Are We There Yet? Understanding the Implementation of Re-municipalization Decisions and their Duration

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Abstract:

Studies of the drivers of the decision to re-municipalize have increased recently, but research on its implementation is very scarce. We analyse how service characteristics and institutional factors influence the implementation of re-municipalization. For that purpose, we use an extensive database on re-municipalization decisions, and analyse the available data by means of logistic and negative binomial regressions. Strong network characteristics are associated with lower probabilities of implementation and longer implementation processes. Re-municipalization of personal services is more likely to be fully implemented and is finalised faster. Interestingly, after the great recession the probability of implementing reforms increased.

Keywords: Re-Municipalization, Privatization, Implementation Policy, Policy Analysis, Quantitative Analysis.

Introduction

In recent years there has been growing evidence of a reversal of the widespread trend towards privatization that was witnessed in the late 1980s and 1990s. Reverse privatization and nationalization has occurred at the level of state-owned enterprises, municipal enterprises and local government (municipal) services. At the local level, evidence has gradually emerged of numerous cases of reverse privatizations where services are returned to public production thereby ending privatization arrangements. Such reversals of earlier privatization measures have commonly been described as contracting back-in, backsourcing or insourcing (Hefetz and

Warner 2004; Young and Macinati 2012; Damanpour, Magelssen and Walker 2020). More recently they have been popularly labelled as 're-municipalization' and include high-profile cases such as Atlanta and Paris where concessions for water supply were terminated in 2003 and 2010 respectively. In addition, there have been several cases of municipalization where local governments establish new municipal companies in liberalized markets. For example, in the German energy sector, 63 new *stadtwerke* (local public utilities) were established between 2007 and 2012.

The literature covering factors driving re-municipalization has expanded in recent years [Hefetz and Warner (2004, 2007), Chong, Saussier and Silverman (2015), Campos-Alba et al. (2017), Albalate and Bel (2020), Gradus and Budding (2020), Warner and Aldag (2020), Damanpour, Magelssen and Walker (2020)]. However, there is an absence of studies into the implementation of re-municipalization policies that follow adoption decisions.

Recent data provided by Kishimoto and Petitjean (2017) provides evidence of over 800 cases in over 40 countries where it was decided to return services to municipal control since the early 2000's. That data contains cases in which the decision to re-municipalize was made and was either (a) fully implemented or (b) not fully implemented. Moreover, where re-municipalization decisions were implemented, there was significant variation in the time period between the decision and full implementation across cases. The time taken to implement re-municipalization decisions can have important implications for public policy as protracted durations are suggestive of obstacles to the achievement of policy objectives. In economic terms, guiding decisions through the implementation process is likely to create non-trivial transaction costs and efficiency losses.

In this paper we use the data provided by Kishimoto and Petitjean (2017) to empirically examine two research questions concerning re-municipalization. First, what factors explain the

implementation of the re-municipalization decision? Second, what factors speed up or slow down the implementation of this decision?

We are not aware of other studies that deal with the implementation of re-municipalization decisions. Hence, our paper makes two significant contributions to the existing literature. First, it distinguishes between the decision to insource and the implementation of that decision thereby providing new analysis and insights on the dynamics of re-municipalization, which is still an under-researched topic. Second, it provides new, robust empirical evidence on the issue of policy implementation and the factors that explain the time spent between deciding and finalizing the implementation of public policy reform.

Theory and empirical background on re-municipalization

Our analysis of the implementation of re-municipalization and its timing draws from the existing literature on reverse privatization and re-municipalization. Reforms such as contracting-out and re-municipalization are choices between public and private delivery forms. The literature has dedicated extensive theoretical analysis to the analysis of drivers of privatization of public services (e.g. Bel and Fageda 2017). Fiscal constraints and the desire to obtain cost savings have been primary rationales for privatization. While partisan political interests have been drivers of privatization, ideology tends not to be a key factor for technical services such as waste collection, wastewater, etc. However, ideology is found to be more relevant for social services which are closely related to welfare mechanisms such as education, elder-care and child-care. Hence, the relatively more politicized nature of social and personal services can be expected to give momentum to organizational change (Petersen, Houlberg and Christenssen 2015; Guo and Willner 2017)

The main theoretical expectations for re-municipalization can be illustrated in terms of theories of privatization (Young and Macinati 2012). The first relevant reasons for re-municipalization are failure to achieve expected costs savings following privatization and dissatisfaction with service quality under private production. These outcomes are more likely in sectors were transaction costs are high (Donahue 1989; Brown and Potoski 2003;) and quality is not measurable or crucial for policy makers (Hart, Shleifer and Vishny 1997; Levin and Tadelis 2010). Therefore, organizational change (e.g. privatization) is less likely if transaction costs are high and quality is not measurable, which is more frequent in sectors with network characteristics and high asset specificity (e.g. water distribution). Furthermore, cost savings from privatization are less likely to be realized in these sectors because the probability of opportunism is greater and governance costs are likely to be higher (Globerman and Vining 1996).

Ideological and political motivations have also been emphasized as drivers of re-municipalization (Young and Macinati 2012). This view is shared by proponents of public choice theory (e.g. Shleifer and Vishny 1994), as well as by scholars that emphasize a rejection of private business involvement in public services as a cause of re-municipalization (McDonald 2016). In addition, Young and Macinati (2012) posit that significant changes in the external environment faced by governments and business provide opportunities to re-organize and bring services back-in.

The empirical evidence on re-municipalization, based on case studies and large-n data sets, has increased in the recent years but remains scarce. Preliminary multi-service studies for the US find reverse privatization to be a pragmatic decision (Hefetz and Warner 2004, 2007) with politics or ideology having little influence (Warner and Aldag 2020). Although Damanpour, Magelssen and Walker (2020), were unable to analyse the relevance of political ideology on insourcing they do provide some (weak) evidence that asset specificity -a key component of

transaction costs- is negatively related to insourcing. Several studies based on European countries have been published in recent years. In the water sector, Chong, Saussier and Silverman (2015) find that prices tend to be higher under private management and this can explain re-municipalization in large municipalities with overpriced services, while ideology does not appear to be relevant. Campos-Alba et al. (2017) analyse several local services in Spain. They find that technical services are less frequently re-municipalized compared to personal/social services, and also that re-municipalization decisions do not appear to be ideologically driven. Similarly, in their multivariate study of re-municipalization in Catalonia, Albalate and Bel (2020) do not find an ideological influence. In the case of Netherlands, however, Gradus and Budding (2020) study re-municipalization of solid waste collection and find that ideological factors have some, albeit limited, influence.

Voorn, Van Genugten and Van Thiel (2020) provide an interesting review on existing evidence on re-municipalization, and discuss whether it is an expanding practice, and whether it is ideological or pragmatic. These authors conclude that while re-municipalization appeared to gain momentum in the first decade of the century, its intensity was not sustained in the following decade. Furthermore, while re-municipalization has occurred for ideological reasons, most available evidence suggest that governments adopt this approach for pragmatic managerial reasons.

