different changes: one endogenous change to offset the V.A.T fall (lessening the size of the stimulus), but the second action is exogenous – the decision to keep the duty at the higher rate when V.A.T. returns to normal, thus increasing alcohol prices. I split up the revenue yield into a temporary measure which reverses when the V.A.T. cut comes to an end and a rise on the same date. The temporary measure is *endogenous, demand management* – classified together with the V.A.T. cut. The longer term measure is *exogenous, deficit consolidation*.

The other tax increases were less complicated. As discussed, from the outset the PBR “Announces discretionary fiscal policy to support the economy through these difficult times followed by a sustained fiscal consolidation from 2010-11 when the economy is expected to be recovering and able to support a reduction in borrowing”.<sup>1111</sup> The measures listed under this comment are: a restriction of personal allowance to half for earnings over £100,000 and to zero from £140,000 from 6<sup>th</sup> April 2010; an additional higher income tax rate of 45 per cent above £150,000 from 6<sup>th</sup> April 2011; and an increase in the employee, employer and self-employed rates of National Insurance contributions by 0.5 per cent from 6<sup>th</sup> April 2011. Given the clear statement of purpose and the deferred implementation, I classify these as *exogenous, deficit consolidation*.

As part of the National Insurance changes, the N.I.C.s primary threshold was aligned with the personal allowance, also from 6<sup>th</sup> April 2011. As this reduced the revenue from NICs and was implemented on the same date, I classify it together with the overall N.I.C. package – the arithmetic effect will be to correctly reduce the yield raised from 6<sup>th</sup> April 2011. Furthermore, the PBR explains “This will ensure that the fiscal consolidation is broad based, without affecting those over state pension age, who do not pay N.I.C.s”.<sup>1112</sup> I classify this as *exogenous, deficit consolidation*.

These changes account for nearly 90 per cent of the consolidation and of the stimulus remissions.

## **2009: Budget 22<sup>nd</sup> April 2009**

*Chancellor:* Alistair Darling; *Prime Minister:* Gordon Brown (Labour)

### **Context**

Growth in 2008 was 0.6 per cent but by April 2009 GDP had been falling continuously for four quarters. In 2009 the world economy was forecast to contract for the first time in the post-war period.<sup>1113</sup> Unemployment had risen by over 400,000 on the claimant count since the PBR alone. The inflation rate was now falling but by March 2009 the Bank Base Rate had hit 0.5 per cent and the Bank of England announced its Quantitative Easing programme. The U.K. growth forecasts were substantially revised down even since the PBR, with a forecast

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<sup>1110</sup> PBR November 2008, page 1

<sup>1111</sup> PBR November 2008, page 1

<sup>1112</sup> PBR November 2008, page 85

<sup>1113</sup> EFSR 2009, paragraph 1.5

contraction of 3½ per cent for 2009 (but picking up again in 2010 and 2011). Public borrowing also became a key issue with public sector net borrowing forecast to top 12 per cent of GDP in 2009-10.<sup>1114</sup>

### Overall Budget Objectives

The Government's support package had a variety of features: a fiscal stimulus, a huge Quantitative Easing programme, the lowest interest rates since 1694 and financial interventions such as the Asset Protection Scheme. But the economy clearly remained in serious trouble. The EFSR opens "Building on the strategy set out at the 2008 Pre-Budget Report, the Budget announces targeted discretionary support for the economy through these difficult times, while continuing sustained fiscal consolidation from 2010-11". This Budget therefore "announces further targeted support for those most affected by the downturn and to ensure a sustained and sustainable recovery".<sup>1115</sup> These measures included: further support to businesses and households hit hardest, further investment in infrastructure and measures to support a move to a low carbon economy.<sup>1116</sup> Like the 2008 PBR, Budget 2009 was a combination of short-term discretionary stimulus and longer-term consolidation. Repeating the message from previous Labour Budgets, automatic stabilisers were allowed to work and the Chancellor explained: "Allowing borrowing to rise — protecting services, helping people and businesses — is the right thing to do".<sup>1117</sup> In a succinct comment, the Chancellor argued "We need to help people now. We need to maintain key public services now. We need to invest in the future, but we also need to make sure that we maintain public finances on a sustainable footing". In conclusion, defending his approach, Darling declared "You can grow your way out of recession; you cannot cut your way out of it".<sup>1118</sup> The short term measures were mostly endogenous, the longer term ones were for fiscal consolidation.

### Major Budget Tax Measures

The biggest remission was designed to help businesses. Capital allowances for new investment were increased to 40 per cent for one year from 6<sup>th</sup> April 2009. This was motivated as "a platform for growth as the UK emerges from the recession... a package of measures that will support the adjustment towards renewed economic growth and improve the UK's competitiveness".<sup>1119</sup> The measure was framed in terms of long-term growth and falls under a section titled "Preparing for the Recovery: Encouraging Investment".<sup>1120</sup> However, the catalyst was very much the downturn itself and I classify this as *endogenous, supply stimulus*. Other comments reinforce this view: "The Government is implementing targeted action that will support business investment and help the economic recovery".<sup>1121</sup>

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<sup>1114</sup> EFSR 2009, table 1.1

<sup>1115</sup> EFSR 2009, page 29

<sup>1116</sup> EFSR 2009, page 29

<sup>1117</sup> HC Deb 22 April 2009 c243

<sup>1118</sup> HC Deb 22 April 2009 c250

<sup>1119</sup> EFSR 2009, page 6

<sup>1120</sup> EFSR 2009, page 76

<sup>1121</sup> *Ibid.*

The second measure was designed to help business through the downturn. In the 2008 PBR a one- year extension of trading loss carry-back for business from one to three years was granted. This was extended to two years from 24<sup>th</sup> November 2008 “to support more businesses through the downturn”.<sup>1122</sup> I classify this, as in November 2008, as *endogenous, demand management*, being to offset the fall in demand. These two remissions made up over 80 per cent of the total.

I now turn to the measures designed to raise revenue. The EFSR argued “Over the medium-term the Government’s fiscal policy objective is to ensure sound public finances and that spending and taxation impact fairly within and between generations. Building on the significant fiscal consolidation announced in the 2008 Pre-Budget Report, this Budget sets out tax and spending measures that reduce borrowing by £26½ billion by 2013-14”.<sup>1123</sup> Four measures made up over 70 per cent of the increases. Three I classify as *exogenous, deficit consolidation*: firstly, there was an increase in the top rate of income tax to 50 per cent on incomes above £150,000 from 6<sup>th</sup> April 2010. Secondly, the income tax personal allowance was restricted for those with incomes over £100,000 from 6<sup>th</sup> April 2011. Thirdly, tax relief on pension contributions for those with incomes over £150,000 was restricted, tapered down to 20 per cent from 6<sup>th</sup> April 2011.

