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**Working Paper**

## Electoral system change and spending: Four quantitative case studies

Freiburger Diskussionspapiere zur Ordnungsökonomik, No. 16/06

**Provided in Cooperation with:**

Institute for Economic Research, University of Freiburg

*Suggested Citation:* Pfeil, Christian F. (2016) : Electoral system change and spending: Four quantitative case studies, Freiburger Diskussionspapiere zur Ordnungsökonomik, No. 16/06, Albert-Ludwigs-Universität Freiburg, Institut für Allgemeine Wirtschaftsforschung, Abteilung für Wirtschaftspolitik und Ordnungsökonomik, Freiburg i. Br.

This Version is available at:

<https://hdl.handle.net/10419/146516>

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## Electoral System Change and Spending: Four Quantitative Case Studies

Christian F. Pfeil

16/06

Freiburger **Diskussionspapiere**  
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Instituts für allgemeine Wirtschaftsforschung  
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Ordnungsökonomik**

Albert-Ludwigs-Universität Freiburg



# Electoral System Change and Spending: Four Quantitative Case Studies

Christian F. Pfeil\*

September 2016

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**Abstract** This paper investigates the effects of electoral system changes in Japan, New Zealand and Italy on the overall level of spending as well as on social spending. In 1996 both Japan and New Zealand switched from a majoritarian rule to a mixed-member electoral system. Italy switched from a proportional rule to a mixed-member electoral system in 1994 and turned back to a proportional rule in 2006. By applying the Synthetic Control Method I find an effect on the overall level of spending in the range between 2.13 and 3.36 percentage points. However, the treatment effect is either poorly statistically significant or insignificant. I can find a clear significant effect on social spending in New Zealand (2.08 percentage points) but not in Japan (0.45 percentage points) and Italy (0.42 percentage points and 1.53 percentage points). This might be due to the fact that New Zealand switched from a pure majoritarian rule to an almost pure proportional rule.

**JEL-Code:** D72, H11

**Keywords:** electoral system change, government spending, synthetic control method, mixed-member electoral systems

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## 1 Prelude

“At present, the UK uses the ‘first past the post’ system to elect MPs to the House of Commons. Should the ‘alternative vote’ system be used instead?”

This question was the centrepiece of a referendum held in Great Britain in May 2011. Through this the British were given the opportunity to vote for a change of their electoral system. Eventually the referendum was unsuccessful, but there was a lively debate about the political consequences of the suggested system change. The political as well as economic consequences of electoral laws are also discussed among scholars. This is relevant as the electoral system is a crucial element of a representative democracy in which the citizens delegate their decision-making power to elected representatives. With respect to political outcomes [Lijphart \(1990\)](#) finds that the plurality rule and the majoritarian electoral rule cause a clearly more disproportional allocation of seats in parliament than the largest remainder (LR) Hare formula or the d’Hondt formula which are both rules of proportional representation.<sup>1</sup> Additionally, he finds that the seat allocation is more proportional the larger the district magnitude is. More comprehensive theoretical as well as empirical analyses of the political consequences of electoral rules are provided, e.g., by [Lijphart \(1994\)](#) or [Taagepera and Shugart \(1989\)](#).

Economists are instead interested in the effects on economic outcomes like the overall level of government spending or the relative scope of welfare spending. A considerable effort in discovering such effects was undertaken by [Torsten Persson and Guido Tabellini](#). As a result of the utilisation of a probabilistic voting model in which candidates focus on marginal districts they state that majoritarian electoral rules come up with more geographically targeted spending compared to proportional electoral rules ([Persson and Tabellini, 1999](#)). Because of the strong link between a candidate and the local electorate established by the electoral formula itself, deputies support spending programmes that directly benefit their constituency. Under proportional representation, in contrast, the candidate-party link is stronger and candidates support spending that appeals to social rather than geographical groups.

With respect to the overall level of spending, the effect of electoral rules is indirect. As [Duverger’s law](#) states, majoritarian electoral rules tend towards two-party competition at the local level. This might eventually result in a two-party political system at the national level. The relationship is to some extent confirmed by [Lijphart \(1990\)](#). For 20 western democracies he finds the average effective number of elective parties at the national level to be 1.12 higher under proportional rule than under majority rule. The number of parties in parliament and in government thus tend to be smaller under majoritarian rule. Accordingly, party systems that are based on the proportional electoral rule are

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<sup>1</sup>An allocation of seats in parliament is proportional, if the seat share of each party as percentage of all seats in parliament coincides with the vote share of each party as percentage of all votes.

associated with coalition governments where party systems based on the majoritarian electoral rules are associated with single-party governments. From a theoretical model [Persson et al. \(2007\)](#) thus conclude that government spending is higher under proportional rule as coalition governments induce electoral competition among parties. Every party in the coalition tries to implement spending programmes that benefit their clientele.

Empirical studies undertaken by [Persson and Tabellini \(2003, 2004\)](#) that capture the reduced-form relationship support this idea and indicate that governments that run under majoritarian electoral rules exhibit a level of overall spending that is about five percentage points of GDP lower than governments that run under proportional electoral rules. Regarding the composition of government spending they find that governments that run under majoritarian electoral rules exhibit a share of social spending as percentage of overall spending that is two or three percentage points of GDP lower than governments that run under proportional electoral rules. The results are statistically significant. [Persson and Tabellini \(2002\)](#) confirm the result on overall spending by using non-parametric matching estimators instead of the ordinary least square (OLS) estimator. [Persson \(2002\)](#) confirms the result regarding the effect on social spending but cannot confirm the effect on overall spending. By incorporating more countries in the sample and using more recent data, [Blume et al. \(2009\)](#) confirm the results provided by [Persson and Tabellini \(2003\)](#) regarding the effect on overall spending. [Milesi-Ferretti et al. \(2002\)](#) apply a model of strategic delegation that leads to the same theoretical hypotheses. For OECD countries they find that proportionality raises overall spending as well as transfer spending.

In line with the idea that the effect on overall spending is indirect, [Persson et al. \(2007\)](#) provide empirical evidence that coalition governments are more common under proportional rule and that coalition governments exhibit a higher level of government spending compared to single-party governments. They conclude that the effect of the electoral rule on the level of government spending is driven by the type of government. Similarly, some studies find (weak) evidence that government expenditure and transfers are the higher the more parties are part of the coalition in office ([Kontopoulos and Perotti, 1999](#); [Perotti and Kontopoulos, 2002](#); [Volkerink and de Haan, 2001](#)).