Overall, the evidence available in the literature tends to provide information on three relevant questions. First, although re-municipalization has been a common practice in recent decades, it is not an expanding policy (Warner and Hefetz 2020), and the incidence of privatization and re-municipalization is similar (Gradus, Schoute and Budding 2019; Albalate and Bel 2020). Second, dissatisfaction with outcomes of privatization have been influential drivers of privatization (Chong, Saussier and Silverman 2015; Damanpour, Magelssen and Walker 2020). Third, re-municipalization decisions have followed pragmatic and managerial considerations

rather than ideological ones (Hefetz and Warner 2004, 2007; Chong, Saussier and Silverman 2015; Campos-Alba et al. 2017; Albalate and Bel 2020).

Notwithstanding the value of these insights there remain gaps in the re-municipalization literature. Two questions (among others) have received little attention. First, besides some case studies (that arguably suffer from ideological bias), no robust evidence is available on the economic impact of re-municipalization (Clifton et al 2019). Second, although empirical research focusing on the adoption of the re-municipalization decision has increased, questions concerning its implementation process have been largely overlooked. This gap in the research on re-municipalization is highlighted by Damanpour, Magelssen and Walker (2020:4) in their study of the outsourcing implementation process and its influence on insourcing. Our study contributes to filling this gap in the research on re-municipalization by going beyond the analysis of the adoption decision and analyzing key aspects of the implementation of re-municipalization decision. More specifically, it examines the drivers of actual implementation of re-municipalization and the factors that influence the speed of the implementation process.

Relevant Literature on Policy Implementation and Hypotheses

In order to address our principal questions concerning the implementation of re-municipalization policies we derive a number of testable hypotheses from three strands of relevant literature, namely: re-municipalization, public versus private choice for service delivery and public policy implementation.

The extant literatures on re-municipalization and public versus private delivery discussed in the previous section demonstrates the importance of service characteristics (e.g. network versus non-network services, which is directly related to the relevance of asset specificity) as well as type of service (e.g. technical versus social) in terms of driving re-municipalization decisions.

In addition, a related and relevant literature concerns the time taken to implement policies such as public-private partnerships (PPPs). Studies show that complex organizational change and reforms such as PPP are characterized by lengthy tendering periods that can impact public sector investment efficiency (HM Treasury 2010) Moreover, tendering periods are found to vary across service types (technical and social) and are also explained by factors such as project size, procurement authority, and whether projects overlap with general elections (Reeves, Palcic and Flannery 2015; 2017).

These studies show that the lag between deciding and implementing new forms of public service (or asset) production or delivery can vary across jurisdictions and can depend on institutional arrangements, legal frameworks, and political commitments. Such issues have not been examined in the context of re-municipalization and this paper aims to address this gap in the literature. On the basis of relevant theory and evidence on public versus private choice of public service delivery, we formulate the two following hypotheses in relation to the implementation of re-municipalization policies.

H_1: Probability of implementation and speed of re-municipalization is negatively related to network services characterized by greater asset specificity and higher transaction costs.

H_2: Probability of implementation and speed of re-municipalization is higher in social/personal than in technical services, as ideological factors can be more influential and give more strength to the policy.

Additional hypotheses can be drawn from the literature on public policy implementation. The so-called 'third generation' of implementation research moved beyond the debate between "top-down" and "bottom-up" approaches to implementation and has yielded more scientific implementation research methods and results" (Howlett 2019:408). The work of Winter (2006) was particularly influential in this regard and is relevant to our study of re-municipalization. It

advocated reducing the emphasis on analysing goal achievement and policy outcomes (which relate more to policy evaluation) and increasing attention to the analysis of policy outputs (i.e. whether a policy was actually implemented) and the variation in outputs (e.g. the time taken to complete implementation). In this regard, implementation outputs can be de-limited to the completion of actions required to carry out a policy (Montjoy and O'Toole 1979; O'Toole 2000) and the real issue is not to evaluate if policy implementation is successful (outcomes), but rather if it is effective (Lane 1987). This forms the basis for our study of re-municipalization where the implementation output is the return of service production to government control and the variation in output is the time taken to implement the policy.

The third generation of implementation research also promoted more robust empirical analysis. Recent studies (e.g. Hupe and Sætren 2015: 94-95) have identified a number of desirable features of empirical research, specifically: (1) Clearly defined variables; (2) Theoretically derived hypotheses; (3) Use of statistical analysis with quantitative data; (4) More comparison across policy sectors and units of analysis and; (5) Longitudinal research. Furthermore, Hupe and Sætren add that cross-national comparison is especially important to furthering the development of theory in implementation research. These are precisely the features of the empirical exercise we undertake for this paper in which we analyse the factors associated with implementation of re-municipalization and the time taken to complete implementation.

We draw on three main factors identified in the policy implementation research in order to establish theoretically derived hypotheses. First, several studies identify the importance of clarity with respect to the policy to be implemented and required actions. Contributions to the policy implementation literature assert that task ambiguity is negatively related to implementation performance (Montjoy and O'Toole 1979; Sabatier and Mazmanian 1979; Matland 1995) and supporting evidence in this regard has been provided by Chun and Rainey (2005). This provides the basis for testing the following hypothesis:

H3: Ambiguous definition of policy goals and tasks has a negative effect on the probability of the policy being implemented, and also on the time required for implementation.

A second factor derived from the policy implementation literature concerns administrative ineffectiveness (weak capacity for achieving policy goals, Scholz 1991). Several authors posit that regulatory and procedural complexity (which create regulatory burden) cause administrative ineffectiveness, as they lead to, for instance, more time spent on learning about regulations, and meeting paperwork requirements. (Meier and O'Toole 2009). Higher administrative ineffectiveness is therefore expected to be associated with lower implementation performance and we formally test the following hypothesis.

H4: Administrative ineffectiveness is negatively related to the probability of the policy being implemented, and also to the speed of implementation.

Third, the literature identifies changing economic conditions and external shocks as factors that can influence implementation performance (Sabatier and Mazmanian 1979; Matland 1995). In this context we focus on the impact of the great recession on the implementation of decisions to re-municipalize. The global financial crisis of the late 2000's and subsequent government interventions to rescue and support private business (sometimes through nationalisation) raised appreciable scepticism about the role of the private sector in the economy and provided support for arguments in favour of government intervention (Hodges and Lapsley 2016; Levy 2017). We therefore examine the influence of the great recession on the implementation of re-municipalization as follows:

H5: Re-municipalization decided after the great recession has a higher probability of being implemented, and also more quickly implemented.

Empirical Approach

Data

Our empirical analysis draws on the dataset assembled by Kishimoto and Petitjean (2017) which covers information on 834 cases of re-municipalization worldwide between 2000 and mid-2017. The data is based on a survey seeking information concerning cases of re-municipalization cases, sent to organisations working in the field of public services (citizen organisations, researchers and trade unions) in 45 countries.[1] This is the largest and the most varied international database on re-municipalization of which we are aware.[2] The number of countries covered is almost double the number of countries covered in other relevant databases on public and private management, such as the Privatization Barometer (25 countries), frequently used in empirical research on privatization (e.g. Peña-Miguel and Cuadrado-Ballesteros 2019).