The fourth measure was a fuel duty increase of 2 pence per litre on 1<sup>st</sup> September 2009 and 1 pence per litre in real terms each year from 2010 to 2013. This introduced a new fuel duty escalator, with the usual problems of assigning a ‘full year’ cost. I therefore take the 2009-10 yield and assign it to 1<sup>st</sup> September 2009. As in previous years, I treat each confirmed future increase as a new measure. Given that 2009 is the final Budget I consider, the later revenue estimates are not included in the data series. As the first implementation date is ‘close’ to the announcement, and in 2009 growth was negative, I classify this change as *endogenous, deficit reduction*.

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<sup>1122</sup> EFSR 2009, page 73.

<sup>1123</sup> EFSR 2009, page 3

## References in the Long Appendix

- Blanchard, O., and Perotti, R. (2002). "An empirical characterization of the dynamic effects of changes in government spending and taxes on output." *Quarterly Journal of Economics*, 117, 1329-1368.
- Britton, A. (1991) "Macroeconomic policy in Britain 1974-87". *Cambridge University Press*.
- Cairncross, A. (1992) "The British Economy Since 1945". *Blackwell Publishers*.
- Cairncross, A. (1994) "Economic Performance and Policy 1964-1990" in Floud, R. and McCloskey, D. "The Economic History of Britain since 1700 Volume 3 (Second Edition)". *Cambridge University Press*.
- Copey, R. and Woodward, N. (1996) "Britain in the 1970s: The Troubled Economy". *Routledge Publishers*.
- Dow, C. (1964) "The management of the British economy 1945-60". *The Syndics of the Cambridge University Press*.
- Institute for Fiscal Studies (2009) "A Survey of the UK Tax System", *Briefing Note No. 9*.
- Ramey, V. A. (2011). "Identifying government spending shocks: It's all in the timing." *Quarterly Journal of Economics*, 126(1), 1-50.
- Ramey, V., and Shapiro, M. (1998). "Costly capital reallocation and the effects of government spending." *Carnegie Rochester Conference Series on Public Policy*, 48, 145-194.
- Romer, C., and Romer, D. (1989). "Does monetary policy matter? A new test in the spirit of Friedman and Schwartz." *In NBER Macroeconomic Annual 1989*.
- Romer, C., and Romer, D. (2004). "A new measure of monetary shocks: Derivation and implications." *American Economic Review*, 94(4), 1055-84
- Romer, C. and Romer, D. (2009) "A Narrative Analysis of Postwar Tax Changes". *Available from the authors' website*.
- Romer, C. and Romer, D. (2010) "The macroeconomic effects of tax changes: Estimates based on a new measure of fiscal shocks". *American Economic Review*, 100(June), 763-801.
- UK Parliament (2000), "Select Committee on Social Security Fifth Report". *House of Commons*.

## A.2 Chapter 2 Data Appendix

Table A.1: Chapter 2 Data sources

Series	Source	Description	Series
Output	ONS	GDP	ABMI
Consumption	ONS	Final household consumption expenditure	ABJR
Investment	ONS	Gross Fixed Capital Formation	NPQT
Imports	ONS	Trade in Goods and Services: Total Imports	IKBL
Exports	ONS	Trade in Goods and Services: Total Exports	IKBK
Real Wage	ONS	Average Earnings Index divided by GDP deflator	LNMQ/YBGB
Hours	ONS	Weekly hours worked per worker	YBUS/MGRZ
Inflation	ONS	Change in Retail Price Index	CZBH
Index of Production	ONS	Covers manufacturing, mining and quarrying and energy supply	CKYW
Interest rate	Bank of England	Bank Rate/ Minimum Lending Rate/ Repo Rate / Official Bank Rate	“Official Bank Rate history”
Population	Eurostat	UK Total Population (Datastream)	
Total government expenditure	ONS	Nominal total managed expenditure minus debt interest divided by GDP deflator	(EBFT-NMFX)/YBGB
Revenues	ONS	Total receipts divided by GDP deflator	ANBV/YBGB
GDP deflator	ONS	Implicit price deflator for GDP	YBGB
Nominal GDP	ONS	GDP in current prices	YBHA

Specific data definitions are shown in table (A.1). Per capita variables are the real chained volume measures, seasonally adjusted, divided by population. Log variables are multiplied by 100 so that the log change in a variable is a growth rate expressed in per cent (the tax variable is a percentage).

Revenues are the only variable not cyclically adjusted at source. It is therefore cyclically adjusted using the X-12 ARIMA software from the United States Census Bureau.

### A.3 Implementation lags in the UK data series

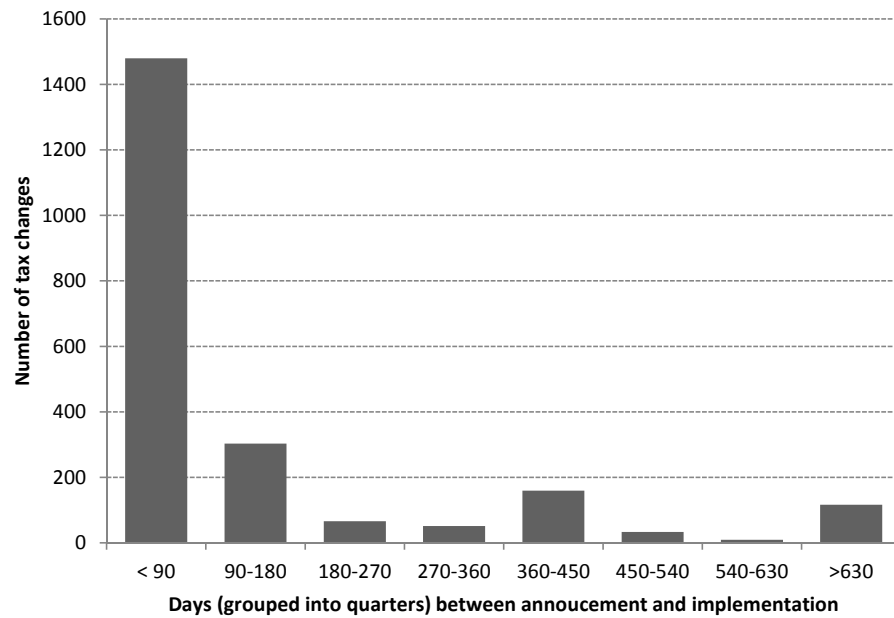


Figure A.1: *Distribution of implementation lags, grouped by quarters (90 days)*

## Appendix B

# Appendices to Chapter 3

### B.1 The linearised model

Lower case letters with hats denote the percentage point deviation from steady state. The details of the steady state relationships are given in Appendix B.2, together with the calibrated and estimated parameter values in the text.