With respect to social spending, [Funk and Gathmann \(2013\)](#) as well as [Iversen and Soskice \(2006\)](#) find that left-wing parties prevail under proportional representation and on grounds of their preference for redistribution, proportional representation is associated with a higher level of welfare spending. For local governments in Sweden, [Pettersson-Lidbom \(2008\)](#) uses a regression-discontinuity design and finds that overall spending is at a higher level under left-wing party control. [Acemoglu \(2005\)](#) points to methodological aspects and argues that the OLS as well as the matching estimates provided by [Persson and Tabellini \(2003\)](#) cannot definitely rule out the influence of unobservable variables. Thus a reduced-form OLS estimation may fail to capture the causal effect if the relation between the explaining variable of interest and the explained variable is indirect and

persistent.

In order to capture the causal effect of electoral systems on government spending it thus would be better to focus on the change of the electoral rule and compare spending before and after the alteration for the same observations. At best, nothing but the electoral system changes and the omitted variables bias should be minimised. Consequently, [Funk and Gathmann \(2013\)](#) apply the difference-in-difference estimator to uncover the effect of electoral system changes on government spending in Switzerland at the cantonal level. They find that the adoption of proportional representation increases welfare spending and decreases spending on roads. They cannot find an effect on the size of government. [Bordignon and Monticini \(2012\)](#) use bootstrap estimation to test the effect of the change of the electoral rule from proportional representation to a mixed-member majoritarian system in Italy in 1993/94 at the national level. They find that the number of parties in government increased significantly which is counter to expectations derived from theory. The number of parties in parliament increased insignificantly.

While [Bordignon and Monticini \(2012\)](#) focus on political outcomes, [Funk and Gathmann \(2013\)](#) capture the subnational level. But there is no study that captures the alteration of electoral systems at the national level. This is reasonable, as the number of electoral system changes at the national level is rather small. [Bormann and Golder \(2013\)](#) in their dataset report roughly 50 electoral system changes in a worldwide sample covering 65 years. Most of the East European countries introduced a new electoral system together with democratisation in the early 1990s. However, the previous electoral systems did not meet democratic standards. The cases of, e.g., the Czech Republic, Estonia, Hungary, Latvia, Poland, the Slovak Republic or Slovenia can thus not be exploited. Beyond that, the application of the difference-in-difference estimator requires the changes of all observations (cases) among the treated units to move in the same direction, e.g., from a majoritarian rule towards a (more) proportional system. Japan and New Zealand both switched this way in 1996.<sup>2</sup> While Japan switched from the Single Non-Transferable Vote (SNTV) to the Mixed-Member Majoritarian (MMM) System, New Zealand switched from Plurality Rule to the Mixed-Member Proportional (MMP) System. Italy, however, switched from an Open List Proportional Rule to the Mixed-Member Majoritarian Rule (with vote linkage), and thus in the opposite direction, in 1994. In 2006, Italy switched (back) to (closed) List Proportional Rule that is accompanied by a majority bonus for the leading party. Albania switched from the Mixed-Member Proportional Rule to the Mixed-Member Majoritarian Rule in 1996 and switched back in 2001. Thus these electoral system changes can not be investigated together in a difference-in-difference setting. Factoring in all these constraints reduces the number of exploitable electoral system changes considerably.

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<sup>2</sup>All dates that indicate an electoral system change refer to the time of the first election under the new rule and might differ from the date of the adoption the electoral law.

In order to investigate the economic effects of electoral system changes on the overall level of government spending as well as on social spending at the national level I apply the Synthetic Control Estimator. This method allows for the analysis of only one or a few treated units. The alterations under scrutiny are the aforementioned changes of the electoral rule in Japan (1996), New Zealand (1996) and Italy (1994, 2006).

The paper proceeds as follows: section 2 explains the mechanics of the Synthetic Control Method. Section 3 gives information concerning the data I use. Sections 4, 5, 6 and 7 present the empirical analyses. Each section starts with a short description of the institutional setting in the respective country before and after the system change. Section 8 concludes.

## 2 The Synthetic Control Estimator

The Synthetic Control Method (SCM) combines the analysis of case studies with quantitative procedures regarding the approximation of the treated unit's trajectory in the pre-intervention period as well as the statistical significance of the intervention. Since it allows for the analysis of only one or a few interventions, it is very well-suited to discover the effects of political institutions on policy or economic outcomes. The following description of the method follows [Abadie et al. \(2010, 2015\)](#).

In principle the method depicts the trajectory of an outcome variable for one single unit of interest (treated unit) in the pre-intervention period as well as the post-intervention period. The method then aims at approximating the path of the outcome variable of the treated unit in the pre-intervention period as well as possible with that path of a control group. This control group is called 'synthetic' since it does not consist of only one comparison unit (e.g. one country) but of (the weighted average of) a positive number of units. Eventually the trajectory of the outcome variable of the synthetic control group is depicted for both periods. So the path of the control group in the post-period shows how the outcome variable of the treated unit would have evolved without the intervention. The difference between both trajectories in the post-period thus provides the Synthetic Control Estimator. A stylised representation of the method is given in figure 1 where the solid line represents the outcome variable of the treated unit (e.g. Social Expenditure in Japan) and the dashed line represents the outcome variable of the synthetic control group, respectively. The effect of the intervention on the outcome variable is then represented by the grey triangle.

More formally the method is based on a sample of  $i + j$  units. While  $i$  depicts the treated unit,  $j = 1, \dots, J$  is a positive number of potential comparison units. All these units together constitute the donor pool. Units that are not in the pool obviously cannot be part of the control group and ultimately the researcher decides on which units are in the donor pool. Time runs from  $t = 1, \dots, T$  where  $T_{pre}$  is a positive number of pre-

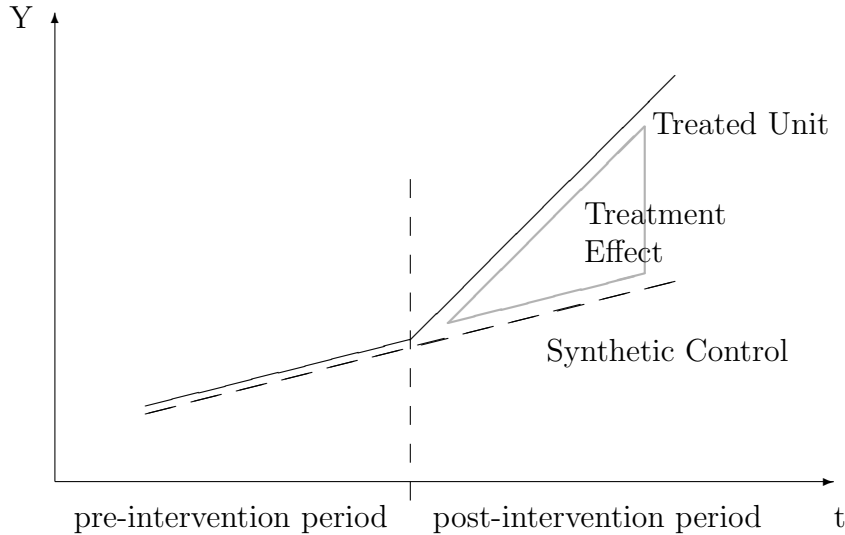


Figure 1: Stylised Representation of the Synthetic Control Method

intervention time periods.  $T_{post}$ , in contrast, entails a positive number of post-intervention time periods.<sup>3</sup> Thus it holds that  $T = T_{pre} + T_{post}$ .