Information is collected on the country/region/city where re-municipalization occurred, the population affected (inhabitants), the specific service and sector, and the government level of taking back control (state/province/city). Information on how it occurred (e.g. contract expired, contract was terminated, shares were sold by private operators) is also provided. In order to test our main hypotheses, we take advantage of the information provided on the timing of re-municipalization as the data distinguishes between the date of the decision to re-municipalize and the date re-municipalization was actually implemented. This facilitates the determination of the time lapse between decisions and implementations. Furthermore, it allows us to identify those decisions yet to be implemented.

The dataset includes re-municipalizations in 45 countries. In sectoral terms, energy (346), water (269) and other local government services (140) rank the highest. The data shows that in the majority (68%) of cases, re-municipalization occurred following the decision not to renew

contracts after they expired (Figure 1). Waiting for existing contracts to expire before (re)municipalizing is to be expected given the high costs likely to be incurred if contracts are terminated. Nevertheless, it is noteworthy that contract terminations did occur in 132 (21 %) of cases for which data are available with two thirds of terminations occurring in the water services sector. In the remainder of cases, re-municipalization occurred after private companies sold their shares or decided to withdraw from contracts. The data also includes a category labelled de-privatizations. These are defined as decisions to re-municipalize that were taken without a clear indication on how and when this should be executed. De-privatizations account for 34 cases in the database.

(Insert figure 1 here)

Another interesting feature of our data is the information on the timing of re-municipalizations. Figure 2, which covers all cases between 2000 and the last complete year (2016) in the database, shows that over time, the incidence of decisions to re-municipalize followed an increasing trend. It also shows an important structural change between 2007 and 2009, which coincides with the first years of the great recession. The number of decisions prior to 2008 was just 141 (20% of sample), whereas this increased to 566 (80% of sample) between 2009 and 2016.

(Insert figure 2 here)

Importantly, the data shows that just 54% of decisions were actually implemented over the period 2000-2017. The percentage of decisions implemented before 2009 was very low (31%) but this increased significantly thereafter, reaching an average of 59% between 2009 and 2017. Focusing on cases where decisions were implemented, the data shows that for the full sample, the average time period between making the decision and implementation was 1.25 years. Figure 3 shows that while in most cases implementation was completed within two years after the decision, several cases required much more time, the maximum of which was 8 years. The

average time spent does not show any significant change between the pre- and post-great recession.

(Insert figure 3 here)

In order to further examine implementation rates and their timing we provide some descriptive statistics in table 1, which displays rates and timing by economic sector and by the channels through which the re-municipalization was decided. The first three columns focus on economic sectors, showing that the highest percentage of implemented decisions is found in the energy sector (89%). This is followed by personal services, such as health and education (76% and 64%, respectively). Transportation, waste and other local government services, (which may involve technical but also personal services), are the next group (55%, 46% and 45%, respectively).[3] Water, which is generally considered a technical infrastructure-based service presents by far the lowest implementation rate. Regarding timing, we find that fastest implementation is associated with personal services, such as health (0.52 years) and education (0.75 years), followed by other local government services (0.70 years). More technical services take longer to implement with energy (1.57 years), transportation (1.26 years) and water (1.14 years) showing the longest periods.

(Insert table 1 here)

This analysis can also be replicated focusing on the channel of re-municipalization presented in the last three columns. Public-led decisions (that is, re-municipalization decided by government) enjoy a low implementation rate of 46% and an average time of 1.28 years. Instead, private-led reasons (namely, the private sector selling shares or withdrawing from the service, which forces the government to take over the service) show a much higher implementation rate (68%) and a shorter average time (0.48 years).

Methods and variables

The empirical approach in this study comprises two different analyses of the implementation of re-municipalization decisions. On the one hand, given the low implementation rate of re-municipalization decisions, we seek to assess the factors determining the probability of implementation. Thus, we consider all decisions in the database and identify whether they have been actually implemented or not. Our dependent variable for this analysis is a binary variable (*Implemented*) which is assigned a value of 1 if decisions are actually implemented and with 0 for those not yet implemented. Because our analysis is based on a probability model with a binary outcome variable, we apply logistic regressions with robust to heteroskedasticity errors, or clustered errors either by country or by economic sector. We transform coefficients into odds ratios (OR) in order to facilitate their interpretation.

On the other hand, we are also interested in evaluating the variables that extend or shorten the time between the re-municipalization decision and its implementation. This analysis is applied only to the sample of the database in which decisions have been implemented. Because our dependent variable follows a distribution similar to count data –(figure 3)– for which the normality assumption or errors of OLS is not reasonable, we apply negative binomial regressions, for which we also correct errors by clustering them either at country level or by economic sector.

Both approaches use a common set of explanatory variables. First, we use demographic variables such as population (in thousands) and its square to account for the size effects. The square is introduced in the equation on the probability of implementation in order to capture possible non-linearities between the likelihood of implementation and the size of the jurisdiction when this offers a better fit than including population alone. The variable *Local* is

also a binary variable that takes a value of 1 if the government making the decision is a local government, and 0 if it is a supra-municipal government.

An important source of variation is the economic sector in which the service belongs. The literature shows that the magnitude of transaction costs incurred when implementing reforms such as privatization (or its reverse) can vary depending on service characteristics As the energy sector has the highest frequency in our database with more than 300 cases, we use this sector as a reference category when we include all binary variables denoting economic sector. Coefficients are therefore interpreted with reference to the energy sector.

However, as we are testing two hypotheses derived from the private-public literature and comparisons it is necessary to go beyond testing with respect to just one sector. To address this when testing H1 we introduce a binary variable denoting economic sectors characterized by network features (high transaction costs). Secondly, to test H2 we introduce a binary variable denoting personal services with 1, and 0 otherwise. Most personal services belong to two sectors: education and health. However, we revised the category 'other local government sectors' to add services such as school catering, local food supply, and housing advice to personal services.

The origin of the decision is captured in our specification by incorporating a binary variable assigned a value of 1 if the decision is privately led. This covers cases in which the private sector sold shares or withdrew from the service. This should be interpreted relative to publicly-led decisions including de-privatizations and contracts that expired and were terminated. Privately-led decisions are beyond the boundaries of the public sector decision process but require a public sector response in order to guarantee the delivery of the service. We expect this variable to affect re-municipalization implementation rates and their time efficiency. Furthermore, we test H3 (concerning policy ambiguity) by including a dummy variable

denoting a specific group of publicly-led decisions, namely de-privatizations. These decisions are less defined than the all other approaches (terminations, contract expired and private withdrawal). This overarching term includes those cases where the decision to move to public service delivery was made, but no specific action or method was chosen. This connects to the issue of goal and task ambiguity discussed in our theoretical framework.