#### B.1.1 Households

$$\hat{\lambda}_t = \frac{-\sigma \hat{x}_t}{1 - \mu\beta} + \mathbb{E}_t \frac{\sigma \mu \beta \hat{x}_{t+1}}{1 - \mu\beta} + \frac{\hat{u}_t^b}{1 - \mu\beta} - \mathbb{E}_t \frac{\mu \beta \hat{u}_{t+1}^b}{1 - \mu\beta} \quad (\text{B.1})$$

with

$$-x_t + \frac{\hat{c}_t}{1 - \mu} - \frac{\mu}{1 - \mu} \hat{c}_{t-1} \quad (\text{B.2})$$

$$\hat{u}_t^l + \kappa \hat{n}_t = \hat{\lambda}_t + \hat{w}_t - \hat{\tau}_t^n \frac{\tau^n}{1 - \tau^n} \quad (\text{B.3})$$

$$\hat{\lambda}_t - \mathbb{E}_t \hat{\lambda}_{t+1} + \hat{q}_{k,t} = \mathbb{E}_t (1 - \beta(1 - \delta)) (\hat{r}_{t+1}^k + \hat{v}_{t+1} - \frac{\tau^k}{1 - \tau^k} \hat{\tau}_{t+1}^k) + \beta(1 - \delta) \mathbb{E}_t \hat{q}_{k,t+1} - \beta \delta_1 \mathbb{E}_t \hat{v}_{t+1} \quad (\text{B.4})$$

$$\hat{q}_{k,t} - \phi_k'' (1 + \beta) \hat{i}_t + \phi_k'' \hat{i}_{t-1} - \phi_k'' \hat{u}_t^i + \beta \phi_k'' \mathbb{E}_t \hat{i}_{t+1} + \frac{\Gamma}{1 - \Gamma} \hat{\Gamma}_t + \beta \phi_k'' \mathbb{E}_t \hat{u}_{t+1}^i \quad (\text{B.5})$$

$$\hat{\Gamma}_t = \mathbb{E}_t \hat{\lambda}_{t+1} - \hat{\lambda}_t + (1 - \beta(1 - \delta^\tau)) \mathbb{E}_t \hat{\tau}_{t+1}^k + \beta(1 - \delta^\tau) \mathbb{E}_t \hat{\Gamma}_{t+1} \quad (\text{B.6})$$

$$\hat{r}_t^k = \hat{q}_{k,t} + \frac{\delta_2}{\delta_1} \hat{v}_t + \hat{\tau}_t^k \frac{\tau^k}{1 - \tau^k} \quad (\text{B.7})$$

$$\hat{k}_t = \delta \hat{i}_t + (1 - \delta) \hat{k}_{t-1} - \delta_1 \hat{v}_t \quad (\text{B.8})$$

$$\hat{\mathcal{K}}_t^\tau = \frac{I}{\mathcal{K}^\tau} \hat{i}_t + (1 - \delta^\tau) \hat{\mathcal{K}}_{t-1}^\tau \quad (\text{B.9})$$

#### B.1.2 Firms

$$\hat{y}_t = \alpha \hat{v}_t + \alpha \hat{k}_{t-1} + (1 - \alpha) \hat{z}_t + (1 - \alpha) \hat{n}_t \quad (\text{B.10})$$

$$\hat{w}_t = \hat{m}c_t + \hat{y}_t - \hat{n}_t \quad (\text{B.11})$$

$$\hat{r}_t^k = \hat{m}c_t + \hat{y}_t - \hat{k}_{t-1} - \hat{v}_t \quad (\text{B.12})$$

$$\pi_t = \mathbb{E}_t \pi_{t+1} + \frac{(1-\eta)(1-\beta\eta)}{\eta} \hat{m}c_t \quad (\text{B.13})$$

### B.1.3 Market clearing

$$\hat{y}_t = \frac{C}{Y} \hat{c}_t + \frac{I}{Y} \hat{i}_t + \frac{G}{Y} \hat{g}_t \quad (\text{B.14})$$

### B.1.4 Policy

Dividing equations (3.38) and (3.39) by  $Y_t$ , linearizing and defining  $\hat{\mathcal{R}}_t^{N,X} = \hat{\mathbb{R}}_t^{N,X} - \hat{y}_t$  yields:

$$\begin{aligned} \Delta \hat{\mathcal{R}}_t^N &= \frac{wNT_n^N/Y}{\mathcal{R}^N} (\Delta \hat{w}_{t-1} + \Delta \hat{n}_{t-1} + \Delta \hat{T}_{n,t}^N - \Delta \hat{y}_t) \\ &\quad + \frac{r^k KT_k^N/Y}{\mathcal{R}^N} (\Delta \hat{r}_{t-1}^k + \Delta \hat{v}_{t-1} + \Delta \hat{K}_{t-2} - \Delta \hat{y}_t) + \frac{r^k KT_k^N/Y - \delta^\tau \mathcal{K}/Y}{\mathcal{R}^N} \Delta \hat{T}_{k,t}^N \\ &\quad - \left( \frac{\delta^\tau \mathcal{K}/Y}{\mathcal{R}^N} \right) (\Delta \hat{\mathcal{K}}_{t-2} - \Delta \hat{y}_t) \end{aligned} \quad (\text{B.15})$$

and

$$\begin{aligned} \Delta \hat{\mathcal{R}}_t^X &= \frac{wNT_n^X/Y}{\mathcal{R}^X} (\Delta \hat{w}_{t-1} + \Delta \hat{n}_{t-1} + \Delta \hat{T}_{n,t}^X - \Delta \hat{y}_t) \\ &\quad + \frac{r^k KT_k^X/Y}{\mathcal{R}^X} (\Delta \hat{r}_{t-1}^k + \Delta \hat{v}_{t-1} + \Delta \hat{K}_{t-2} - \Delta \hat{y}_t) + \frac{r^k KT_k^X/Y - \delta^\tau \mathcal{K}/Y}{\mathcal{R}^X} \Delta \hat{T}_{k,t}^X \\ &\quad - \left( \frac{\delta^\tau \mathcal{K}/Y}{\mathcal{R}^X} \right) (\Delta \hat{\mathcal{K}}_{t-2} - \Delta \hat{y}_t). \end{aligned} \quad (\text{B.16})$$

