

SAVE NOW: SAVE LATER?

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Save now, save later?:

Linkages between saving behaviour in adolescence and adulthood

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## Abstract

Using evidence from an 18 year British follow up study this paper examines whether saving during adolescence is linked to saving during adulthood. A contextual development model of saving behaviour is tested, examining the interplay between socio-economic family background, parenting style, economic socialisation, adult socio-economic attainments, and saving behaviour in adolescence and adulthood. The findings suggest that saving at age 16 is linked to saving at age 34, and that socialisation experiences during adolescence, as well as own social status and income shape the savers that we become.

## Linkages between saving behaviour in adolescence and adulthood

If you save money at 16 years of age are you more likely to save in your thirties than someone who did not save at 16? That experiences during childhood and adolescence, as well as the family context, shape the economic adults we become is often taken for granted. Although the question of whether saving during adolescence is linked to saving during adulthood is an important one for policy makers, educationalists, psychologists and economists, as far as we are aware, this link has not been established using longitudinal data in a general population sample. To date, we only have information from adults suggesting such links from studies using retrospective questions (Bernheim, Garrett, & Maki, 2001; Otto, 2009).

Drawing on research in economic and developmental psychology, and using data collected for a nationally representative British cohort study, this paper seeks to close this gap in the literature. A pathway model of saving behaviour is tested, examining the interplay between family socio-economic background, parenting style, economic socialisation, adult socio-economic attainments, and saving behaviour in adolescence and adulthood. The model is conceptualised within a developmental contextual framework (Bronfenbrenner, 1979; Schoon, 2006; Vondracek, Lerner, & Schulenberg, 1986), bringing together assumptions about multiple influences shaping saving behaviour across the life course. Before we describe the model in more detail, we review the literature regarding the interlinkages of the variables included in the model.

### *The savings literature*

Discretionary savings represent the decision to save any spare money after expenditures or necessities (see Katona, 1975), and this is the working definition that we use in this paper. For the most part, standard economic models have been used to examine savings behaviour (see Katona, 1975). However, in 2004, economists Mullainathan and Thaler appealed to psychology for a better understanding of the topic (Mullainathan & Thaler, 2004). Our knowledge of saving behaviour is mainly based on research with adults. There is far less research on children, whose saving has mainly been studied using experiments, and almost none on adolescents. The literature on adult saving encompasses the study of saving motives and strategies (e.g., Wärneryd, 1999), as well as psychological variables and individual differences (e.g., Webley & Nyhus, 2001). People's saving goals or motives are not fixed, but differ according to their age, life stage and culture (see Webley, Burgoyne, Lea & Young, 2001).

Wärneryd's (1999) work suggests that people who save to control their expenditures are more likely to develop a saving habit, which perhaps explains why some people continue to "cut back" even if they do not need to (Otto, 2009). The notion of a "saving habit" is supported by Furnham's (1999) UK based study with 11-16 year olds. He found that the total amount of money saved in the previous week was one of the best predictors of the regularity and proportion of saving. Webley et al. (2001) suggest that consumption preferences and habits developed during adolescence are relatively unlikely to change. It therefore appears likely that saving in adolescence will be linked to saving in adulthood.

#### *Family socialisation*

"The apple never falls far from the tree"

The family is recognised as one of the key contexts in which adolescent development takes place and there is a rich literature on the topic (e.g., Bronfenbrenner, 1979, 1994; Lerner & Steinberg, 2004). Here we focus on the role of parenting styles and economic socialisation as key factors shaping saving behaviour during adolescence. Baumrind (1967, 1971) identified three types of parenting styles — authoritative, authoritarian and permissive. The permissive category was later split into two distinct types —indulgent and neglectful (Maccoby & Martin, 1983). Each parenting style differs with regard to levels of parental responsiveness (i.e., warmth, acceptance and involvement) and demandingness (i.e., control, see Maccoby & Martin, 1983). Authoritative parents are warm and supportive, while setting and establishing rules that are appropriate for the age of their child. Authoritarian parents are controlling and expect orders to be obeyed without question, yet are lacking in warmth. In contrast, indulgent (or permissive) parents are nurturing, warm and supportive, but display low levels of control. Neglectful (or uninvolved) parents have a “laissez faire” attitude and are lacking in warmth and support, as well as control (see Baumrind, 1971, 1991; Maccoby & Martin, 1983).

For the most part, researchers have demonstrated the positive influence of authoritative parenting on adolescent development, and in turn, a more problematic influence of the other parenting types (e.g., Melby & Conger, 1996; Steinberg, Mounts, Lamborn & Dornbusch, 1991). Although authoritative parenting tends to be seen as a “middle class” approach (Steinberg, Lamborn, Darling, Mounts & Dornbusch, 1994), its positive influence has been shown to hold across different ethnic backgrounds, family types and socio-economic backgrounds (Steinberg et al., 1991).

An authoritative parenting style has been shown to foster self-control skills, the

ability to delay gratification and future orientation (e.g., Seginer, Vermulst & Shoyer 2004). In turn, all three of these variables have been linked to successful saving (e.g., Webley & Nyhus, 2006). In developing this research, Otto (2009) confirmed that an authoritative parenting style facilitates adolescent saving behaviour. However, more research is needed to replicate this finding, as well as to explore the impact of parenting style on saving in adulthood as well as adolescence.