We take two approaches to exploring inter-country differences. First, we use country-specific dummy variables to distinguish the observations of the most frequent countries in the dataset: Germany, France, United States and United Kingdom. This may offer insights into the average behaviour of decisions in these countries relative to all other countries. Second, we explore several institutional variables at country level in order to test H4 (concerning administrative ineffectiveness). The first of these variables indicates the country-specific *regulatory burden* (from several editions of the Annual Global Competitiveness Report published by the World Economic Forum). This variable takes values on a scale between 1 and 7. The former denotes extreme burden and the latter, absence of burdensome, which we revert by multiplying by (-1) to facilitate interpretation. We expect a higher regulatory burden to hinder both the implementation of decisions and the time efficiency of their execution. The other institutional binary variables included indicate the legal origin of the country's administration, which we expect to strengthen the effect of regulatory burden. We use the classification by La Porta, López de Silanes and Shleifer (2008) to distinguish the German, British, French and Scandinavian legal origins of the countries included in our dataset.

Finally, the effects of time are captured by two different strategies. First, we introduce a binary variable denoted as Recession, which distinguishes the period before the great recession (until 2007) and the period after the great recession (from 2008) to test H5. After this approach we substitute the binary variable by specific year dummies for each year, which is a preferred

strategy as it enables us to account for trend effects and year-specific shocks. Table 2 displays the descriptive statistics of the variables employed.

(Insert table 2 here)

Results

Probability of Implementing Re-municipalization Decisions

Table 3 displays our main results on the probability of implementation. Model (1) includes the basic specification with dummies for all economic sectors and for the countries with the highest incidence of decisions to re-municipalize (Germany, France, United States and United Kingdom). We also control for the structural change created by the great recession (Warner, Aldag and Kim 2020) with the binary variable 'Recession'. In model (2) we replace binary variables for economic sectors with the network variable in order to test the transaction cost hypothesis H1. A similar approach is followed in Model (3) where we test for personal services (instead of network-based services) related to H2. Model (4) adds the variable de-privatization in order to test H3 (concerning ambiguity of policy goals). For the purpose of testing H4 regarding administrative ineffectiveness, we replace country-dummies with the institutional variables (namely, regulatory burden, and different legal origins) in Model (5).

We use Model (6) to introduce time effects by replacing the variable capturing the structural change produced by the great recession with year-specific binary variables. Three additional models were run to improve the robustness of the analysis. Models (7) and (8), retain the year-specific time effects and present results with clustered errors by country and by economic sector respectively. Finally, we present results for a restricted sample Model (9) in which we include only re-municipalization decisions taken up to and including 2013.

(Insert table 3 here)

Our results provide some evidence of an inverted U-shape relationship between the likelihood of implementation and population size. It should be noted that our results show odds ratios instead of coefficients, so values below 1 indicate a lower probability and values over 1 a higher probability. In most models the probability increases with population until a certain threshold after which the probability starts to decrease in very large jurisdictions. This result is consistent for the most robust and preferred models (6-9) (which include year-specific fixed effects, institutional variables and clustered errors). It reveals a characteristic that re-municipalizations share with privatization reforms but the magnitude of the effect of a one thousand population change is not appreciable (odds ratios very close to 1). Whether the reforming government is local or supra-municipal and whether the decision is privately or publicly led, does not seem to affect the probability of implementation of a re-municipalization decision.

Focusing on economic sectors, we find, in model 1, that compared to the energy sector (our reference category) the probability of implementation in the water sector – the second most frequent sector in the dataset is negative and statistically significant. Also, waste services and 'other government services' display statistically significant coefficients below 1, indicating that the likelihood of implementing a re-municipalization decision in these sectors is statistically different and lower than in the energy sector. Transportation services and personally-oriented sectors, such as education and health, do not show significant differences compared to energy.

In order to relate these findings to theoretical propositions we explore further by replacing sector-specific binary variables with two different groupings of sectors. First, in Model (2) we distinguish between sectors according to network characteristics in order to proxy for transaction costs and test H1. Second, in Model (3) we distinguish personal services from technical services to test H2. Our results support both hypotheses. Sectors with network characteristics are associated with lower probabilities of implementation (approximately half

of the likelihood - odds ratio of 0.50), while personal services are associated with higher probabilities– more than three times higher than technical services (odds ratio of 3.4). These results are consistent across all models.

As the models that keep the distinction between personal versus technical services provide a (marginally) better fit compared to other models we keep this distinction to test our remaining hypotheses. In Model (4) we include a binary variable denoting de-privatizations in order to test H3 (concerning policy ambiguity). This variable refers to public-led re-municipalization decisions that are more task-ambiguous compared to other publicly-led decisions. Using publicly-led decisions (linked to contract expiration and termination) as a reference category our results indicate that de-privatizations are not statistically different from the rest of publicly-led decisions. We therefore fail to accept H3 which states that ambiguity about the re-municipalization policy had a negative impact on the probability of implementation. This result holds when we include this variable in the more robust Models (5-9).

Country dummies in models (1-4) also offer some anecdotal information regarding country-specific implementation rates. Using 'all other' countries as the reference category the results from models (1-4) indicate that Germany is the country associated with the highest probabilities of implementation. France, the UK and the US are associated with lower implementation rates compared to 'other countries'.

Next, to improve our understanding of the differences we find between countries, we substitute country dummies with institutional variables in Models (5-9). According to our results, regulatory burden is only relevant and negatively related to the implementation probability in Model 5 as the odds ratio is not statistically significant when we add time dummies (Models 6-9). However, legal origins consistently report statistically significant coefficients for some specific legal heritages in all models. Using the German legal origin as the reference category,

we find that the British, French and Scandinavian legal origins are associated with much lower implementation probabilities thereby confirming the traditional view of the effectiveness of the German administration.

Time differences are found to be associated with implementation probability. Our dummy variable 'Recession' records a positive and statistically significant coefficient in the models in which it is employed (1-5)- as odds ratios are greater than 1. The odds ratio of 3.3 indicates that the probability of implementation increased by approximately 3-fold after 2008 thereby confirming H5. The analysis therefore indicates that there were more re-municipalizations in the 'post-recession' period and that their implementation rates increased. Models (6-9) in which this variable is replaced with year-specific dummies also indicate a similar path. All coefficients are negative and statistically significant when compared with the reference category (base year 2000). Also, odds ratios increase over time indicating that the probability of implementation is higher in later years.

Finally, in model (9) we restrict the analysis to decisions taken before 2013. This robustness check allows us to exclude recent decisions that may not have had enough time to be executed, thereby biasing our results. Although this robustness check is made at the expense of a large number of observations, we expect more accurate estimates by removing possible noise arising from more recent decisions. As our main results hold after this robustness check we use the most robust combination by including year-specific dummies, institutional variables and clustered errors.

Time Spent Implementing Re-municipalization Decisions

In addition to analysing the probability of implementation, we also examine the average time spent implementing decisions. For this stage of the analysis we restrict our sample to re-municipalization decisions actually implemented and estimate a model explaining the time

lapse between the decision and implementation. Our results for the negative binomial regressions for such models are displayed in table 4.

(Insert table 4 here)

We run a number of models that reproduce the presentation of results in table 3. Some of our results appear consistent across different models. For instance, we consistently find that population size is negatively related to implementation timing. This suggests that governments of larger municipalities or regions have more capacity to undertake reforms and take over the service compared to governments of smaller jurisdictions. We also consistently find that whether the administration is local or supra-municipal does not change the results in terms of average time.