The  $\Delta \hat{\mathcal{R}}_t$  terms reflect the change in the percentage deviation from steady state. Multiplying this by the steady state revenue-to-GDP ratio  $\mathcal{R}$  would then give the percentage point change in the revenue-to-GDP ratio. This would be equivalent to the narrative shocks. Therefore, define the model-equivalent narrative variable as  $\hat{\varepsilon}_t^{N,X}$ , and  $\theta^{N,X}$  as the steady state ratio, which then implies:

$$\hat{\varepsilon}_t^N = \theta^N \Delta \hat{\mathcal{R}}_t^N \quad (\text{B.17})$$

$$\hat{\varepsilon}_t^X = \theta^X \Delta \hat{\mathcal{R}}_t^X. \quad (\text{B.18})$$

These two variables are related to the data via the measurement equations in Chapter 3.

Movements in the model's tax rates are governed by endogenous and exogenous move-



ments, as discussed in Chapter 3. This means that the linearised tax rules are:

$$\hat{Y}_t^n = \gamma_y^n \hat{y}_t + \gamma_b^n \hat{b}_{t-1} + \gamma_g^n \hat{g}_t + \nu_t^n \quad (\text{B.19})$$

$$\hat{Y}_t^k = \gamma_y^k \hat{y}_t + \gamma_b^k \hat{b}_{t-1} + \gamma_g^k \hat{g}_t + \nu_t^k \quad (\text{B.20})$$

$$\hat{\tau}_t^n = \hat{Y}_t^n + \hat{x}_t^n \quad (\text{B.21})$$

and

$$\hat{\tau}_t^k = \hat{Y}_t^k + \hat{x}_t^k \quad (\text{B.22})$$

with  $x_t$  an exogenous AR(1) process. Government spending and transfers are described as follows:

$$\hat{g}_t = -\gamma_y^g \hat{y}_t - \gamma_b^g \hat{b}_{t-1} + \hat{u}_t^g \quad (\text{B.23})$$

$$\hat{L}S_t = -\gamma_y^{LS} \hat{y}_t - \gamma_b^{LS} \hat{b}_{t-1} + \hat{u}_t^{LS}. \quad (\text{B.24})$$

The government budget constraint is given by:

$$\begin{aligned} B\hat{b}_t - (B/\beta)\hat{b}_{t-1} - (B/\beta)\hat{r}_{t-1} = & \tau^k (MC\alpha Y - \delta^\tau \mathcal{K}) \hat{\tau}_t^k - \tau^k \delta^\tau \mathcal{K} \hat{\mathcal{K}}_{t-1}^\tau + \tau^k MC\alpha Y (\hat{y}_t + \hat{m}c_t) \\ & + \tau^n MC(1 - \alpha)Y (\hat{\tau}_t^n + \hat{y}_t + \hat{m}c_t) \end{aligned} \quad (\text{B.25})$$

Monetary policy is described by the interest rate rule:

$$\hat{R}_t = \psi_R \hat{R}_{t-1} + (1 - \psi_R)(\psi_\pi \pi_t + \psi_y \hat{y}_t) + e_t^R. \quad (\text{B.26})$$

## B.2 The steady state

$$I = \delta K \quad (\text{B.27})$$

$$MC = \frac{\epsilon - 1}{\epsilon} \quad (\text{B.28})$$

$$\mathcal{K}^\tau = \frac{\Lambda}{\delta^\tau \tau^k} = \frac{I}{\delta^\tau} \quad (\text{B.29})$$

$$\Gamma = \frac{\beta \delta^\tau \tau^k}{(1 - \beta(1 - \delta^\tau))} \quad (\text{B.30})$$

$$\frac{K}{Y} = \frac{\beta(1 - \tau^k)\alpha MC}{(1 - \beta(1 - \delta))} \quad (\text{B.31})$$

$$Y = \left(\frac{K}{Y}\right)^{\frac{\alpha}{1-\alpha}} N \quad (\text{B.32})$$

$$\delta_1 = \frac{(1 - \tau^k)\alpha}{K} \quad (\text{B.33})$$

$$\mathbb{R} = (1 - \alpha)MC\tau^n Y + \tau^k(MC\alpha Y - \delta^r \mathcal{K}) \quad (\text{B.34})$$

### **B.3 Chapter 3 Data Appendix**

Table (B.1) describes the data construction. The data largely come from the Bureau of Economic Analysis' NIPA tables, downloaded on 17<sup>th</sup> May 2011. The nominal variables are converted into real variables using the GDP deflator for personal consumption expenditures (NIPA Table 1.1.4, line 2). The data are transformed into per capita variables by dividing through by the total civilian noninstitutional population from the Federal Reserve Bank of St. Louis Federal Reserve Economic Data (FRED), originally from the Bureau of Labor Statistics (BLS). Variables are then converted into logs and multiplied by 100. Variables in bold are used in the estimation.