The approximation of the outcome variable of the treated unit is not obtained by simply using the weighted average of the outcome variables of the synthetic control group but is based on some  $k = 1, \dots, K$  (economic) characteristics that are predictor variables of the outcome variable.<sup>4</sup> In the case of government spending this might be the gross domestic product or the share of elderly people in the population.  $X_i$  is the  $(K \times 1)$  vector of these predictor variables for the treated unit in the pre-intervention period. The predictors are averaged over this period. Likewise, the  $(K \times J)$  matrix  $X_J$  covers the same  $K$  (averaged) predictor variables for the same time period but for all  $J$  potential comparison units in the donor pool. Since the predictor variables differ in their ability to predict the outcome variable, a weight  $v_k$  is assigned to every predictor variable  $k$  based on a regression.

In a next step the synthetic control group is obtained by compiling the  $(J \times 1)$  vector of weights  $W = (w_1, \dots, w_J)'$ . The control group thus is the weighted average of comparison units. These weights are required to be non-negative and sum up to one so that  $0 \leq w_j \leq 1$  and  $w_1 + \dots + w_J = 1$  holds. Usually some units in the donor pool are not chosen to be part of the synthetic control group, which means that the respective comparison units have a zero  $w$ -weight. The  $W$ -vector is then chosen to approximate the matrix  $X_J$  with the vector  $X_i$  as well as possible. That is, it minimises the difference  $v\|X_i - X_JW\|$ . The ultimate aim of the optimisation is to minimise the root mean square prediction error

<sup>3</sup>The year of the intervention itself neither belongs to the pre-intervention period nor to the post-intervention period.

<sup>4</sup>Lags of the outcome variable are often used as predictors, too.



(RMSPE)<sup>5</sup> of the outcome variable in the pre-intervention period.<sup>6</sup>

The vector  $W^*$  is then used to depict the outcome variable of the synthetic control group. Let  $Y_i = (Y_{i,T_{pre}+1}, \dots, Y_{i,T})'$  be a  $(T_{post} \times 1)$  vector that contains the values of the outcome variable for the treated unit in the post-intervention period. And for the units in the donor pool the  $(T_{post} \times J)$  matrix  $Y_J$  contains the values of the outcome variable for all countries in the pool. The estimation of the intervention effect is now given by the difference between the  $T_{post}$ -values of the outcome variable of the synthetic control group and those of the treated unit. So for any point in time  $t > T_{pre}$  the synthetic control estimator (SCE) can be written as

$$SCE_t = Y_{i,t} - \sum_{j=1}^J w_j^* Y_{j,t}. \quad (1)$$

In the subsequent analyses I calculate the treatment effect of the overall post-intervention period  $T_{post}$  as the average treatment effect, i.e.  $\frac{1}{T_{post}} \sum_{T_{pre}+1}^T (SCE_t)$ .

I then want to know whether the observed treatment effect occurred by chance. However, the selection of cases is not completely random because the scholar has some leeway in selecting the units for the pool. Furthermore the sample size is rather small and the method does not provide a coefficient of a variable for which a Gaussian distribution in the population can be assumed. Therefore results stemming from the SCM are usually proved by placebo studies. In the subsequent analyses I rely on cross-unit placebo tests. The intervention is then assigned to and the analysis is conducted for every single country in the donor pool.<sup>7</sup> The year of intervention is that of the treated unit. ‘Placebo’ then means that an intervention is imposed to a country although it obviously did not face one.<sup>8</sup> After receiving the results one can then calculate the post-intervention RMSPE as well as the ratio of the post-intervention RMSPE over the pre-intervention RMSPE for every country. The intervention effect can be labeled significant if the treated unit comes up with a post-pre-ratio that is large relative to the ratios of the donor pool countries.

To quantify the statistical significance I refer to the concept of the p-value and calculate the probability to find a country in the donor pool with a post-pre-ratio that is of the same size or even larger than that for the treated unit. This probability can then be compared with a certain significance level (e.g.  $\alpha =$  five percent) to evaluate the statistical

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<sup>5</sup>RMSPE =  $\left( \frac{1}{T_{pre}} \sum_{t=1}^{T_{pre}} \left( Y_{i,t} - \sum_{j=1}^J w_j^* Y_{j,t} \right)^2 \right)^{\frac{1}{2}}$

<sup>6</sup>The sequence is: 1) find initial  $v$ -weights via regression, 2) find optimal  $w$ -weights and calculate pre-intervention RMSPE, 3) find alternative  $v$ -weights via iteration method, calculate  $w$ -weights and pre-intervention RMSPE, 4) repeat step three until pre-intervention RMSPE is minimised.

<sup>7</sup>An alternative would be in-time placebos. The intervention then is assigned to the treated unit but at a point in time where there was no intervention.

<sup>8</sup>When we run the placebo test for a country in the pool the treated unit itself is excluded. So if we, e.g., run the analysis for Australia, Japan is not part of the donor pool.

significance of the result obtained in the analysis.<sup>9</sup>

Eventually I can seriously rely on the results only if all distorting influences are excluded. So first of all I shall care for observable as well as unobservable characteristics. The former are basically taken into consideration via the inclusion of predictor variables. With respect to the latter (but also the observable characteristics) [Abadie et al. \(2010\)](#) argue that their influence is smaller the longer the pre-intervention time period is. If it is possible to trace the outcome variable of the treated unit for a long time it can be assumed that this is because the units are similar to each other concerning the aspects that impact on the outcome variable. This holds for both observable and unobservable characteristics. In fact, the length of the pre-period is restricted by data availability.

Furthermore, I restrict the sample to OECD member countries. So countries with substantial economic or political structural breaks different from OECD countries are excluded. Similarly, I restrict the post-intervention period to six years (or less) to protect the trajectory of the synthetic control group against influences unrelated to the intervention.

Next, I shall consider reverse causality. Applied to my analyses this would mean that a certain shape of the treatment effect has led to the intervention. As the treatment effect occurs undoubtedly after the policy intervention I feel confident that reverse causality is not a serious obstacle in the context of my analyses.