In the present paper it is hypothesised that authoritative parents will be more likely to socialise their children into the economic world. Research on the role of parents in children's economic socialisation mostly focuses on pocket money (or allowances) and money use (e.g., see Feather, 1991; Furnham & Kirkcaldy, 2000). As well as giving an allowance or pocket money, parents can also ask their children to do chores or household work in return for money. With a few exceptions (e.g., Miller & Yung, 1990), evidence suggests that allowances are effective in enriching children and young people's monetary experience, competence and knowledge (Pliner, Feedman, Abramovitch, & Drake, 1996). However, there are cultural, ideological and class differences vis-à-vis attitudes towards pocket money and household work in return for money (e.g., Feather, 2001). In a UK context, pocket money, as well as payment for household jobs, tends to be viewed positively (e.g., see Furnham, 1999, 2001). Middle class parents have been found to be more in favour of giving pocket money, particularly in return for household work (Furnham & Argyle, 1998; Newson & Newson, 1978). In relation to saving, Webley and Nyhus (2006) found a positive association between economic socialisation in childhood and saving in adulthood. They also found a link between the saving behaviour of parents and their adolescent children. In line with these findings, Bernheim et al. (2001) found that adult participants, who remembered their

parents being “frugal” (in the sense that they saved more than average) during their teenage years, saved more themselves than others.

Taken together, the work discussed above suggests that parents could impact on their children’s saving behaviour through the way in which they socialise their children economically and the parenting style that they adopt.

#### *Socio-economic environment*

Another explanatory factor considered in the model is the socio-economic environment. In line with a contextual developmental approach (Bronfenbrenner, 1979; Vondracek, Lerner, & Schulenberg, 1986) it is assumed that social background influences both parenting style and economic socialisation. Research vis-à-vis socio-economic variables and saving during childhood and adolescence has produced inconclusive results and more research is needed. While Webley & Nyhus (2006) found a positive relationship between family income and adolescent saving, Otto (2009) did not. Similarly, although Pritchard, Myers and Cassidy (1989) found a positive association between parental educational level and adolescent saving, other researchers have failed to find this association (see Furnham, 2002).

In adulthood, both income and social status have been empirically linked to adult saving (see Furnham & Argyle, 1998). However, some researchers have failed to find associations between social status and saving (e.g., Lunt & Livingstone, 1991) or income and saving (e.g., Wheeler-Brooks & Scanlon, 2009). While economic factors have dominated in explanations of saving behaviour, the importance of psychological factors (such as expectations and perceptions), have also been recognised. Katona (1975) suggested that a person’s ability to save was tied to their (disposable) income,

while their willingness to save was tied to how optimistic or pessimistic they felt about their economic situation and the future of the economy.

Katona's (1975) work implies that people will be more likely to save when they have a pessimistic view of their financial future. Although Lunt and Livingstone's (1991) findings are in keeping with this suggestion, Han and Sherraden (2009) reported the opposite pattern of results. Recent UK based findings suggest that people who think that they are managing well financially are more likely to save than those who are finding it a struggle (HMRC, 2007). Similarly, Schor (1998) found that those who believed that they were in a worse financial position compared to their reference group, reported lower expected savings.

The empirical evidence reported above is based on studies involving different selected samples and different methods of assessment. More research is needed to examine the association between saving behaviour in adolescence and adulthood, and the factors shaping saving behaviour across the life course.

### *The Model*

This paper addresses some of the gaps in the literature described above in two ways. First, it explores the question of whether saving during adolescence is linked to saving during adulthood, using longitudinal, not retrospective, data. Second, it tests a developmental contextual model of saving, examining the interplay between possible explanatory processes (i.e. socio-economic circumstances and family socialisation) leading to saving in adolescence and adulthood.

Figure 1 gives a diagrammatic depiction of the model to be tested, showing the hypothesised pathways linking parental socio-economic background to socialisation experiences within the family, to own adult socio-economic status and saving behaviour



in adolescence and adulthood. In depicting the model the usual structural equation modelling conventions are used (Bollen, 1989), with latent variables shown as circles and manifest variables as rectangles. Single headed arrows represent causal influences. Unique and error variance for each manifest variable and disturbance on the latent variables are included in the model (not shown in the diagram).

Figure 1

It is assumed that family social background at birth (measured through parental social status and education) is associated with family income, authoritative parenting and economic socialisation at age 16. In turn, all four variables are hypothesised to shape adolescent saving. Family social background is also assumed to be directly related to both adult social status attainment (measured through own occupational status and highest level of education at age 34) and saving at age 34. Furthermore, a direct link between family income at age 16 and adult income is predicted, as well as a direct link between both economic socialisation and authoritative parenting, and adult social status attainment and saving at age 34. Adult income is assumed to influence the perception of one's current financial situation, and both income and income perception are hypothesised to influence adult saving.

### Method

This paper used data collected for the 1970 British Cohort Study (BCS70), which is a continuing longitudinal study following children born in a week of April 1970. Data collection sweeps have taken place at ages 5, 10, 16, 26, 30 and 34 years. The data used in this analysis was collected at birth, at age 16, and at age 34. Although missing data due to survey loss and incomplete response is a problem (especially in analyses drawing on multiple sweeps of data collection), bias due to attrition of the

whole BCS70 sample during childhood has been shown to be minimal (Butler, Despotidou, & Shepherd, 1997). The cohort has maintained its characteristics despite a disproportionate loss of the most disadvantaged cohort members and a slight tendency for more women than men to continue with the survey (Plewis, Calderwood & Hawkes, 2004).