Table B.1: Chapter 3 Data Sources

Series	Source	Construction
<b>Consumption</b>	BEA	Personal consumption expenditures on nondurable goods (Table 1.1.5 line 4) plus services (Table 1.1.5 line 5).
<b>Investment</b>	BEA	Gross private domestic investment (Table 1.1.5 line 7) plus durable goods (Table 1.1.5 line 4).
Average personal tax rate	BEA	$\tau^p = \frac{P}{W+PRI/2+CI}$ where $P$ is personal current taxes (Table 3.2 line 3), $W$ is wage and salary accruals (Table 1.1.12 line 3), $PRI$ is proprietors' income (Table 1.1.12 line 9), $CI$ is capital income, defined as rental income (Table 1.1.12 line 12), corporate profits (Table 1.1.12 line 13) and net interest (Table 1.1.12 line 18) and $PRI/2$ .
Labour tax rate	BEA	$\tau^n = \frac{\tau^p(W+PRI/2)+CSI}{EC+PRI/2}$ where $CSI$ is contributions for government social insurance (Table 3.2 line 11) and $EC$ is compensation of employees (Table 1.1.12 line 2).
Capital tax rate	BEA	$\tau^k = \frac{\tau^p CI + CT}{CI + PT}$ where $CT$ is tax on corporate income (Table 3.2 line 8) and $PT$ are property taxes (Table 3.3, line 8).
<b>Labour tax revenues</b>	BEA	$\tau^n \times (EC + PRI/2)$ .
<b>Capital tax revenues</b>	BEA	$\tau^k \times (CI + PT)$ .
<b>Government spending</b>	BEA	Consumption expenditures (Table 3.2 line 21) plus gross government investment (Table 3.2 line 32), net purchases of nonproduced assets (Table 3.2 line 44) less consumption of fixed capital (Table 3.2 line 45).
<b>Transfers</b>	BEA	Current transfer payments (Table 3.2 line 22) minus current transfer receipts (Table 3.2, line 16); plus capital transfer payments (Table 3.2 line 43) minus capital transfer receipts (Table 3.2 line 39); minus current tax receipts (Table 3.2 line 2), contributions for government social insurance (Table 3.2 line 11), income receipts on assets (Table 3.2 line 12), current surplus on government enterprises (Table 3.2 line 19) plus capital and labour tax revenue (defined above).
<b>Government debt</b>	BEA	$B_t = NB - (M_t - M_{t-1}) + B_{t-1}$ where $M_t - M_{t-1}$ is the adjusted monetary base (St. Louis Fed series AMBSL). $NB$ is net borrowing as defined in the NIPA.
Hours	BLS	Nonfarm business average weekly hours index (2005=100). BLS series PRS85006023.
Employment	FRED	Civilian employment, FRED/BLS series CE16OV.
<b>Hours worked</b>		$N = \frac{Hours \times Employment}{100}$ .
Population index	FRED/BLS	Civilian noninstitutional population, 16 years and older. FRED series CNP16OV/BLS series LNS10000000.
<b>Inflation</b>	BEA	First difference of the (log) GDP deflator (Table 1.1.4 line 1).
<b>Nominal interest rate</b>	St Louis Fed	Effective Federal Funds Rate (FEDFUNDS), averaged to yield a quarterly series, expressed at a quarterly rate.
<b>Endogenous tax changes</b>	Romer and Romer (2010)	Sum of spending-driven, countercyclical and deficit-driven tax changes.
<b>Exogenous tax changes</b>	Romer and Romer (2010)	Long-run tax changes.

## Appendix C

# Appendices to Chapter 4

### C.1 Chapter 4 Data Appendix

The data span the period 1955:1 to 2007:4. Real government spending, real consumption, real investment and real GDP come directly from the Bureau of Economic Analysis NIPA tables. All variables are the log of real per capita variables. Nominal variables are deflated by their own implicit price deflators with the exception of government spending which is deflated by the GDP deflator. Real hours are an unpublished Bureau of Labor Statistics (BLS) series, downloadable from Valerie Ramey's website. The real wage is real hourly compensation, non-farm business, in logs from the BLS. Population is total civilian population also from the BLS. Table (C.1) contains a summary of the data.

Real per capita debt is the log of my constructed debt measure divided by the total population and the GDP deflator. The debt measure is very close the 'Debt Held by the Public'. This series is only available from 1970, so I construct a proxy from old editions of the United States Treasury Bulletin back to 1947. For the pre-1974 period this is the 'Total Public Issues' series. After 1974, for consistency, I have to construct the 'Total Public Issues' series from the Monthly Statement of Public Debt by combining 'Total Interest Bearing Debt' minus the 'Government Accounts Series' plus 'Total Treasury Deposit Funds'. Because this is not an exact match to 'Debt Held by the Public' I check how close the two measures are (for the common part of the series, 1970 onwards) — the R squared is 0.999, so I am confident that my constructed series reflects changes in 'Debt Held By the Public'.

The capital and labour income tax rates are constructed following Jones (2002). I reconstruct the series, extend it back to 1947 following Burnside et al. (2004) and forward to 2008. As a check, I reproduce the narrative Vector Autoregression results in Burnside et al. (2004), the results are very similar. These extra results are available on request.

Table C.1: Chapter 4 Data sources

Series	Source	Description
Gov. spending	BEA	Gov. cons. expenditures and gross inv. (CVM)
Capital taxes	BEA	Constructed as above
Labour taxes	BEA	Constructed as above
Output	BEA	Gross domestic product (CVM)
Real wage	BLS	BLS Series ID: PRS85006153
Hours	Unpublished BLS	Francis-Ramey “Measures of Hours per Capita”
Consumption	BEA	Personal consumption expenditures (CVM)
Investment	BEA	Gross private domestic investment (CVM)
Debt	Treasury Bulletin	Close to ‘Debt Held by the Public’

## C.2 Linearised model

### C.2.1 Notation

Lower case letters represent the percentage deviation of each variable from its steady state value. The only exceptions are the tax rates  $\tau_t^N$  and  $\tau_t^K$  which are expressed as percentage point deviations to match the variable definition in the VAR.

### C.2.2 Households

$$a_1c_t + a_2n_t + a_3x_t + a_4x_{t-1} + a_5\mu_t - a_6\lambda_t + a_7c_{t-1} = 0 \quad (\text{C.1})$$

$$\lambda_t + w_t - \frac{1}{1 - \tau_t^N} \tau_t^N = b_1c_t + b_2n_t + b_3x_t + b_4c_{t-1} \quad (\text{C.2})$$

$$c_1c_t + c_2n_t + c_3x_t + c_6c_{t-1} + \mu\mu_t = c_4\mu_{t+1} + c_5c_{t+1} \quad (\text{C.3})$$

$$\mathbb{E}_t\lambda_{t+1} = \lambda_t - r_t \quad (\text{C.4})$$

$$(1 - h)x_t = (1 - h)(1 - \gamma)x_{t-1} + \gamma c_t - h\gamma c_{t-1} \quad (\text{C.5})$$

$$\omega q_t - (1 + \beta)i_t + i_{t-1} - \beta\mathbb{E}_t i_{t+1} = 0 \quad (\text{C.6})$$

where  $\omega = \frac{1}{\phi^r}$ .

$$q_t + r_t = r^K(1 - \tau^K)\beta\mathbb{E}_t r_{t+1}^K - \beta r^K\mathbb{E}_t \tau_{t+1}^K + \beta(1 - \delta)\mathbb{E}_t q_{t+1} - \beta\delta'(z)z\mathbb{E}_t z_{t+1} \quad (\text{C.7})$$

where the coefficients are given at the end of this appendix.