Finally, it is necessary that there are no spillover effects. This means that there must not be an effect of the intervention on the outcome variable of the treated unit or the donor pool units during the pre-intervention period. The same holds for the outcome variable of any donor pool unit in the post-intervention period. An effect of the intervention on the treated unit's outcome in the pre-period could come up as an anticipation. However, anticipation effects are captured by the approximation similar to unobservable characteristics. And I do not know a case in which the alteration of the electoral system in Japan, New Zealand or Italy influenced the spending behaviour of another OECD member country.

### 3 Data

To capture the effect on the overall level of government spending in New Zealand and Italy (1994), I use total outlays (disbursements) of general government as percentage of GDP. This includes current as well as capital disbursements. Current outlays consist of current consumption, transfer payments, subsidies and property income paid. This also includes interest payments. The use of total outlays instead of central government expenditure is mainly for data availability reasons. For some countries in the donor pool, the latter is available from 1995 onwards. In case of the utilisation the pre-intervention

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<sup>9</sup>This significance test is rather strong. If there are twenty countries in the pool and the treated unit comes up with the largest post-pre-ratio the utmost significance level is 0.05. If, however, the treated unit comes up with the second largest ratio this level jumps up to 0.1.

period would thus entail only one observation for these analyses. To investigate the effect on the overall level of spending in Italy in 2006, I use total central government expenditure as percentage of GDP. This variable includes intermediate consumption, compensation of employees, subsidies, interest payments, taxes, social benefits and social transfers in kind, current transfers and capital transfers (payable), adjustments for the net equity of households in pension funds reserves as well as gross capital formation and net acquisition of non-financial non-produced assets.

From a theoretical perspective it is appropriate to use central government data rather than general government expenditure or total outlays, as the focus is on the election of the national assembly. While [Persson and Tabellini \(2004\)](#) use central government spending, [Milesi-Ferretti et al. \(2002\)](#) use data from the general government level. Where [Blume et al. \(2009\)](#) report significant results based on central government data but insignificant results when using general government data, [Perotti and Kontopoulos \(2002\)](#) cannot find a substantial difference in the significance of their results when using general instead of central government data.

Concerning the overall level of spending in Japan, total outlays increased steadily in the 1990-95 period while the potential comparison units did not experience such an increase. Hence, the approximation in the pre-intervention period is not possible to a satisfactory extent and the pre-intervention RMSPE is fairly large. Thus I refrain from investigating the impact of the electoral system change on the level of overall spending in Japan.

To uncover the effect on the composition of government spending, the dependent variable is social expenditure of the public sector as percentage of GDP. In its all-encompassing definition it covers old-age pensions, survivor pensions, incapacity-related benefits, health spending, family benefits, active labour market policy, unemployment benefits, housing and others. This variable covers cash benefits as well as in-kind transfers and refers to the general government level. In the case of Japan I also use old-age expenditures of the public sector as percentage of GDP. This variable covers public old-age pensions, early-retirement pensions, home-help for the elderly and residential services for the elderly ([Adema et al., 2011](#)).

In selecting variables that are good predictors of government spending I follow the literature. In reference to Wagner's Law I include the natural logarithm of GDP per capita. The law supposes government spending to evolve in line with the (economic) development of the society. Secondly, the sum of imports of goods and services plus exports of goods and services as percentage of GDP is included to capture the extent of trade activity. This is in line with [Rodrik \(1998\)](#) who finds a positive relationship between the economy's exposure to international trade and government spending. Government spending is implemented to offset the losers of globalisation. Additionally, several measures of population characteristics are included. The percentage of people aged 65 and older in the total population is considered since elderly people are more in need of health spending.

The percentage of people aged 14 and under in the total population is taken into account as young people receive child benefits. Likewise, the natural logarithm of total population is considered.

To capture further economic conditions I incorporate the rate of unemployment, unemployment of people aged 15 to 24 (as percentage of total labour force, aged 15 to 24) as well as the density of trade unions (share of wage and salary earners who are trade union members in the total number of employees). In recognition of the fact that countries may differ in some sector-specific characteristics, I use patent applications of residents (per million of population) and high-technology exports (as percentage of manufactured exports). Finally, I take account of employment in the three main economic sectors: agriculture, industry and services (as percentage of total employment). These predictor variables are always accompanied by the lagged outcome variable of certain years which often is the first and the last year of the pre-intervention period. Among these predictors I search for a combination that best supports the approximation of the treated unit's real data.

As mentioned already the sample is restricted to OECD member countries. However, Greece, Mexico and South Korea are discarded from the sample as their electoral rule either was altered several times within a relatively short time period or it features peculiarities that makes it difficult to deduce clear hypotheses. Greece amended its electoral rule in 1989, 1993 and 2007. The rule used before 1989 was called reinforced proportional representation. This was basically a proportional rule, since voters casted a vote for a closed list of a party or a coalition of parties at the district level. However, it contained majoritarian elements. Seats were allocated in 56 lower electoral districts pursuant to the Droop/Hagenbach-Bischoff method.<sup>10</sup> Residual seats were assigned at a second tier (9 major electoral districts) pursuant to the Hare quota. If there were lower electoral district seats unallocated after the second distribution, they were finally assigned to parties at a third tier that comprised one nationwide constituency. At that tier seats were solely allocated to parties or coalitions that participated in the second tier distribution. Eventually, as the Hare quota at the third tier referred to the vote share a party or coalition obtained nationwide, lower electoral district seats were solely allocated to the party or coalition with the largest vote share at the national level.

In the two elections of 1989 Greece used a pure proportional system combined with preferential voting at the district level. Under this rule voters casted a vote for a party list and could indicate a preference for one candidate of that party by marking her name with a cross.<sup>11</sup> The third tier was abolished and the number of major districts increased to 13. In 1993, Greece mainly restored the reinforced proportional rule that was used before 1989, but preserved preferential voting. A party threshold of three percent of the national votes was introduced. Beyond that, the third tier was reintroduced, but seats

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<sup>10</sup>Most districts were multi-member districts. In single-member districts the plurality rule was applied.

<sup>11</sup>In some districts voters could mark the name of more than one candidate.

were assigned to parties only. Thus coalitions were excluded from the allocation at the third tier. Moreover, parties were required to obtain the most votes at the national level as well as in the respective major district in order to qualify for the seat allocation at the third tier. In 2007, the second and the third tier were abolished. At the one remaining (first) tier, seats were allocated proportionately to the parties or coalitions of parties that polled three percent of the votes at the national level (party threshold). However, the party or coalition with the largest vote share nationwide obtained a bonus of 40 seats. Preferential voting was preserved (Dimitras, 1994; Lamprinakou, n.d.).