The 16 year follow up survey took place during a teachers' strike meaning that many cohort members did not receive questionnaires. Despite the relatively low response rate, all children were affected in the same way, and the demographic characteristics of the sample at 16 remained representative of the target population (Shepherd, 1997). Potential bias due to missing variable information is addressed in the section on estimating the model.

The sample used here comprises 2361 cohort members (62% female; 38% male) for whom complete data were collected on the variables of interest at birth and at age 16. At age 34, the majority of participants lived with a partner (76%).

#### *Measures at birth*

*Family background.* Family social status was assessed through three variables: parental occupational social class, mothers' education and fathers' education. Parental occupational social class was measured using the Registrar General's measure of social class (RGSC). The RGSC is defined according to job status and the associated education, prestige (OPCS, 1980) or lifestyle (Marsh, 1986). It is assessed by the current or last held job and is coded on a six-point scale (from I = professional, to V = unskilled, Leete & Fox, 1977). For ease of interpretation, this scale was reversed, so that high scores reflect high status (from 1 = unskilled, to 6 = professional). Where the father was absent, the social class of the mother was used. Parental education was

measured through asking mothers and fathers what age they were when they left full time education. In the model these three variables were combined into a latent variable, following previous research (Schoon & Parsons, 2002).

#### *Measures at age 16*

*Family income.* When cohort members were aged 16, their parents were asked about their combined gross income (not including child benefit, but including all other earned income before deductions for tax, national, insurance etc.). An 11-point scale was created, with a higher score indicating a higher family income (1 = less than £50 per week, 2 = £50-£99, ... , 11 = £500 & over).

*Economic socialisation.* In a section entitled “spending power” participants were asked about their spending money. They were asked to specify whether they received spending money unconditionally (“given by parents regularly without strings”; “parents/relations give it to me when I need it”; “given by other relations”), conditionally (“parents/relations sometimes pay me for chores”; “rewards for achievement e.g., passing exams”; “earned in the house”; “earned from other relations”) or not at all. A 3-point scale was created, with a higher score indicating greater economic socialisation. A score of 2 was allocated if respondents were required, at least some of the time, to “earn” their pocket or spending money (e.g., through completing household chores or working hard at school). A score of 1 was allocated if regular money was received “without strings,” and a score of 0 was allocated if no regular pocket or spending money was received. The measure used here shares similarities with those used in other studies of saving and debt (Webley & Nyhus, 2001; 2006).

*Authoritative parenting.* The BCS70 survey at age 16 included 11 items assessing relationships with parents, parental interest and involvement similar to those

used by Steinberg et al. (1991) and Lamborn et al. (1992) in their assessment of parenting styles. The 11 items were subjected to a principal component analysis using an oblique rotation (since we had no reason to assume that the dimensions were orthogonal). Three distinct factors could be identified, reflecting the three dimensions of parenting identified in previous research (namely, acceptance/involvement, strictness, and psychological autonomy). The correlation between the two items capturing “psychological autonomy” was fairly weak and this measure was not used.

Three items were summed to create a measure of acceptance/involvement ( $\alpha = .69$ ), with a high score indicating greater acceptance/involvement (sample item: “My parents are loving/caring/look after me,” 1 = true, 0 = false). Scores ranged from 0 to 3. Six items were summed to create a measure of strictness ( $\alpha = .85$ ), with a high score indicating greater strictness (sample item: “When you go out with friends of your own age how often do your parents ask you who you are going out with?” from 1 = hardly ever, to 4 = almost always). Scores ranged from 6 to 24. In the model both dimensions of authoritative parenting (“acceptance/involvement” and “strictness”) were combined into a latent variable, see results section.

*Saving behaviour at 16.* At age 16, one item measured saving behaviour: “Do you save money?” (1 = yes, 0 = no). The majority of participants (78.5%) said that they did save. In line with this figure, nearly all of Furnham and Goletto-Tankel’s (2002) adolescent participants engaged in “saving of some sort” (p.623). The measure of saving behaviour used here shares similarities with those used in other UK surveys and empirical studies (e.g., HMRC, 2007; Furnham & Goletto-Tankel, 2002; Otto, 2009; Rabinovich & Webley, 2007; Webley & Nyhus, 2006).

*Measures at age 34*

*Own social status.* Own social status was measured by two variables: adult occupational status and highest qualification achieved by age 34. Data on current or last occupation was classified according to the Registrar General Scale described above. The highest educational qualifications achieved comprise information on academic and vocational qualifications, and are coded to the six-point scale of National Vocational Qualification levels (from 0 = none, to 5 = degree level and higher). In the model both variables were combined into a latent variable.

*Income at age 34.* A measure of family income was created combining respondent's net wages and, where applicable, partner's net wages, as well as any wage-replacing transfers, state benefits, non state benefits or other income received by respondents and/or their partners. Weekly net income (before bills) ranged from £42 to £3297 with a mean of £568 and a median of £517. The mean income of those who lived alone (i.e. 24% of the sample) was £341 (median £300) compared to £663 (median £603) for those who lived with a partner (76% of the sample).