### C.2.3 Firms

Up to a first order approximation the aggregate production function is given by

$$y_t = \alpha z_t + \alpha k_t + (1 - \alpha)n_t \quad (\text{C.8})$$

and factors are paid

$$r_t^K = mc_t + y_t - k_t \quad (\text{C.9})$$

$$w_t = mc_t + y_t - n_t. \quad (\text{C.10})$$

Utilisation is described by

$$(1 + \kappa)z_t = y_t - k_t - q_t + mc_t - \frac{1}{1 - \tau^K} \tau_t^K \quad (\text{C.11})$$

where  $\kappa = \frac{\delta''}{\delta'}$ .

Price evolution is determined by the New Keynesian Phillips Curve

$$\pi_t = \beta \mathbb{E}_t \pi_{t+1} + \frac{(1 - \eta)(1 - \beta\eta)}{\eta} mc_t. \quad (\text{C.12})$$

### C.2.4 Policy rules

$$r_t - \mathbb{E}_t \pi_{t+1} = \phi_\pi \pi_t \quad (\text{C.13})$$

$$\tau_t^n = \theta^{gn} g_t + \theta^{n1} \tau_{t-1}^n + \theta^{n2} \tau_{t-2}^n \quad (\text{C.14})$$

$$\tau_t^k = \theta^{gk} g_t + \theta^{k1} \tau_{t-1}^k + \theta^{k2} \tau_{t-2}^k \quad (\text{C.15})$$

$$g_t = \phi_1 g_{t-1} + \phi_2 a_t \quad (\text{C.16})$$

$$\frac{T}{Y} \hat{T}_t = \frac{B}{Y} \frac{1}{R} (b_{t+1} - r_t) - \frac{B}{Y} b_t = \frac{G}{Y} g_t - (1 - \alpha) \tau^n (\tau_t^n + n_t + w_t) - \alpha \tau^k (\tau_t^k + r_t^k + k_t). \quad (\text{C.17})$$

### C.2.5 Identities

$$\delta i_t = k_{t+1} - (1 - \delta) k_t \quad (\text{C.18})$$

$$y_t = \frac{C}{Y} c_t + \frac{I}{Y} i_t + \frac{G}{Y} g_t. \quad (\text{C.19})$$

### C.2.6 Stochastic processes

$$a_{t+1} = \rho a_t + \epsilon_{t+1} \quad (\text{C.20})$$

The 3 predetermined variables are:

$$\{b_t, k_t, a_t\}$$

and the control variables are:

$$\{c_t, \pi_t, w_t, n_t, x_t, y_t, r_t^k, mc_t, q_t, z_t, \lambda_t, \mu_t, r_t, \tau_t^K, \tau_t^N, g_t, i_t\}$$

### C.2.7 Coefficients from the linearised Jaimovich–Rebelo preferences

$$a_1 = (\gamma - 1)\mu\gamma X^{1-\gamma}(C(1-h))^{\gamma-2}C - \sigma C\chi(C - hC - \psi N^\xi X)^{-1}$$

$$a_2 = \xi\psi N^\xi X\sigma(C - hC - \psi N^\xi X)^{-\sigma-1}$$

$$a_3 = \psi N^\xi X\sigma(C - hC - \psi N^\xi X)^{-\sigma-1}$$

$$a_4 = (1 - \gamma)\mu\gamma X^{1-\gamma}(C(1-h))^{\gamma-1}$$

$$a_5 = \mu\gamma X^{1-\gamma}(C(1-h))^{\gamma-1}$$

$$a_6 = \mu\gamma X^{1-\gamma}(C(1-h))^{\gamma-1} + \chi$$

$$a_7 = -ha_1$$

$$b_1 = -(\sigma\psi N^{\xi-1}\xi X((C - hC - \psi N^\xi X)^{-\sigma-1})C)/(a_6W(1 - \tau^N))$$

$$b_2 = ((\xi - 1)\psi XN^{\xi-1}\xi\chi + \sigma\psi^2N^{2\xi-1}\xi^2X^2(C - hC - \psi N^\xi X)^{-\sigma-1})/(a_6W(1 - \tau^N))$$

$$b_3 = X(\psi N^{\xi-1}\xi\chi + \psi N^{\xi-1}\xi X(\sigma((C - hC - \psi N^\xi X)^{-\sigma-1})\psi N^\xi))/(a_6W(1 - \tau^N))$$

$$b_4 = -hb_1$$

$$c_1 = -\sigma\psi N^\xi(C - hC - \psi N^\xi X)^{-\sigma-1}C + h(1 - \gamma)\mu\beta\gamma(C(1-h))^{\gamma-1}X^{-\gamma}C$$

$$c_2 = \psi^2\xi X\sigma N^{2\xi}(C - hC - \psi N^\xi X)^{-\sigma-1} + \xi\psi N^\xi\chi$$

$$c_3 = \sigma\psi^2N^{2\xi}(C - hC - \psi N^\xi X)^{-\sigma-1}X + \gamma\mu\beta(1 - \gamma)(C(1-h))^\gamma X^{-\gamma}$$

$$c_4 = \mu\beta(1 - \gamma)(C(1-h))^\gamma X^{-\gamma}$$

$$c_5 = \gamma\mu\beta(1 - \gamma)(C(1-h))^{\gamma-1}X^{-\gamma}C$$

$$c_6 = \sigma h\psi N^\xi(C - hC - \psi N^\xi X)^{-\sigma-1}C$$

$$\chi = (C - hC - \psi N^\xi X)^{-\sigma}$$

## C.3 The steady state

Our assumptions of  $\phi(I/K)$  imply that

$$\frac{I}{K} = \delta$$

therefore

$$\frac{I}{Y} = \frac{I}{K} \frac{K}{Y} = \delta \frac{K}{Y}.$$

Given the tax and subsidy on revenue ( $mc = 1$ ), the state version of the return on capital implies

$$r^K = \alpha \frac{Y}{K}.$$

From equation (4.14)

$$r^K = \frac{R - 1 + \delta}{1 - \tau^K} \quad (\text{C.21})$$

therefore

$$\frac{K}{Y} = \frac{\alpha}{r^K} \quad (\text{C.22})$$

and

$$\frac{I}{Y} = \frac{\delta \alpha}{r^K}. \quad (\text{C.23})$$

The share of consumption can be written

$$\frac{C}{Y} = 1 - \delta \frac{K}{Y} - \frac{G}{Y}, \quad (\text{C.24})$$

This follows from the resource constraint, equation (4.23).