Mexico applied a mixed-member proportional electoral system from 1988 to 1993. Under this rule voters casted one vote for a candidate in 300 single-member districts and casted a vote for a party list in five multi-member districts (200 seats). The winning party was awarded a majority bonus.<sup>12</sup> However, the precise design of that bonus depended on the vote share of that party. If the vote share of the leading party was lower than 51 percent it was awarded 251 seats, which guaranteed an absolute majority. In the case of a vote share between 51 percent and 70 percent, seats of the winning party were assigned proportionately to the vote share. Finally, the seat share of the leading party was restricted to 70 percent (350 seats) even if its vote share exceeded this threshold. In 1991, the terms of the majority bonus were altered. If the winning party received less than 35 percent of the national vote, seat allocation followed a proportional rule. If the winning party received 35 percent of the national vote, it was awarded 251 seats (absolute majority). If the party received a vote share between 36 percent and 60 percent it was awarded 251 seats that assured the absolute majority plus two additional seats for each percentage point above 35 percent. If it received more than 60 percent but no more than 70 percent of the votes it received a number of seats proportional to votes. If it received more than 70 percent of the national vote, the number of seats was limited to 350 (70 percent of the seats in parliament). In 1994, the MMP electoral system was turned into a MMM electoral system and the majority bonus was abolished. However, two limitations of the overall number of seats a party could win (in both tiers) and one exemption from the MMM rule were introduced. A party that gained less than 60 percent of the national vote could not win more than 300 seats (60 percent of the seats in parliament). If a party received a vote share between 60 percent and 63 percent, seat allocation followed a proportional rule.<sup>13</sup> Finally, no party could win more than 63 percent of the seats in parliament (315 seats). Since 1997 there are two limitations of the number of seats in place. No party can receive more than 300 seats (60 percent of the seats in parliament) and the share of seats both from the nominal as well as the list tier cannot be higher than eight percentage points above the national vote share (Horcasitas and Weldon, 2003).

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<sup>12</sup>The party that wins most of the single-member district elections is declared winning party.

<sup>13</sup>In that small range the rule switched to mixed-member proportional representation but only for the winning party.

South Korea used a mixed-member electoral system with linkage between the tiers from 1962 to 1972 and from 1980 to 1996.<sup>14</sup> Under this rule voters casted one vote for a candidate in single-member districts. These votes were also used to calculate the seat allocation at the list tier (single ballot). In these two time periods the electoral rule was accompanied by a majority bonus. From 1962 to 1972 the party that received 50 percent of the national vote was awarded two-thirds of the list tier seats. If no party received this absolute majority of votes the party with the simple majority of the vote share received 50 percent of the list tier seats (vote linkage). In 1980 the majority bonus was altered. The party that won most of the district elections received two-thirds of the list tier seats (seat linkage). In 1987 the majority bonus was weakened. The party that won most seats at the nominal tier received a number of seats in parliament that ensured an overall majority. In 1996, the linkage between the tiers was abolished. However, the single ballot was maintained. That is, the seat allocation at the list tier was determined on the basis of each party's vote share at the nominal tier. In 2003, the dual ballot was introduced. Voters cast one vote for a candidate and one vote for a party list. That is, South Korea uses a standard mixed-member majoritarian electoral system since then (Hicken and Kasuya, 2003; Reilly, 2007).

Eventually, the donor pool contains Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the USA.<sup>15</sup> Further countries need to be removed from the pool for data availability reasons. For details see the respective section of the paper.

## 4 The Alteration from the SNTV Rule to the MMM Electoral System in Japan

### 4.1 Institutional Setting

For many years Japan used the Single Non-Transferable Vote to elect the representatives of the national assembly. Under this rule voters casted their vote for one candidate in multi-member districts.<sup>16</sup> Hence, candidates faced clear incentives to take a stand for spending that directly favoured their constituency. Moreover, the non-transferability incentivised parties to place more than one candidate in each district.<sup>17</sup> This caused intra-party competition and thus further increased the candidates' appeal to serve their constituency in terms of targeted spending. Due to electoral competition between candidates at the

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<sup>14</sup>Between 1972 and 1980 South Korea used the SNTV rule to elect its representatives of the national assembly.

<sup>15</sup>Treated units are in no case part of the donor pool.

<sup>16</sup>In Japan the district magnitude amounted to four on average.

<sup>17</sup>Under non-transferability received votes which are not necessary for a candidate to qualify for a mandate in the district cannot be transferred to another candidate of the same party.

district level campaigning was very expensive in Japan and was considered responsible for the vast extent of corruption in Japan (Reed and Thies, 2003a,b).

Japan experienced a long lasting public debate about the causes of the political grievances in which the electoral system was at least partially held responsible. Besides the public claim for reform further aspects have helped the electoral reform to finally push through. On the one hand two party factions (Sakigake and Shinseito) separated from the long time leading Liberal Democratic Party (LDP) and formed independent parties. On the other hand junior politicians within the LDP supported the reform movement as they realised the drawbacks of the SNTV rule, e.g., in terms of the pecuniary campaign efforts (Sakamoto, 1999).

Eventually, Japan introduced a mixed-member majoritarian electoral system in 1994. The first election under the new rule took place in October 1996. Under this rule 300 seats are assigned in single-member districts and 200 seats are assigned via list proportional representation in eleven districts. Hence, this system is called two-tier electoral system. While voters cast a vote for one candidate at the nominal tier, they cast a second vote for a party at the list tier. Since there is no linkage between the tiers, the overall seat allocation is not necessarily proportional to the overall vote share a party receives (Reed and Thies, 2003b).

The alteration from the SNTV rule to the MMM electoral system brought along a decrease of the district magnitude down to one at the district level as well as the addition of the proportional rule via the introduction of the list tier. Thus this change can be expected to have relaxed the candidate-constituency link and I expect social as well as old-age spending to increase in the wake of this transformation. Unfortunately it is not possible to disentangle the effect of the decrease in the district magnitude from that of the list tier introduction. However, both effects can be expected to lead to an increase in social spending as well as old-age spending.

## 4.2 The Effect on Social Spending

To uncover the effect of the electoral system change in Japan on social spending I use social expenditure as percentage of GDP as dependent variable. To predict social spending I use the natural logarithm of GDP per capita, the share of elderly people in the total population and the density of trade unions. These variables are accompanied by lagged social spending of the years 1990, 1993 and 1995. The pre-intervention period covers the years 1990 to 1995 and the post-intervention period covers the years 1997 to 2002. Due to missing data in the pre-intervention and the post-intervention period, Estonia, Hungary, Israel, the Slovak Republic, Slovenia and Turkey had to be removed from the sample described in section 3. The donor pool thus contains 22 countries.

The  $w$ -weights are given in table 1. Chile and Portugal are used to approximate the development of social spending in Japan. Both countries are rather equally represented.