*Perception of current financial situation.* Respondents were asked "How well would you say you personally are managing financially these days?" (from 1 = finding it very difficult, to 5 = living comfortably). This measure is similar to that used by Webley and Nyhus (2001).

*Saving behaviour at 34.* Respondents were asked "Do you save any amount of your income for example by putting something away now and then in a bank, building society, or Post Office account other than to meet regular bills. Please include share purchase schemes and ISAs (individual savings accounts)?" (1= yes, 2 = no). Participants were reminded to include any personal savings as well as joint or household savings (excluding pension payments). Savers were also asked, "Do you save on a

regular basis or just from time to time when you can?" (1 = regular basis, 2 = from time to time). This was converted into a 3-point scale from does not save (0), saves intermittently (1), to saves regularly (2). Just below 50% of participants said that they save regularly, whilst 32% said they did not save at all. These figures fit with Nationwide's, the largest UK building society, savings index (based on self-report measures) showing that fewer than half of consumers save regularly, and 25% save nothing at all (Nationwide, 2009).

### *Analytic Strategy*

To assess the pathways linking socio-economic family background to family socialisation, social status attainment and saving behaviour in adolescence and adulthood we used a path model with latent variables, depicted in Figure 1. Latent variables in the model are shown as circles and include family social background (measured through parental occupational status, mothers' education and fathers' education); authoritative parenting style (measured through two dimensions of authoritative parenting: acceptance/involvement and strictness); and respondent's social status attainment at age 34 (measured through own occupational status and highest level of education at age 34).

All analyses were carried out using the program Mplus 7 (Muthén & Muthén, 2007). This method allows analysis of cases with missing data under the assumption that the data are missing at random, which means that "missingness" is permissible even when it is related to covariates or outcomes, so long as covariate status does not determine presence or absence of data (Little & Rubin, 2002). Estimation is based on the covariance matrices between observed variables for all patterns of missing data in the other observed variables. Mplus provides maximum likelihood estimation under MCAR (missing completely at random).

In line with current practice, several criteria were used to assess the fit of the data to the model, namely the  $\chi^2$  statistic, the root mean square error of approximation (RMSEA), and the comparative fit index (CFI). It should be noted that the  $\chi^2$  statistic is overly sensitive to model misspecification when sample sizes are large or the observed variables are not normally distributed. The RMSEA gives a measure of the discrepancy in fit per degrees of freedom, with values less than .05 indicating a good fit. The CFI's values are restricted to lie on a 0-to-1 continuum, with higher values indicating a better fit (Bentler, 1990).

The model was run for the full sample (N=2361). It was then run on a dataset containing no missing values (N=1054). Since people who live with a partner were asked about joint saving, the direct relationship between adolescent and adult saving will be partly masked by the partner's own saving experiences, behaviours and attitudes. We thus ran the model separately for people who live alone (N=438) and people who live with a partner (N=1386). The analysis was not run separately for males and females. Preliminary analysis revealed no significant relationship between either adolescent or adult saving and gender. Also, there is no strong evidence to expect gender differences in saving behaviour (Lunt & Livingstone, 1991).

## Results

Table 1 shows means, standard deviations and correlations between the variables. When the model, which is displayed in Figure 1, was fitted to the data some of the predicted pathways were not significant, and the model was adjusted accordingly. The "final" model, which is shown in Figure 2, has a good fit to the data, as suggested by the goodness of fit indicators:  $\chi^2 (55) = 175.34$ ; CFI = 0.972, RMSEA = 0.030 for the full sample. Similarly, the model was a good fit to the data when run on a dataset

containing no missing values,  $\chi^2(55) = 132.25$ ; CFI = 0.963, RMSEA = 0.037. For the full sample the model explains 6 percent of the variance in the variable “saving in adolescence” and 15 per cent of the variance in the variable “saving in adulthood.” For the dataset containing no missing values the model explains 5 percent of the variance in the variable “saving in adolescence” and 13 per cent of the variance in the variable “saving in adulthood.”

Also, the model fitted the data well when run separately for people who live alone,  $\chi^2(55) = 77.62$ ,  $p = 0.00$ ; CFI = 0.979, RMSA = 0.031, and people who live with a partner,  $\chi^2(55) = 121.73$ ,  $p = 0.00$ ; CFI = 0.974, RMSA = 0.030. It explains 5 per cent of the variance in the variable “saving in adolescence” amongst those who live alone, compared to 11 per cent of the variance amongst those who live with a partner. Similarly, it explains 21 per cent of the variance in the variable “saving in adulthood” amongst those who live alone, compared to 13 per cent of the variance amongst those who live with a partner.

Table 1

Figure 2

Table 2 shows the measurement model for the latent variables as well as the estimated standardised path coefficients for the final model displayed in Figure 2 when fitted to the full dataset, the dataset containing no missing values, the dataset containing respondents who live with a partner, and the dataset containing respondents who live alone. The signs of the path coefficients were all in the expected direction.

Table 2

### *Saving in adolescence and adulthood*

The findings revealed a modest positive association between saving during



adolescence and saving in adulthood. This association remained significant when the model was fitted to a dataset containing no missing values and to the two subsamples of cohort members living with and without a partner. As expected, given that people who live with a partner were asked about joint saving, the relationship between adolescent and adult saving was stronger for those living alone, than for those living with a partner.