Our analysis provides noteworthy results with regard to the economic sectors in which services are located. In Model (10) we find that, compared to energy (the reference category), several services are more efficient in terms of average time. With the exception of transportation all other sectors display negative and statistically significant coefficients indicating that decisions to re-municipalize are more efficiently implemented (in terms of time) compared to decisions that are fully implemented in the energy sector. In order to test H1 and H2 we replace sector dummies with the variables 'network' and 'personal', respectively. H1 is confirmed in Model (11), given that average re-municipalization in network sectors (where transaction costs are higher) takes more time. We also find support for H2 in model (12), as re-municipalization of personal services (for example, health, personal and other local government services) are finalized faster than other services. Unlike table 3, we keep the 'network' variable instead of the 'personal' variable in order to test the remaining hypotheses as this improves the fit of our models while avoiding multicollinearity.

The channel through which the re-municipalization decision was taken is also found to be a significant determinant of time spent in implementation. Our variable distinguishing privately-led from publicly-led decisions reports negative and statistically significant coefficients consistently across all models in which it is considered either by comparing it to all other public-led decisions in Models (10-12) or with respect to contract expire decisions in Models (13-17). These estimates indicate that time lags are shorter when the decision to re-municipalize is prompted by the private sector selling shares or withdrawing from the service (Models 10-12). In these cases, government must take action sooner to return the service to public production. Therefore, even if the origin of the decision is not relevant for implementation rates (table 3) publicly led decisions are associated with longer time spent in implementation.

As we find differences in the timing explained by the origin of the decision (privately-led versus publicly-led) we examined these differences in more depth by distinguishing between de-privatizations, contract expirations and terminated contracts which are within the publicly-led group. It is reasonable to expect privately-led and terminated contracts to be negatively related to time spent, given that the termination of a contract urges the substitution of the private operator. Results for this analysis is presented in models (13-17) where the reference category is 'contract expired'. Our findings suggest that, as expected, privately-led and terminated contracts (publicly-led) are statistically significant and report a negative coefficient. On the contrary, de-privatization –which is a decision taken to re-municipalize without any specific target and method- does not display consistent results. For some models it is not statistically significant –and therefore is not different from 'contract expire'– except for two of our preferred models such as model (15), which includes time dummies and model (17) where we further consider clustered errors by economic sector. Our results show that this diffuse category seems to take more time (positive coefficient) to finalize compared to decisions to re-

municipalize that are taken after contract expiration. Thus, we find some evidence supporting H3 concerning policy ambiguity.

Again, we find that the coefficient for the 'Recession' binary variable to be negative and statistically significant but only in models (13 and 14). Re-municipalization decisions were not only more frequent after the great recession as described in our descriptive analysis, but these decisions were also more likely to be implemented compared to the pre-recession period (see table 3). In addition, our results show (with less consistency however) that, that the lags between taking the decision and finalizing implementation may have been shorter in the post-recession period. This provides somewhat weak support for H5 with respect to our analysis of the implementation period. The replacement of this variable by the year-specific dummies does not clarify the situation. Many coefficients are not statistically significant, and it is not possible to find a pattern in relation to time.

Country dummies included in Models (10-13) provide some evidence of variation in implementation periods across countries although results vary across models. Compared to the reference category 'average period for other countries', France is found to have longer implementation periods in all models considered. Germany, in models (11 and 12) and UK in models (11-13) display similar behaviour but with less consistency across models. Finally, the US does not seem to behave differently from the reference category.

In order to examine differences between countries in more depth we replace these dummies with institutional variables. We find them to be significant determinants of average time in Models (14-17). For instance, we find that the regulatory burden is positively related to time in model (14). This suggests that more regulation usually complicates the implementation of a decision and this may extend the period between the decision and completion of the reversal. However, this result is not produced when we replace the 'post-great recession structural

change' variable with year-specific dummies. Thus, our results on the importance of the regulatory burden appear weak according to our best empirical models.

On the contrary, different legal origins are found to be good predictors of implementation timing in addition to implementation rates (table 3). Using the German origin as reference category, we again find that the administrations under the British, French and Scandinavian legal origins might spend more time implementing re-municipalization decisions compared to jurisdictions where the German legal system applies. Although coefficients are not statistically significant in some models, these results are consistent for our preferred models with time dummies and clustered errors (16-17). The British legal origin, however, is only statistically significant in our model with clusters by country (model 16) whereas the French legal origin , is statistically significant for models 15-17. Thus, the German legal origin is associated with higher rates of implementation and these implementations appear to be more efficient in terms of time. All in all, our results provide support for the hypothesis that institutions are important although our regulatory burden variable shows limited explanatory power once time dummies are introduced.

Summary and Discussion

In recent years, there has been growing evidence of a reversal of the earlier international trend towards privatization, especially at the level of municipal services. When viewed in historical terms it appears that the new wave of re-municipalization represents another swing in the regulatory pendulum of public service provision that has oscillated between public sector and privatist paradigms since the mid-nineteenth century (Hall, Lobina and Terhorst, 2013:193; Bel, 2020).

Given the increase of re-municipalization since the early 2000's we can expect several questions to be asked about different aspects of a reform that represents a significant re-

configuration of public service delivery and which appears to have taken hold on a global level. To date the literature has illuminated aspects such as the scale of the phenomenon, international trends, the motivation for decisions to re-municipalize (taking differences between sectors into account) and efforts to unpack the concept (Clifton et al, 2019).

This paper makes a novel contribution to the literature by focusing on the implementation of re-municipalization decisions. It takes advantage of the first international dataset that provides information on re-municipalization and uses the data to empirically examine two principal questions. First, as the raw data indicates that over 40% of decisions have yet to be implemented it examines the factors that determine whether the decision to re-municipalize services is actually implemented (finalized). Second, we analyse the factors that determine the lag between the decision to re-municipalize and actual implementation. We therefore address what Damanpour, Magelssen and Walker (2020) identify as a "major gap in research on governance choice, which primarily focuses on the adoption decision rather than scrutinizing the entire process" (2020:14).

Our findings provide strong empirical support for hypotheses drawn from public versus private choice literature. In that regard, service characteristics are found to matter in terms of policy implementation and execution. Sectors such as water and waste services which possess strong network characteristics are associated with lower probabilities of implementation. Also, it takes longer to implement re-municipalization policies in network sectors, consistent with the view that organizational change is more difficult in these sectors (Brown and Potoski 2003, Levin and Tadelis 2010). On the other hand, re-municipalization is more likely to be implemented in personal services including health and education and is finalized faster for these services.

Support for hypotheses drawn from policy implementation literature is more nuanced. The results do not find that greater clarity about re-municipalization policy is associated with the

level of implementation. But there is some support for the proposition that less ambiguity is associated with less time spent on implementation, as suggested by Montjoy and O'Toole 1979; Sabatier and Mazmanian 1979; and Matland 1995. There is support for the hypothesis that administrative inefficiency is negatively associated with both the probability of implementing policy and the time taken to complete the task, as legal origins are found to be significant (consistent with La Port, Lopez-de-Silanes and Shleifer, 2008). Specifically, countries following the German legal tradition are associated with higher probabilities of implementing and completing reforms compared to other legal traditions. The level of regulatory burden also has a degree of impact and there is some support for the hypothesis that higher burdens which erode administrative efficiency are negatively associated with implementation and reforms take longer to complete in jurisdictions where burdens are greater.