$\psi$  can be found by solving the household's steady state first order conditions

$$\psi = \left( N^\xi \left[ \frac{\xi X}{W(1 - \tau^N)N} - \frac{\gamma X^{1-\gamma} (C(1-h))^{\gamma-1}}{\beta(1-\gamma)(C(1-h))^\gamma X^{-\gamma} - 1} \right] \right)^{-1} \quad (\text{C.25})$$

where  $N$  is steady state hours and is calibrated.

From the production function and the marginal product of capital is

$$K = \left( \frac{r^K}{\alpha} \right)^{\left( \frac{1}{\alpha-1} \right)} N \quad (\text{C.26})$$

and dividing the resource constraint by  $K$  gives an expression for  $CK$ . Using this together with equation (C.26) yields an expression for steady state consumption. The steady state real wage follows from

$$W = (1 - \alpha) \left( \frac{K}{N} \right)^\alpha. \quad (\text{C.27})$$

$\mu$  is the steady state Lagrange multiplier

$$\mu = \frac{\psi N^\xi \chi}{\beta(1-\gamma)(C(1-h))^\gamma X^{-\gamma} - 1}. \quad (\text{C.28})$$

From equation (4.8), steady state  $X$  is given by:

$$X = C(1-h). \quad (\text{C.29})$$



The steady state gross real interest rate is related to the discount factor

$$R = \frac{1}{\beta}. \quad (\text{C.30})$$

From the first order condition for  $z_t$

$$\delta'(z)z = (1 - \tau^K)\alpha\frac{Y}{K}. \quad (\text{C.31})$$

$\frac{B}{Y}$  is calibrated.

# Bibliography

- Adam, S., Browne, J., and Heady, C. (2010). “Taxation in the U.K.” in *Dimensions of Tax Design: The Mirrlees Review*. Oxford University Press.
- Alesina, A., Ardagna, S., Perotti, R., and Schiantarelli, F. (2002). “Fiscal policy, profits and investment.” *American Economic Review*, 92(3), 571–589.
- Altig, D., Christiano, L., Eichenbaum, M., and Linde, J. (2005). “Firm-specific capital, nominal rigidities and the business cycle.” *NBER Working Paper No.11034*.
- Auerbach, A. (1989). “Tax reform and adjustment costs: the impact on investment and market value.” *International Economics Review*, 30(4), 939–962.
- Baxter, M., and King, R. (1993). “Fiscal policy in general equilibrium.” *American Economic Review*, 83, 315–334.
- Beetsma, R. (2008). “A survey of the effects of discretionary fiscal policy.” *Working Paper, University of Amsterdam*.
- Benhabib, J., Schmitt-Grohe, S., and Uribe, M. (2001). “Monetary Policy and Multiple Equilibria.” *American Economic Review*, 90, 40–69.
- Blanchard, O., and Perotti, R. (2002). “An empirical characterization of the dynamic effects of changes in government spending and taxes on output.” *Quarterly Journal of Economics*, 117, 1329–1368.
- Blow, L., and Preston, I. (2002). “Deadweight loss and taxation of earned income: evidence from tax records of the UK self employed.” *Institute for Fiscal Studies Working Paper WP02/15*.
- Blundell, R., Brewer, M., and Shephard, A. (2005). “Evaluating the labour market impact of Working Families’ Tax Credit using differences-in-differences.” *HM Revenue and Customs Working Paper 4*.
- Blundell, R., Duncan, A., and Meghir, C. (1998). “Estimating labor supply responses using tax reforms.” *Econometrica*, 66(4), 827–861.

- Britton, A. (1991). *Macroeconomic policy in Britain 1974-87*. Cambridge University Press.
- Burnside, C., Eichenbaum, M., and Fisher, J. D. (2004). "Fiscal shocks and their consequences." *Journal of Economic Theory*, 115, 89–117.
- Cairncross, A. (1992). *The British economy since 1945*. Blackwell publishers.
- Calvo, C. A. (1983). "Staggered prices in a utility maximizing framework." *Journal of Monetary Economics*, 12(3), 983–998.
- Canova, F. (2007). *Methods for Applied Macroeconomic Research*. Princeton University Press.
- Christiano, L., Eichenbaum, M., and Evans, C. (1996). "The effects of monetary policy shocks: evidence from the flow of funds." *Review of Economics and Statistics*, 78(1), 16–34.
- Christiano, L., Eichenbaum, M., and Evans, C. (2005). "Nominal rigidities and the dynamic effects of a shock to monetary policy." *Journal of Political Economy*, 113, No.1.
- Coenen, G., and Straub, R. (2005). "Non-Ricardian Households and fiscal policy in an estimated DSGE model of the Euro Area." In: *Computing in Economics and Finance*, 102.
- Cogan, J., Cwik, T., Taylor, J., and Wieland, V. (2010). "New Keynesian versus Old Keynesian government spending multipliers." *Journal of Economic Dynamics and Control*, 34(3), 281–295.
- Cummins, J., Hassett, K., and Hubbard, R. (1996). "Tax reforms and investment: A cross-country comparison." *Journal of Public Economics*, 62(1-2), 237 – 273.
- Davig, T., and Leeper, E. (2006). "Fluctuating macro policies and the fiscal theory." In: *NBER Macroeconomics Annual 2006*, 247–298.
- Davig, T., and Leeper, E. (2011). "Monetary-fiscal policy interactions and fiscal stimulus." *European Economic Review*, 55(2), 211–227.
- Dow, C. (1964). *The management of the British economy 1945-60*. The Syndics of the Cambridge University Press.
- Dow, C. (2000). *Major Recessions: Britain and the World, 1920-1995*. Oxford University Press.
- Favero, C., and Giavazzi, F. (2007). "Debt and the effects of fiscal policy." *NBER Working Paper No. 12822*.