#### *Family socialisation*

As predicted, individuals who rated their parents as more authoritative displayed higher levels of economic socialisation and saving at 16. However, the relationship between authoritative parenting and economic socialisation did not remain significant when the model was tested on a dataset containing no missing values. Also, no association was found between economic socialisation and saving. Authoritative parenting had a positive association with own social status in adulthood, as did economic socialisation. However, the relationship between economic socialisation and adult social status did not remain significant when the model was tested on smaller datasets containing no missing values and only those who live alone.

No direct relationship was found between either authoritative parenting or economic socialisation and adult saving. However, authoritative parenting and to a lesser extent, economic socialisation, might play an indirect role in adult saving in the sense that they positively influenced social status at 34, which in turn influenced adult saving.

#### *The socio-economic environment*

Family social background at birth was positively associated with economic socialisation during adolescence. However, this relationship did not remain significant when the model was tested on a smaller subsample comprising only those who live

alone. The association between family income during adolescence and economic socialisation was only apparent for the full sample.

Family social background was also positively associated with authoritative parenting. There was no direct relationship between family social background and saving during adolescence, yet possibly family social background might be indirectly related to saving via its association with authoritative parenting. Family social background was furthermore positively related to social status attainment at 34, and family income at 16 was positively related to family income at 34. Own social status, family income at 34, and perception of one's current financial situation were positively related to adult saving.

### Discussion

This paper provides evidence that if you save during adolescence you are more likely to save in adulthood. The relationship between adolescent and adult saving was only modest, yet it was found using longitudinal, not retrospective, data. As far as we are aware, this is the first paper to use longitudinal data to establish this link (e.g., see Bernheim et al., 2001; Otto, 2009). For policy makers, educationalists and parents, the findings imply that encouraging adolescents to save could go some way to shaping their saving behaviour in later life.

In addition, the study did more than establish a relationship between adolescent and adult saving. Significantly, it filled a gap in the literature by testing a developmental contextual model of saving, examining the interplay between possible explanatory processes (i.e. socio-economic circumstances and family socialisation) leading to saving in adolescence and adulthood. As will be discussed below, consistent with assumptions

within a developmental contextual framework, the findings suggest multiple influences on saving behaviour.

*Pathways to saving in adolescence*

Individuals who rated their parents as more authoritative reported higher levels of saving at age 16. This finding fits with and adds to Otto's (2009) work, which suggests that authoritative parenting has a positive impact on saving during adolescence. In line with the suggestion that authoritative parenting is a characteristically "middle class" approach to child rearing (Steinberg et al., 1994), we found that a relatively privileged family social background was positively associated with authoritative parenting. We also found a small positive association between family social background and economic socialisation. This finding fits with previous evidence suggesting that middle class parents are more in favour of giving pocket money, particularly in return for household work (e.g., Furnham & Argyle, 1998)

No association was found between economic socialisation and saving, which could be due to the measure used. Parents can socialise their children into the economic world through (a) giving them pocket money/allowances, (b) the financial example that they themselves set (e.g., saving, paying bills on time), and (c) discussions about finances and family financial decisions (e.g., Webley & Nyhus, 2006). In the present research a higher level of economic socialisation reflected receiving pocket money, as well as completing some chores in return for this pocket money. However, whilst allowances might facilitate financial experience, and chores might "teach the value of money," it may be that, in themselves, they are not enough to encourage saving (see Furnham & Argyle, 1998). This assertion fits with Songua-Barke and Webley's (1993) findings that parents tend to use pocket money to teach about spending not saving. As

well as pocket money then, a good parental example vis-à-vis saving and/or discussions about family finances may also be required to encourage saving. This line of thinking needs to be explored in future work, but it is supported by Lassarre's (1996) conclusion that pocket money can play a more educative role when teamed with discussions about family financial matters.

In relation to income, a small association was found between family income and economic socialisation. However, neither family social background nor family income were directly associated with adolescent saving. Nonetheless, family social background might be indirectly related to saving behaviour during adolescence, via its association with authoritative parenting.

#### *Pathways to saving in adulthood*

In line with evidence that resources are transmitted across generations (e.g., Schoon & Parsons, 2002), socio-economic circumstances during childhood and adolescence were directly linked to socio-economic outcomes in adulthood. Specifically, family social background at birth was positively related to own social status at 34, while family income at 16 was positively related to family income at 34.

Saving during adolescence, adult social status, income and income perception were all positively related to saving at age 34. People who thought that they were managing well financially were more likely to save, while those who were finding it a struggle were less likely to do so. It appears that it is not necessarily income per se that matters, but rather the way in which people think that they are managing on this income. This line of thinking fits with the suggestion that the decision to save is influenced by psychological factors (such as perceptions and expectations), as well as economic ones (e.g., Canova et al., 2005). One caveat is that this relationship is correlational. While

people may decide to save because they think that they are managing well financially (or vice versa), it may be that people view their financial situation more positively because they save (Lunt & Livingstone, 1991). Given the current uncertain economic climate, it also appears fruitful to explore the interplay between current perceptions and future expectations vis-à-vis income, the way in which these adapt and change over time (if at all), and their impact on saving.