Our findings support the proposition that significant changes in external economic conditions, (specifically the great recession) provide opportunities to implement decisions for the purpose of reorganizing service delivery (Young and Macinati, 2012). We find that the probability of implementing reforms increased after the great recession and there is some evidence of faster implementation in the post-recession period.

Overall, when our analysis of the re-municipalization phenomenon is considered in terms of relevant theoretical frameworks we find support for propositions from theory that considers choices between public and private sector delivery of services. However, support for propositions derived from the literature on the implementation of public policy measures is more limited.

Conclusions

Whereas much of the literature on outsourcing and insourcing of public services focuses heavily on the adoption decision this paper addresses a recognised gap in the literature by

examining the implementation of such decisions. We focus on insourcing at the municipal level and conduct the first cross-country empirical analysis of re-municipalization of which the authors are aware. The data used to conduct this study demonstrates that re-municipalization has been adopted extensively in international terms. It should however be noted that this data has limitations such as the underrepresentation of regions including Asia and Africa. In that regard caution should be applied when seeking to make generalization of findings to those regions.

It remains to be seen if re-municipalization continues to be a significant feature of changes to the configuration of public service delivery around the world especially post-Covid-19. However it is reasonable to expect that future developments will invite a number of research questions. For example, will the post-Covid-19 world be associated with a surge in re-municipalization similar to that witnessed after the great recession? If this occurs, which services are most likely to be re-municipalized? Will decisions to re-municipalize implemented efficiently?

Our analysis offers some preliminary answers to these questions. For example, the relevant literature and available data suggests that the most likely candidates for re-municipalization are social and personal services which tend to more politicized – a factor that potentially gives impetus to organizational change of these services. Events after the great recession of 2008 also suggest that technical services, often characterized by monopoly, which provide essential services such as water and electricity are likely to be candidates for re-municipalization. On the question of implementation, our study indicates that re-municipalization decisions are likely to be implemented more efficiently for social and personal services.

In conclusion, this paper highlights how re-municipalization has been an important phenomenon since the turn of the century. A number of studies have addressed questions about

the re-municipalization experience to date but there is much to learn, especially as developments are ongoing. This study goes some way towards illuminating implementation issues which are often overlooked in the literature on insourcing and outsourcing of public services in general and re-municipalization in particular. In that sense it adds to the ongoing and multi-faceted debate about re-municipalization that is likely to evolve as events unfold.

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Table 1. Average rates of implementation and time spent

Sector	Implemented	Time Spent (Years)	How	Implemented	Time Spent (Years)
Education	64%	0.75	***Public-led***	48%	1.28
Health	76%	0.52	De-privatization	50%	1.66
Waste	46%	0.93	Expired	53%	1.38
Transportation	55%	1.26	Terminated	28%	0.52
Energy	89%	1.57			
Water	17%	1.14	***Private-led***	68%	0.48
Other services	45%	0.70			

Table 2. Descriptive statistics of variables employed.

Variable	Mean	Std dev.	Min	Max	Source	Units
Implemented	0.55	0.50	0	1	Kishimoto and Petitjean	Binary
Time spent	1.26	1.32	0	8	Kishimoto and Petitjean	Years
Population	580.30	120.94	0.269	72,147	Kishimoto and Petitjean	Thousands
Local	0.60	0.49	0	1	Kishimoto and Petitjean	Binary
De-privatization	0.04	0.19	0	1	Kishimoto and Petitjean	Binary
Terminated	0.14	0.35	0	1	Kishimoto and Petitjean	Binary
Energy	0.33	0.47	0	1	Kishimoto and Petitjean	Binary
Education	0.01	0.11	0	1	Kishimoto and Petitjean	Binary
Health	0.04	0.20	0	1	Kishimoto and Petitjean	Binary
Transportation	0.04	0.20	0	1	Kishimoto and Petitjean	Binary
Waste	0.04	0.20	0	1	Kishimoto and Petitjean	Binary
Water	0.28	0.45	0	1	Kishimoto and Petitjean	Binary
Other	0.15	0.36	0	1	Kishimoto and Petitjean	Binary
Privately_led	0.05	0.22	0	1	Kishimoto and Petitjean	Binary
Recession	0.88	0.33	0	1	Author's	Binary
Network	0.61	0.49	0	1	Kishimoto and Petitjean	Binary
Personal	0.08	0.27	0	1	Kishimoto and Petitjean	Binary
Regulatory Burden	-3.21	0.48	-5	-1.9	World Economic Forum	Index between 1 (extremely burdensome) and 7 (not burdensome) (x -1)
German_legor	0.45	0.49	0	1	La Porta et al.	Binary
French_legor	0.31	0.46	0	1	La Porta et al.	Binary
British_legor	0.20	0.40	0	1	La Porta et al.	Binary
Scandiv_legor	0.05	0.21	0	1	La Porta et al	Binary
Germany	0.41	0.49	0	1	Kishimoto and Petitjean	Binary
France	0.18	0.39	0	1	Kishimoto and Petitjean	Binary
UK	0.08	0.27	0	1	Kishimoto and Petitjean	Binary
United States	0.08	0.27	0	1	Kishimoto and Petitjean	Binary

Table 3. Logistic regression estimates on probability of implementation (Coefficients transformed to Odds Ratios).