The predictor balance is given in table 2. This balance indicates the quality of the approximation in the pre-intervention period for every single predictor variable. The column ‘Treated’ reveals the value of the respective predictor variable for Japan that is averaged over the pre-intervention period. The entire column thus provides the vector  $X_i$  explained in section 2. Likewise, the column ‘Synthetic’ provides the mean value of the same predictor variable for Synthetic Japan and is related to the matrix  $X_J$ . The predictor balance shows that the approximation works very well with respect to lagged social spending. It works well regarding the predictors income, the share of elderly people and the density of trade unions. This is reflected by the pre-intervention RMSPE which amounts to 0.295.

Figure 2 provides the graphical result. In the post-intervention period the trajectory of Japan exceeds that of Synthetic Japan. This indicates that the electoral system change indeed caused an upward shift in social spending. However, the average treatment effect in the post-intervention period amounts to 0.452 percentage points and is thus rather small.<sup>18</sup> This might be due to the fact that voters still cast a vote for a candidate. Additionally, the nominal tier and the list tier are not linked under the MMM electoral system. The result of the subsequently conducted placebo tests can be seen in figure 3. Japan is located among the countries with a small post-pre-ratio. The probability of finding a country in the donor pool with a post-pre-ratio the size of Japan or even larger is  $17/23=0.739$ . Thus I conclude that the effect of the electoral system change on social spending in Japan is statistically insignificant.

### 4.3 The Effect on Old-Age Spending

The share of elderly people in the total population of Japan increased steadily in the last centuries. It reached 18 percent in 2002, the last year of the post-intervention period. This is illustrated in figure 4 where the label ‘OECD Countries’ covers all OECD member countries as of 2010 (except for Japan). Consequently, the social group of the elderly is an important clientele when it comes to electoral competition between the parties. Old-age spending can thus be assumed to be a politically important subcategory of social spending. Beyond that Synthetic Japan in the previous section consists of Chile and Portugal only. This is reasonable as social spending increased in Chile, Japan and Portugal in the course of the 1990s. In Japan it started with a rate of 11.1 percent in 1990 and ended up with 17.5 percent in 2002. Portugal experienced a very similar increase in social spending. It started with a rate of 12.5 percent and ended up with 20.6%. In Chile it started with a rate of 9.3 percent in 1994 and ended up with 12.7 percent in 1999. Most of the remaining countries in the donor pool exhibit a relatively constant development or even a decrease

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<sup>18</sup>The distance is larger for the years from 2003 onwards, which is mainly driven by Chile. However, an extended post-intervention period involves the danger of capturing influences that are unrelated to the intervention.



in social spending.<sup>19</sup> This is illustrated in figure 5 where the label ‘Pool Countries’ refers to all countries used for the placebo tests of the preceding analysis except for Chile and Portugal. For the donor pool countries it reveals the sideways movement of the average values of social spending in the range between 20 percent and 23 percent.

In order to appreciate the role of old-age spending with respect to the composition of social spending and in order to obtain a Synthetic Italy that consists of a larger number of comparison units I use old-age expenditure as percentage of GDP as dependent variable to uncover the effect of the electoral system change in Japan on old-age spending. To predict old-age spending I use the share of the elderly in the total population, the unemployment rate and the fraction of people employed in the service sector. These variables are accompanied by lagged old-age spending of the years 1990, 1992 and 1995. The pre-intervention period as well as the post-intervention cover the same years as in the previous analysis. The donor pool consists of the same countries used in the prior analysis.

The  $w$ -weights are given in table 3. While Portugal still contributes to Synthetic Japan with a  $w$ -weight very similar in size, Chile does not contribute to Synthetic Japan anymore. Australia, Iceland and Germany are selected for Synthetic Japan instead. Where Australia is represented with a  $w$ -weight half the size of Portugal, Iceland and Germany contribute to the synthetic control group with a distinctly smaller  $w$ -weight than Australia. The predictor balance is given in table 4. Except for the unemployment rate the approximation of old-age spending in Japan works very well. The pre-intervention RMSPE amounts to 0.055.

Figure 6 exhibits the graphical result. Old-age spending of Japan exceeds that of Synthetic Japan in every year of the post-period. The effect of the electoral system change on old-age spending is larger than the effect on (overall) social spending. The average treatment effect amounts to 0.937 percentage points. The result of the placebo tests can be seen in figure 7. Japan stands out with the largest post-pre-ratio among all countries. The p-value equivalent is  $1/23=0.044$ .

To test the robustness of this result I eliminate the country with the smallest  $w$ -weight (Germany) from the donor pool and rerun the analysis.<sup>20</sup> The graph (not shown) looks very similar to the baseline estimation and the pre-intervention RMSPE amounts to 0.103. Running placebo tests again leads to figure 8. Again, Japan exhibits the largest post-pre-ratio. The p-value equivalent is  $1/22=0.045$ .

Once more I drop the country with the smallest  $w$ -weight (Chile).<sup>21</sup> The graph (not

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<sup>19</sup>While social spending neither increased nor decreased, e.g., in Australia, Austria, Belgium, Germany, Iceland, Luxembourg, Spain, United Kingdom and the USA, it decreased, e.g., in Canada, Finland, Ireland, the Netherlands, Poland and Sweden.

<sup>20</sup>This leads to the following  $w$ -weights: Australia 0.479, Austria 0.072, Chile 0.004, Iceland 0.019 and Portugal 0.425.

<sup>21</sup>This leads to the following  $w$ -weights: Australia 0.453, Austria 0.073, Iceland 0.044 and Portugal 0.431.

shown) again looks very similar to the baseline estimation and the pre-intervention RM-SPE amounts to 0.099. Figure 9 shows that Japan exhibits the second largest post-pre-ratio. The p-value equivalent amounts to  $2/21=0.095$ . The effect of the electoral system change on old-age spending thus is statistically significant at the ten percent level.

## 5 The Alteration from Plurality Rule to the MMP Electoral System in New Zealand

### 5.1 Institutional Setting

Similar to Japan, New Zealand used its plurality voting system for many years. Under this rule voters casted their vote for one candidate in single-member districts. Furthermore, there was no direct election of the president and no second chamber in place. Thus the electoral rule gave rather unrestricted power to one of the two major parties, Labour and National, and to their governments. The governments' electoral accountability to the voters was thus rather limited. Minority parties in New Zealand were barely represented in parliament as they were not geographically concentrated and as the electoral rule was based on the concept called 'the-winner-takes-all'.