Although saving during adolescence was linked to saving in adulthood, no direct relationship was found between either authoritative parenting or economic socialisation experienced in adolescence, and saving in adulthood. However, authoritative parenting might have played an indirect role in the sense that it influenced saving at age 16, as well as social status attainment at age 34.

In this study, the relationship between adolescent and adult saving was stronger amongst those living alone, than those living with a partner. Webley and Nyhus (2006) suggest that couples may adjust their saving behaviour in the light of their partner's beliefs and actions, which may dilute the effects of their own past experiences and upbringing. However, while similarities could result from the attitudes and behaviours of partners converging over time, they could also be due to partners having similar childhood experiences (Webley & Nyhus, 2006). More research (where information is gathered from both partners) is called for. For example, in longitudinal studies such as the one used here, it would be possible to survey a subsample of participants' partners about their saving experiences, behaviours and attitudes.

In interpreting the findings some limitations of the study should be noted. Although every effort was made to use measures of parenting style, economic socialisation and saving similar to those successfully used in other research studies, we

recognise that these particular measures are not optimal. This may explain why some of the associations were only modest. In developing a measure of authoritative parenting style, a number of items were selected to correspond with three dimensions of parenting style (namely, acceptance/involvement, strictness, and psychological autonomy). While we acknowledge that psychological autonomy is important in defining authoritativeness, this measure could not be used due to poor reliability. Lamborn et al. (1991) also did not use this dimension in creating measures of authoritative, neglectful, authoritarian and indulgent families. However, future work including all of the dimensions would be beneficial, especially since the latent variable used in this study was primarily defined by the notion of strictness.

Another potential problem with the measures used here is that participants might have been responding to demand characteristics by only giving favourable answers. In particular, they might have answered that they saved regularly because they thought this was what most people would think that they should do. However, the fact that nearly a third of respondents answered that they did not save at all perhaps lessens this concern.

One further issue to be addressed is missing data, which might have affected the validity of the results. Response bias at the individual level would tend to underestimate the magnitude of effects of social disadvantage, as sample attrition is greatest among cohort members in more deprived circumstances. The results might thus provide a conservative estimate of social inequalities in the sample. Missing data at the variable level may also be non random. Here we used multiple imputations as implemented in Mplus (Muthén & Muthén, 2007; Little & Rubin, 2002) as a “best effort” technique for dealing with the problem of missingness. Despite these concerns, the cohort data offer the unique opportunity to examine antecedents and outcomes of adolescent saving

behaviour in a prospective longitudinal data, providing new evidence regarding the link between saving behaviour in adolescence and adulthood.

### *Conclusion*

The main message of this paper is that socio-economic circumstances as well as socialisation experiences during adolescence shape the savers that we become.

Although more research is required to develop a model that replicates and elaborates the interplay between socio-economic circumstances, authoritative parenting, economic socialisation and saving, this paper serves as an important starting point in examining these links in a prospective dataset. This paper not only confirms the existence of an association between saving in adolescence and adulthood, but also provides a better understanding of the mechanisms and processes influencing saving behaviour across the life span.

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Table 1. Means, Standard Deviations, and Pearson Correlations between Variables Included in the Model

	2	3	4	5	6	7	8	9	10	11	12	13	M	SD	M(wp) <sup>+</sup>	M(a) <sub>++</sub>
1. Mother's education	.465**	.395**	.400**	.144**	.046*	.146**	.067**	.293**	.189**	.068**	.145**	.067**	15.59	1.08	15.64	15.50
2. Father's education	-	.475**	.416**	.160**	.051*	.129**	.058**	.297**	.184**	.084**	.190**	.067**	15.60	1.20	15.65	15.52
3. Parental Social Class		-	.438**	.187**	.050*	.130**	.109**	.347**	.224**	.087**	.146**	.117**	3.44	1.20	3.47	3.46
4. Family Income			-	.187**	.042*	.175**	.103**	.318**	.261**	.139**	.224**	.125**	5.13	2.46	5.27	5.09
5. Strictness				-	.239**	.120**	.157**	.264**	.197**	.118**	.135**	.099**	18.62	4.59	18.81	18.56
6. Acceptance/involvement					-	.097**	.116**	.078**	.041	.056*	.020	.060*	1.96	1.09	2	1.95
7. Economic Socialisation						-	.056**	.217**	.153**	.073**	.083**	.062**	.87	.76	.88	.86
8. Saving at 16							-	.126**	.125**	.116**	.044	.141**	.78	.41	.81	.78
9. Education at 34								-	.523**	.201**	.283**	.202**	2.86	1.34	2.88	2.80
10. Social Status at 34									-	.247**	.294**	.203**	4.27	1.18	4.29	4.19
11. Perception of Income										-	.358**	.346**	4.15	.87	4.23	3.91
12. Income at 34											-	.246**	568.38	320.67	662.63	341.09
13. Saving at 34												-	1.18	.89	1.23	1.02

Note. Significance level: \*\* $p < .001$ , \* $p < .05$ . <sup>+</sup>, <sup>++</sup> M(wp) gives the means for those living with a partner (N=1386) and M(a) gives the means for those living alone (N=438). M gives the means, and SD gives the standard deviations for the full sample (N=2361).