	Logit Full Sample (1)	Logit Full Sample (2)	Logit Full Sample (3)	Logit Full Sample (4)	Logit Full Sample (5)	Logit Full Sample (6)	Logit Full Sample (7)	Logit Full Sample (8)	Logit Restricted Sample (9)
Population	1.000 (0.0000)	1.000 (0.0000)	1.000 (0.0000)	1.000 (0.0000)	1.000* (0.0000)	1.000* (0.0000)	1.000** (0.000)	1.000* (0.0001)	1.000** (0.0001)
Population^2	0.999** (2.51e-09)	0.999 (0.0000)	0.999* (2.95e-09)	0.999* (2.97e-09)	0.999* (2.54e-0)	0.999* (2.87e-09)	0.999* (3.01e-09)	0.999* (3.18e-09)	0.999*** (9.48e-10)
Local	1.081 (0.2403)	0.8202 (0.1708)	0.7764 (0.1634)	0.7765 (0.1625)	0.9144 (0.1788)	0.9722 (0.2055)	0.9722 (0.3190)	0.9722 (0.3360)	0.8629 (0.4152)
Private_led	1.782 (0.8010)	1.379 (0.6161)	1.391 (0.6338)	1.351 (0.6170)	1.356 (0.7148)	1.279 (0.6846)	1.279 (0.3762)	1.279 (0.3611)	1.513 (1.185)
De-privatisation				0.6059 (0.3038)					
Sector (vs. Energy)									
Education	0.5821 (0.3932)								
Health	0.9040 (0.5173)								
Other services	0.2646*** (0.0895)								
Transportation	0.5887 (0.3002)								
Waste	0.2206*** (0.0973)								
Water	0.0779*** (0.0268)								
Service characteristics									
Network		0.4967*** (0.1199)							
Personal			3.405*** (0.9950)	3.346*** (0.9809)	2.516*** (0.8106)	2.982*** (1.086)	2.982*** (0.8736)	2.982*** (0.9765)	3.229** (1.847)
Recession	2.237*** (0.5832)	3.267*** (0.8746)	3.231*** (0.8296)	3.345*** (0.8649)	3.027*** (0.7385)	-	-	-	-
Frequent Countries									
Germany	2.311*** (0.7195)	7.681*** (2.100)	7.019*** (1.745)	6.800*** (1.704)					
France	0.4338*** (0.1279)	0.3026*** (0.0824)	0.2797*** (0.0745)	0.2694*** (0.0736)					
UK	0.1507*** (0.0524)	0.1653*** (0.0661)	0.1940*** (0.0723)	0.1842*** (0.0693)					
United States	0.1710*** (0.0787)	0.1505*** (0.0728)	0.1303*** (0.0610)	0.1251*** (0.0589)					
Institutional variables									
Regulatory burdenn					0.4440*** (0.1350)	1.692 (0.7598)	1.692 (0.9913)	1.692 (0.0122)	0.9315 (0.6923)
Legor_uk					0.0221*** (0.0066)	0.0254*** (0.0082)	0.0254*** (0.0069)	0.0254*** (0.0334)	0.0138*** (0.0082)
Legor_fra					0.1255***	0.0435*** (0.0251)	0.0435*** (0.0348)	0.0435*** (0.0435)	0.0410*** (0.0409)
Legor_sc					0.1428*** (0.0790)	0.1874*** (0.1164)	0.1874 (0.2213)	0.1874*** (0.0664)	0.3082** (0.1453)
Year Dummies	No	No	No	No	No	Yes	Yes	Yes	Yes
Clustered errors (by country)	No	No	No	No	No	No	Yes	No	No
Clustered errors (by sector)	No	No	No	No	No	No	No	Yes	Yes
N. observations	825	825	825	825	818	696	696	696	484
Pseudo R2	0.38	0.32	0.32	0.32	0.36	0.34	0.34	0.34	0.46
Wald Chi2	281.12***	227.53***	233.78***	233.62***	250.69***	229.91***	229.91***	229.91***	-
Log-likelihood	-350.28	-387.96	-384.44	-383.74	-359.26	-316.98	-316.98	-316.98	-180.80

Notes: Significance levels 1%, 5% and 10% denoted by ***, ** and *, respectively. In parentheses standard errors, which are robust to heteroscedasticity in Models 1-6. Parentheses in Models 7-9 display standard errors clustered by country or by economic sector.

Table 4. Negative binomial regression estimates on the timing of implementation.

	Logit Full Sample (10)	Logit Full Sample (11)	Logit Full Sample (12)	Logit Full Sample (13)	Logit Full Sample (14)	Logit Full Sample (15)	Logit Full Sample (16)	Logit Full Sample (17)
Population	-0.0001* (0.0000)	-0.0001* (0.0001)	-0.0001** (-0.0001)	-0.0001* (0.0000)	-0.0001* (0.0000)	-0.0001* (0.0000)	-0.0001* (0.0000)	-0.0001** (0.0000)
Local	0.0696 (0.1227)	0.0431 (0.1082)	0.0376 (0.1161)	0.0366 (0.1063)	0.0435 (0.1047)	0.0618 (0.10244)	0.0618 (0.0433)	0.0618 (0.0717)
Sector (vs. Energy)								
Education	-0.5970*** (0.2229)							
Health	-1.134*** (0.3102)							
Other services	-0.9160*** (0.2100)							
Transportation	-0.7310 (0.5251)							
Waste	-0.6637*** (0.2186)							
Water	-0.5702** (0.2456)							
Service characteristics								
Network	-	0.6235*** (0.1207)	-	0.6272*** (0.1113)	0.6006*** (0.1309)	0.5251*** (0.1382)	0.5251*** (0.1347)	0.5251*** (0.1605)
Personal			-0.5011*** (0.1661)					
How (vs. Expire)								
Private_led	-0.7460*** (0.2513)	-0.8395*** (0.2542)	-0.9048*** (0.2422)	-0.8937*** (0.2542)	-0.9528*** (0.2408)	-0.9881*** (-0.9881)	-0.9881*** (0.1670)	-0.9881*** (0.1644)
De-privatisation				0.2802 (0.2719)	0.4444 (0.3077)	0.4193* (0.2419)	0.4217 (0.3356)	0.4217* (0.2415)
Terminated				-0.7730*** (0.2465)	-0.8663*** (0.2240)	-0.8350*** (0.2251)	-0.8350*** (0.2996)	-0.8350*** 0(.2270)
Recession	-0.3091 (0.2064)	-0.3409 (0.2224)	-0.1119 (0.2290)	-0.3784* (0.2054)	-0.3407* (0.2061)			
Frequent Countries								
Germany	-0.0446 (0.2023)	0.2858* (0.1600)	0.4381** (0.1752)	0.1703 (0.1740)				
France	0.7050** (0.3290)	0.7396*** (0.2218)	0.7130*** (0.2430)	0.6039*** (0.2115)				
UK	0.2633 (0.2832)	0.5270** (0.2460)	0.5491** (0.2557)	0.5927** (0.2394)				
United States	0.1513 (0.6145)	0.4406 (0.6325)	0.7332 (0.6095)	0.4646 (0.5724)				
Institutional variables								
Regulatory burden					0.5525*** (0.1591)	-0.1584 (0.2810)	-0.1584 (0.1467)	-0.1584 (0.1841)
Legor_uk					0.3782 (0.2706)	0.2722 (0.2423)	0.2722* (0.1432)	0.2722 (0.1723)
Legor_fra					-0.1033 (0.1525)	0.6018** (0.2556)	0.6018*** (0.1929)	0.6018*** (0.0575)
Legor_sc					-0.0416 (0.3292)	-0.4549 (0.3242)	-0.4549** (0.1966)	-0.4549* (0.2704)
Year Dummies	No	No	No	No	No	Yes	Yes	Yes
Clustered errors (by country)	No	No	No	No	No	No	Yes	No
Clustered errors (by sector)	No	No	No	No	No	No	No	Yes
N. observations	339	339	339	339	338	338	338	338
Pseudo R2	0.07	0.07	0.05	0.08	0.08	0.11	0.11	0.11
Wald Chi2	79.48***	62.09***	60.75***	87.16***	92.50***	-	-	-
Log-likelihood	-468.01	-473.33	-474.51	-462.50	-457.60	-444.05	-444.05	-444.05

Notes: Significance levels 1%, 5% and 10% denoted by ***, ** and *, respectively. In parentheses standard errors, which are robust to heteroscedasticity in Models 10-15. Parentheses in Models 16-17 display standard errors clustered by country and by economic sector, respectively.