Due to these facts people became increasingly dissatisfied with the political as well as the electoral system. In 1985, the Labour Party installed a Royal Commission to prepare proposals for alternative electoral rules. However, Labour was not in favour of a system change and supported the reform process mainly because of the public claim. In 1986, the Royal Commission proposed the Mixed-Member Proportional System as the best alternative. At that time National began to support the reform process but similarly to Labour, only for strategic reasons. The parties suggested a tentative as well as a binding referendum in the hope that the electorate would lose interest in the topic in consequence of a long lasting reform process. Against the parties' expectations, however, citizens voted for an electoral system change towards an MMP system in 1993. The first election under the new rule took place in October 1996 (Denemark, 2003).

Under the new rule candidates are still running in single-member districts. However, voters cast a second vote for a closed party list. Thus the MMP electoral system also comprises two tiers. The national assembly consists of 120 seats of which 65 seats (54 percent) are filled via the electoral competition at the nominal tier (Massicotte and Blais, 1999). Contrary to the Mixed-Member Majoritarian electoral system the final number of parliamentary seats a party gets is determined by the votes the party polls at the list tier.<sup>22</sup> If the number of seats a party wins at the list tier is larger than the number of seats the party obtains at the nominal tier, remaining seats are filled with party list candidates. If, in contrast, the number of seats a party wins at the list tier is smaller than the number of seats the party receives at the nominal tier, these excess seats are granted nonetheless

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<sup>22</sup>This conjunction is called 'seat linkage'.

(overhang seats). Furthermore, parties either need to pass a vote share threshold of five percent or need to win at least one district seat to be represented in parliament (Shugart and Wattenberg, 2003).

The alteration from plurality rule to the MMP electoral system put a proportional election next to the already existing majoritarian election. Additionally, the overall seat allocation in parliament is determined by the list tier result. Thus this change can be expected to have increased the number of parties in New Zealand. Furthermore, this change can be expected to have strengthened the candidates' alignment towards their parties. Consequently, I expect the overall level of spending as well as social spending to increase in the wake of this transformation.

## 5.2 The Effect on Overall Spending

To uncover the effect of the electoral system change in New Zealand on the overall level of spending I use general government total outlays as percentage of GDP as dependent variable. To predict overall spending I use the natural logarithm of the total population, the share of the population aged 14 and under in the total population as well as the fraction of people employed in the industry sector. These predictors are accompanied by lagged overall spending of the years 1993 and 1995.

Just as the development of total outlays in Japan (see section 3) the development of total outlays in New Zealand stands out among the group of OECD countries. As can be seen in figure 10 total outlays from 1990 until 1996 decreased continuously in New Zealand. Total outlays also decreased in Canada and the USA but not before 1992. In Ireland it did not decrease before 1993. The average of the remaining donor pool countries moved sideways in that time. So approximating total outlays in New Zealand is hardly possible in the early years of the 1990s. Starting the pre-intervention period in 1990, 1991 or 1992 results in fairly large values of the pre-RMSPE. Thus the pre-intervention period covers the years 1993 to 1995 and the post-intervention period covers the years 1997 to 1999. Due to missing data in the pre-intervention and the post-intervention period, Chile, Estonia, Hungary, Israel, Poland, the Slovak Republic, Slovenia and Turkey had to be removed from the sample described in section 3. The donor pool thus contains 20 countries.

The  $w$ -weights as well as the predictor balance are given in table 5 and table 6, respectively. Synthetic New Zealand consists of Canada, Ireland and the USA. All countries are rather equally represented. The approximation in the pre-intervention period works very well which is reflected by the pre-intervention RMSPE which amounts to 0.512.

Figure 11 provides the graphical result. In the post-intervention period total outlays of New Zealand clearly exceed total outlays of Synthetic New Zealand. The average treatment effect amounts to 3.36 percentage points. This result receives support from Barker et al. (2003) who state that the effective number of parliamentary parties is

higher under the MMP electoral system than under the plurality rule in New Zealand.<sup>23</sup> The result of the subsequently conducted placebo tests can be seen in figure 12. New Zealand exhibits the fourth largest post-pre-ratio. The probability of finding a country in the donor pool with a post-pre-ratio the size of New Zealand or even larger is  $4/21=0.19$ . Rerunning the analysis with an extended post-intervention period that covers the years up to 2002 results in a post-pre-ratio that amounts to  $6/21=0.286$ .<sup>24</sup> Thus I conclude that the effect of the electoral system change on the overall level of spending in New Zealand is statistically insignificant.

### 5.3 The Effect on Social Spending

To explore the effect of the electoral system change in New Zealand on social spending I use social expenditure as percentage of GDP as dependent variable. To predict social spending I use the unemployment rate and the density of trade unions. These predictors are accompanied by lagged social spending of the years 1993 and 1995. Similar to the overall level of spending the development of social expenditures in New Zealand cannot be approximated adequately if the pre-intervention period starts in 1990, 1991 or 1992. Thus the pre-intervention period covers the years 1993 to 1995 and the post-intervention period covers the years 1997 to 1999. Due to missing data in the pre-intervention period and the post-intervention period Estland, Hungary, Israel, the Slovak Republic, Slovenia and Turkey had to be removed from the sample described in section 3. The donor pool thus contains 22 countries.

The  $w$ -weights are given in table 7. All countries of the pool are used to approximate the trajectory of social spending in New Zealand. However, Canada stands out with a relatively large  $w$ -weight of 0.55. The predictor balance is given in table 8 and indicates that the approximation works very precise. This is reflected by the pre-intervention RMSPE which amounts to 0.019.

Figure 13 exhibits the graphical result. In the post-intervention period Synthetic New Zealand exhibits a downward trend of social spending. New Zealand also exhibits a downward trend from 1998 to 1999 but an abrupt increase in social spending right after the introduction of the mixed-member proportional system in 1997 and 1998. The average treatment effect amounts to 2.082 percentage points. The result of the placebo tests can be seen in figure 14. New Zealand stands out with the largest post-pre-ratio. The p-value equivalent is  $1/23=0.044$ .

To test the robustness of the result I eliminate the countries with the smallest  $w$ -weights (Denmark, Finland, Spain and Sweden) from the donor pool and rerun the anal-

<sup>23</sup>Nishikawa and Herron (2004) in a sample of 53 countries and a timespan covering the years 1990 to 2001, however, can find only vague evidence that the number of legislative parties under mixed-member proportional representation is higher compared to plurality.

<sup>24</sup>However, an extended post-intervention period involves the danger of capturing influences that are unrelated to the intervention.

ysis.<sup>25</sup> The graph (not shown) looks very similar to the baseline estimation and the pre-intervention RMSPE amounts to 0.013. Running placebo tests again leads to figure 15. Again, New Zealand exhibits the largest post-pre-ratio and the p-value equivalent amounts to  $1/19=0.053$ .