- Favero, C., and Giavazzi, F. (2010). "Reconciling VAR-based and narrative measures of the tax multiplier." *American Economic Journal: Economic Policy*, Forthcoming.
- Forni, L., Monteforte, L., and Sessa, L. (2009). "The general equilibrium effects of fiscal policy: Estimates for the Euro Area." *Journal of Public Economics*, 93(3-4), 559–585.
- Gali, J. (2008). *Monetary Policy, Inflation, and the Business Cycle*. Princeton University Press.
- Geweke, J. (1999). "Using simulation methods for Bayesian econometric models: Inference, development and communication." *Econometric Reviews*, 18(1), 1–73.
- Greenwood, J., Hercowitz, Z., and Huffman, G. (1988). "Investment, capacity utilization, and real business cycles." *American Economic Review*, 78, 402–417.
- Gregg, P., and Harkness, S. (2003). "Welfare reform and lone parents employment in the UK." *Centre for Market and Public Organisation Working Paper*, 03/072.
- Hall, A., Inoue, A., Nason M, J., and Rossi, B. (2010). "Information criteria for impulse response function matching estimation of DSGE models." *Duke University Working Papers* 10-28.
- Jaimovich, N., and Rebelo, S. (2009). "Can news about the future drive the business cycle?" *American Economic Review*, 99(4), 1097–1118.
- Jones, J. (2002). "Has fiscal policy helped stabilize the postwar U.S. economy?" *Journal of Monetary Economics*, 49, 709–746.
- King, R., Plosser, C., and Rebelo, S. (1988). "Production, growth and business cycles I. The basic neoclassical model." *Journal of Monetary Economics*, 21, 195–232.
- King, R., and Rebelo, S. (1999). "Resurrecting real business cycles." *Handbook of Macroeconomics*, Volume 1, 927–1007.
- Klein, P. (2000). "Using the Generalized Schur form to solve a multivariate linear rational expectations model." *Journal of Economic Dynamics and Control*, 24(10), 1405–1423.
- Leeper, E. (1991). "Equilibria under 'active' and 'passive' monetary and fiscal policy." *Journal of Monetary Economics*, 27, 129–147.
- Leeper, E., Plante, M., and Traum, N. (2010). "Dynamics of fiscal financing in the United States." *Journal of Econometrics*, 156, 304–321.
- Linnemann, L. (2006). "The effect of government spending on private consumption: A puzzle?" *Journal of Money, Credit and Banking*, 38(7), 1715–1735.

- Lopez-Salido, J., and Rabanal, P. (2008). "Government spending and consumption-hours preferences." *Manuscript, Federal Reserve Board*.
- McGrattan, E. R. (1994). "The macroeconomic effects of distortionary taxation." *Journal of Monetary Economics*, 33, 573–601.
- Mertens, K., and Ravn, M. (2010). "Empirical evidence on the aggregate effects of anticipated and unanticipated U.S. tax policy shocks." *NBER Working Paper 16289*.
- Mertens, K., and Ravn, M. O. (2011a). "Measuring fiscal shocks in Structural VARs using narrative data." *Manuscript, Cornell University and University College London*.
- Mertens, K., and Ravn, M. O. (2011b). "Understanding the aggregate effects of anticipated and unanticipated tax policy shocks." *Review of Economic Dynamics*, 14(1), 27–54.
- Monacelli, T., and Perotti, R. (2009). "Fiscal policy, wealth effects, and markups." *CEPR Discussion Paper DP7099*.
- Perotti, R. (2005). "Estimating the effects of fiscal policy in OECD countries." *CEPR Discussion Paper No. 4842*.
- Perotti, R. (2007). "In search of the transmission mechanism of fiscal policy." *NBER Working Paper, 13143*.
- Perotti, R. (2010). "The effects of tax shocks on output: not so large, but not small either." *NBER Working Paper No. 16786*.
- Ramey, V., and Shapiro, M. (1998). "Costly capital reallocation and the effects of government spending." *Carnegie Rochester Conference Series on Public Policy*, 48, 145–194.
- Ramey, V. A. (2011). "Identifying government spending shocks: It's all in the timing." *Quarterly Journal of Economics*, 126(1), 1–50.
- Ratto, M., Werner, R., and in 't Veld, J. (2009). "Fiscal policy in an estimated open-economy model for the Euro Area." *Economic Modelling*, 26(1), 222–233.
- Ravn, M. O., Schmitt-Grohe, S., and Uribe, M. (2006). "Deep Habits." *Review of Economic Studies*, 73(1), 195–218.
- Ravn, M. O., Schmitt-Grohe, S., and Uribe, M. (2007). "Explaining the effects of government spending shocks on consumption and the real exchange rate." *NBER Working Paper, 13328*.
- Reis, R. (2008). "Using VARs to identify models of fiscal policy: A comment on Perotti." *NBER Macroeconomics Annual 2007*, 22.

- Romer, C., and Romer, D. (1989). “Does monetary policy matter? A new test in the spirit of Friedman and Schwartz.” *In NBER Macroeconomic Annual 1989*.
- Romer, C., and Romer, D. (2004). “A new measure of monetary shocks: Derivation and implications.” *American Economic Review*, 94(4), 1055–84.
- Romer, C., and Romer, D. (2009a). “Do tax cuts strave the beast? the effect of tax changes on government spending.” *Brookings Papers on Economic Activity, Spring*, 139–200.
- Romer, C., and Romer, D. (2009b). “A narrative analysis of postwar tax changes.” *Manuscript, University of California, Berkeley*.
- Romer, C., and Romer, D. (2010). “The macroeconomic effects of tax changes: Estimates based on a new measure of fiscal shocks.” *American Economic Review*, 100(June), 763–801.
- Schmitt-Grohe, S., and Uribe, M. (2010). “What’s ‘news’ in business cycles.” *mimeo, Columbia University*.
- Smets, F., and Wouters, R. (2003). “An estimated dynamic stochastic general equilibrium model of the Euro Area.” *Journal of the European Economic Association*, 1(5), 1123–1175.
- Smets, F., and Wouters, R. (2007). “Shocks and frictions in US business cycles: a Bayesian DSGE approach.” *American Economic Review*, 97(3), 586–606.
- Traum, N., and Yang, S.-C. (2009). “When does government debt crowd out investment?” *Manuscript, Indiana University*.
- Traum, N., and Yang, S.-C. (2010). “Monetary and Fiscal Policy Interactions in the Post-war U.S.” *IMF Working Paper, November 2010*.
- Woodford, M. (2003). *Interest and Prices: Foundations of a Theory of Monetary Policy*. Princeton University Press.
- Woodward, N. (2004). *The management of the British economy, 1945-2001*. Manchester University Press.
- Zubairy, S. (2009). “Explaining the effects of government spending shocks.” *Mimeo, Duke University*.
- Zubairy, S. (2010). “On fiscal multipliers: Estimates from a medium scale DSGE model.” *Bank of Canada Working Paper 2010-30*.