Figure 1. Frequency of re-municipalizations by sector (2000-2017).

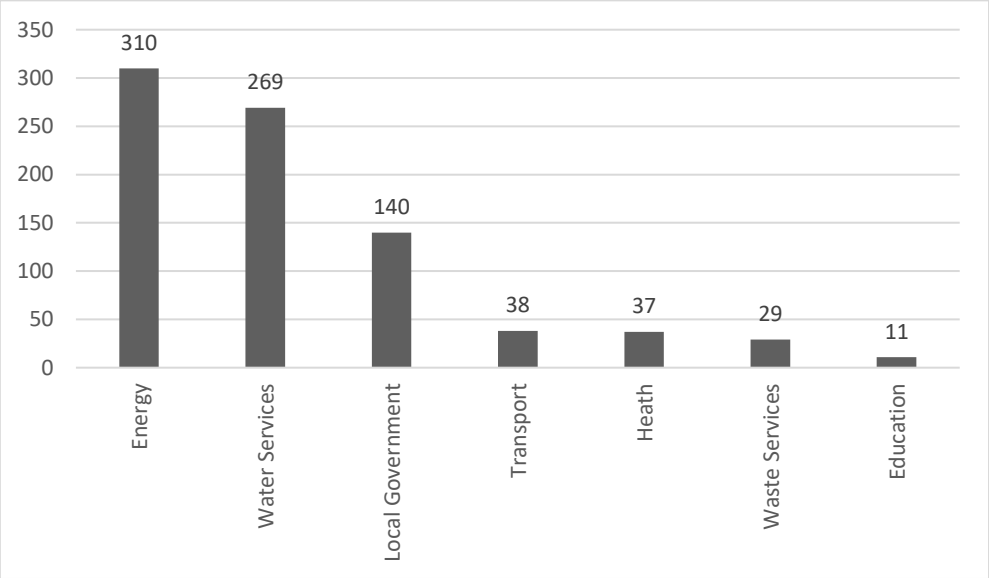


Figure 2. Time trends of decisions to Re-municipalize.

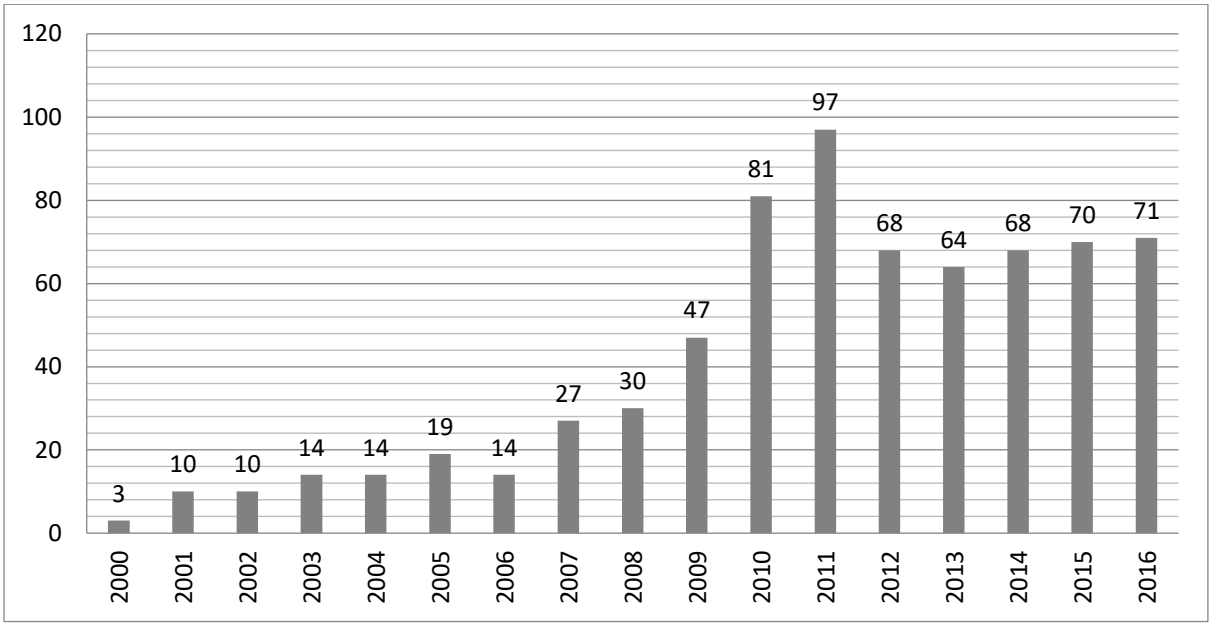
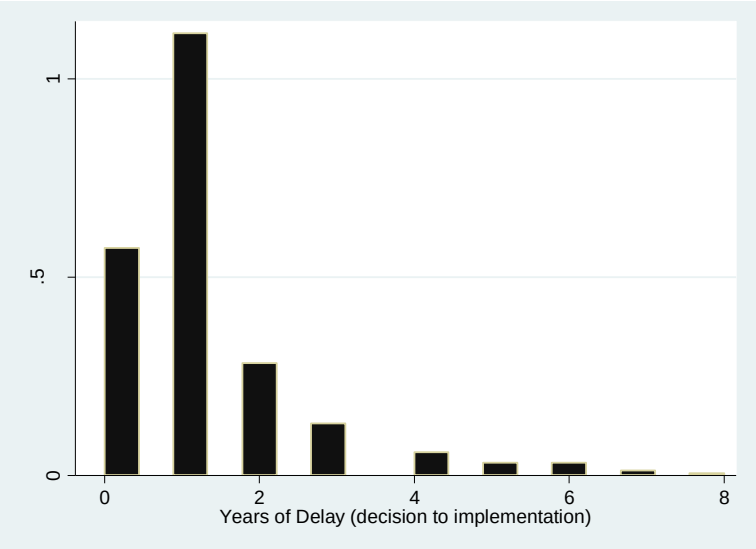


Figure 3. Histogram of years of time spent since a re-municipalisation decision.



[1] The countries included in the database employed are the following: Albania, Argentina, Armenia, Austria, Belgium, Bolivia, Canada, Central African Republic, Colombia, Czech Republic, Denmark, Dominican Republic, Ecuador, Finland, France, Germany, Guinea, Hungary, India, Indonesia, Italy, Japan, Kazakhstan, Lebanon, Lithuania, Malaisya, Mexico, Montenegro, Mozambique, The Netherlands, Nicaragua, Norway, Portugal, Russia, South Africa, Spain, Sweden, Tanzania, Turkey, Uganda, United Kingdom, Ukraine, United States, Uzbekistan, Venezuela.

[2] The survey is highly representative of Europe, North America and South America, but countries are Africa and Asia are less represented. Because of this we need to be cautious about generalization of findings to these last regions, and also call for future research that could further validate the results.

[3] Other local government services include a miscellaneous set of activities such as parking, sports, cleaning, security, bike rental, maintenance of public space, housing, funeral services, parks and gardens, municipal crane, sidewalk, contact centers, police station, cinema, school catering, IT services, support services, and human resources.