Table 2. *Estimated Standardized Path Coefficients in the final model for the full dataset, for people who live with a partner and for people who live alone*

	Standardised estimates by dataset			
	Full dataset (N=2361)	No missing (N=1054)	Live with partner (N=1386)	Live alone (N=438)
<b>Identification of the latent variables</b>				
<i>Family Background</i> <sup>†</sup>	.63***	.61***	.62***	.64***
Mother's education	.69***	.69***	.69***	.72***
Father's education	.68***	.68***	.67***	.70***
Social Class				
<i>Authoritative Parenting Style</i>				
Strictness	.68***	.66***	.71***	.61***
Acceptance & Warmth	.33***	.27***	.29***	.39***
<i>Social Status at 34</i>				
Education	.82***	.82***	.82***	.85***
Social Class	.65***	.65***	.64***	.67***
<b>Path coefficients</b>				
<i>Family Background</i>				
→ Family Income	.64***	.64***	.60***	.70***
→ Economic Socialisation	.11**	.13***	.12**	.07
→ Parent Style	.36***	.38***	.36***	.36***
→ Social Background at 34	.44***	.42***	.46***	.36***
<i>Family Income</i>				
→ Economic Socialisation	.07*	.08 (p=.09)	.07	.05
→ Family Income at 34	.10**	.09**	.07*	.24***
<i>Economic Socialisation</i>				
→ Social Background at 34	.12***	.09**	.16***	-.01
<i>Authoritative Parenting Style</i>				
→ Economic Socialisation	.13***	.08 (p=.11)	.11**	.19*
→ Saving at 16	.26***	.21***	.19***	.33***
→ Social Background at 34	.29***	.27***	.23***	.46***
<i>Saving at 16</i>				
→ Saving at 34	.09***	.08***	.06***	.15***
<i>Social Status at 34</i>				
→ Family Income at 34	.35***	.32***	.39***	.33***
→ Saving at 34	.14***	.14***	.15***	.10
<i>Family Income at 34</i>				
→ Perception of Income at 34	.37***	.37***	.35***	.38***
→ Saving at 34	.10***	.06 (p=.06)	.07	.10
<i>Perception of Income at 34</i>				
→ Saving at 34	.27***	.27***	.25***	.33***

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$\chi^2$	175.34	132.25	121.73	77.62
<i>df</i>	55	55	55	55
<i>p</i>	.00	.00	.00	.02
CFI	.97	.96	.97	.98
RMSEA	.03	.04	.03	.03

*Note.* Significance level: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ . <sup>+</sup> Latent variables are italicised.



Figure 1. Contextual Developmental Model Predicting Saving in adulthood.

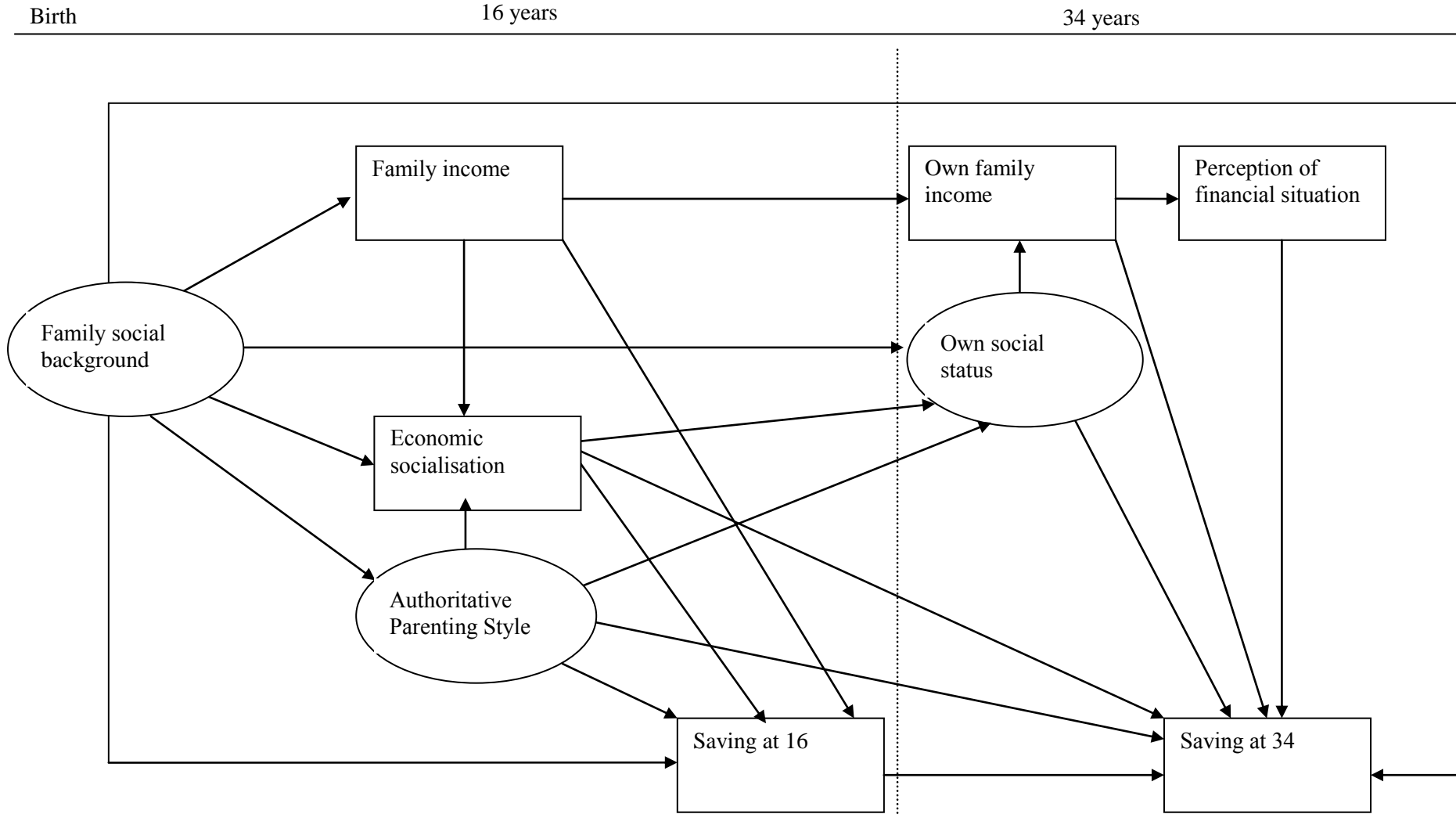
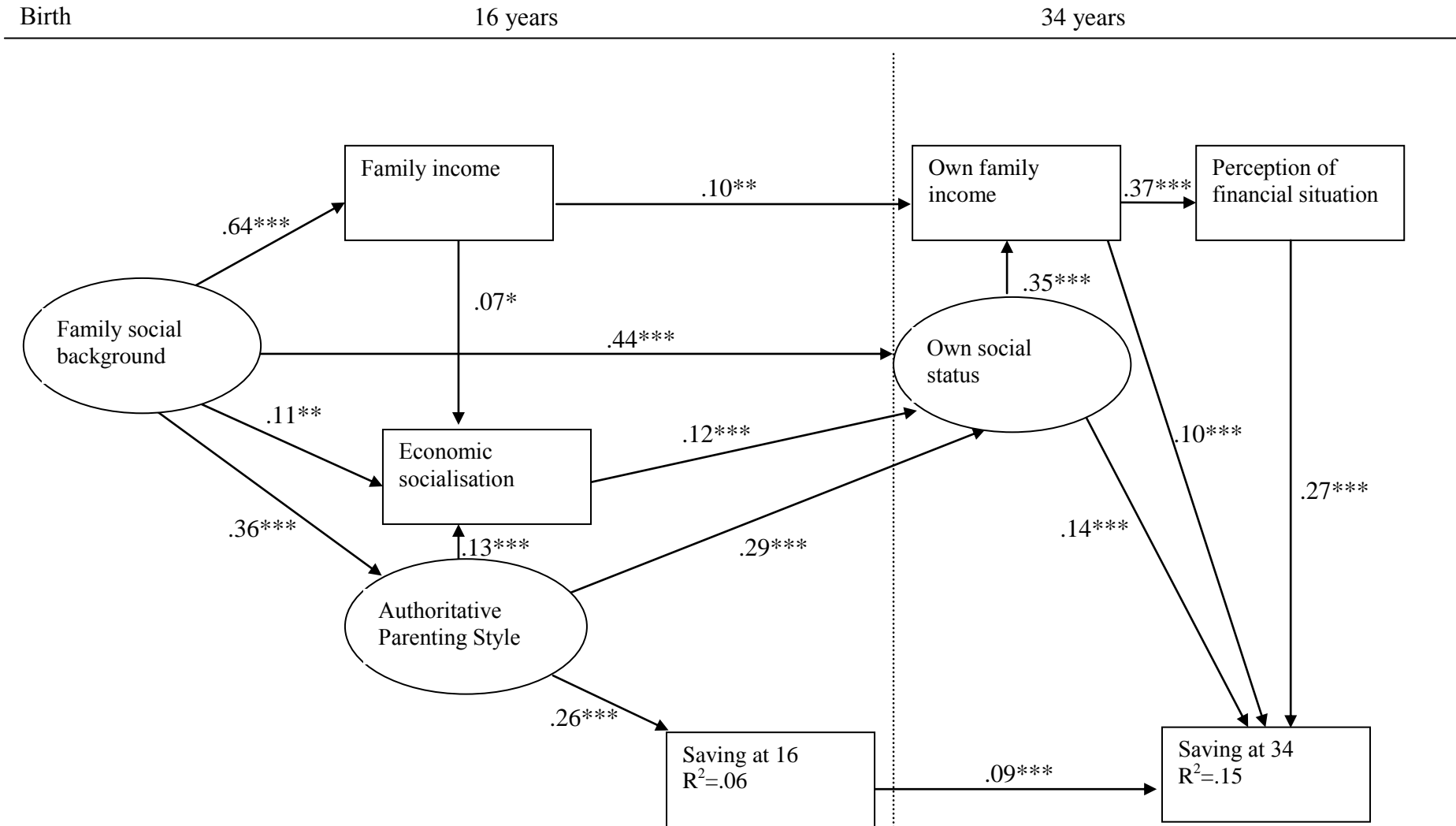


Figure 2. Contextual Developmental Model Predicting Saving in adulthood. Estimated Standardised Path Coefficients in the final model.

Significance level: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$



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