Once more I drop the countries with the smallest  $w$ -weights (Ireland and Poland).<sup>26</sup> The graph (not shown) again looks very similar to the baseline estimation and the pre-intervention RMSPE amounts to 0.022. Figure 16 shows that New Zealand once more exhibits the largest post-pre-ratio. The p-value equivalent is  $1/17=0.059$ . The effect of the electoral system change on social spending in New Zealand thus is statistically significant at the six percent level and robust.

## 6 The Alteration from ListPR to the MMM Electoral System in Italy in 1994

### 6.1 Institutional Setting

Until 1993 Italian voters were used to elect their representatives via an open list proportional electoral rule, this tradition having lasted more than 30 years. Under this rule voters casted their vote for a party list in 31 electoral constituencies and then indicated the preferred order of party candidates within that list.<sup>27</sup> That is, the electoral rule in Italy was proportional in general but provided a deviation from the pure proportional concept in terms of preferential voting in that time. Similar to the electoral rule used in Greece in 1989 (see section 3), candidates acted in a trade-off between fostering the party line and obtaining a personal reputation.<sup>28</sup> Consequently, this ordering of candidates added intra-party competition between opponents to the electoral competition between parties. [Katz and Bardi \(1980\)](#) state that this caused the formation of party factions and with this a rather fragmented party system. Similar to Japan a noticeable level of corruption was observed and the electoral system was at least partially held responsible for these occurrences.

Although citizens increasingly demanded for a reform, parties in the parliament were not able to find an agreement because interests were too contradictory. In the end, the pressure to reform came from outside the governing parties, namely from Mario Segni, a former member of the Christian Democratic Party. Similar to New Zealand a Committee for Electoral Reform was established to prepare proposals for a referendum. Since the

<sup>25</sup>This leads to the following  $w$ -weights: Australia 0.003, Austria 0.002, Belgium 0.002, Canada 0.521, Chile 0.004, Czech Republic 0.011, France 0.002, Germany 0.002, Iceland 0.027, Ireland 0.001, Luxembourg 0.004, the Netherlands 0.121, Norway 0.003, Poland 0.001, Portugal 0.004, Switzerland 0.084, United Kingdom 0.002 and the USA 0.207.

<sup>26</sup>This leads to the following  $w$ -weights: Australia 0.003, Austria 0.003, Belgium 0.003, Canada 0.604, Chile 0.004, Czech Republic 0.007, France 0.002, Germany 0.003, Luxembourg 0.004, the Netherlands 0.051, Norway 0.004, Portugal 0.004, Switzerland 0.215, United Kingdom 0.003 and the USA 0.089.

<sup>27</sup>The district magnitude in Italy ranges from four to 53.

<sup>28</sup>A ranking of electoral rules regarding their incentive to foster a ‘personal vote’ is provided by [Carey and Shugart \(1995\)](#).

initiation of a referendum in no way depends on the approval of the government in Italy, this was a good chance to impose reform progress on the leading political actors. As several referenda were successful the parliament was forced to legislate towards a new electoral rule taking into consideration the proposals submitted by the committee (Donovan, 1995).

Eventually, Italy introduced a mixed-member majoritarian system in 1993. The first election under the new rule took place in march 1994. As it is typical for mixed-member electoral systems voters cast two votes. That is, 155 out of 630 seats in parliament are assigned via proportional representation where 475 candidates (75 percent) are elected in single-member districts at the nominal tier. However, there is a linkage of votes between the two tiers as the calculation of the vote share of party  $i$  at the list tier does not rely on the total number of votes the party received at that tier. The procedure is represented by the equation

$$V_{eff}^{lt} = V_{tot}^{lt} - [V^{fl} + 1] \quad (2)$$

where  $V_{tot}^{lt}$  is the total number of votes party  $i$  polled at the list tier, however gathered at the constituency level. If the candidate  $c_i$  of party  $i$  carried her election in the single-member district, this total number of votes is diminished by the number of votes the candidate  $c_i$  needed in order to win her nominal tier election. That is the number of votes  $V^{fl}$  the first loser polled in the nominal election plus one vote.<sup>29</sup> The total number of votes of party  $i$  at the district level adjusted by the winning margin of the candidate  $c_i$  gives the effective number of votes  $V_{eff}^{lt}$  of party  $i$  at the district level. The total number of effective votes of all districts is then used to calculate the vote share of party  $i$  at the list tier via the Hare quota. (Katz, 1996, 2003; Massicotte and Blais, 1999; Nunez, n.d.).

The alteration from the open list proportional representation to the mixed-member majoritarian electoral system put a direct election of candidates next to the already existing proportional election. Thus this change can be expected to have led to a decrease in the number of parties (which was explicitly an objective of the reform). This is in line with Reed (2001) who in comparing the 1994 election with the 1996 election finds that the number of candidates in the nominal tier decreased down to two (Duverger's law). Furthermore, this change can be expected to have increased the candidates' alignment towards their local electorate. Consequently, I expect the overall level of spending as well as social spending to decrease in the wake of this transformation.

## 6.2 The Effect on Overall Spending

To uncover the effect of the 1994 electoral system change in Italy on the overall level of spending I use general government total outlays as percentage of GDP as dependent variable. To predict total outlays I use the share of the population aged 14 and under

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<sup>29</sup>To keep the description simple the case in which a candidate is affiliated with more than one list is disregarded.

in the total population as well as the fraction of people employed in the service sector. These variables are accompanied by lagged outlays of the years 1989, 1991 and 1993. The pre-intervention period covers the years 1989 to 1993 and the post-intervention period covers the years 1995 to 1999. Due to missing data in the pre-intervention and the post-intervention period, Chile, the Czech Republic, Estonia, Hungary, Israel, Luxembourg, Poland, the Slovak Republic, Slovenia, Switzerland and Turkey had to be removed from the sample described in section 3. The donor pool thus contains 17 countries.

The  $w$ -weights are given in table 9. Synthetic Italy consists of Austria, Finland, Norway and Sweden. Austria stands out with a  $w$ -weight of 55 percent and Norway contributes to Synthetic Italy with a  $w$ -weight of almost 38 percent. The predictor balance is given in table 10. It indicates that the approximation in the pre-intervention period works very well. This is reflected by the pre-intervention RMSPE which amounts to 0.293.

Figure 17 provides the graphical result. In the post-intervention period the trajectory of Synthetic Italy exceeds that of Italy in every year. This indicates that the 1994 electoral system change in Italy reduced the overall level of spending. However, the average treatment effect amounts to 2.13 percentage points and is thus rather small. The result of the subsequently conducted placebo tests can be seen in figure 18. Italy exhibits the fourth largest post-pre-ratio. The probability of finding a country in the donor pool with a post-pre-ratio the size of Italy or even larger is  $4/18=0.222$ . Thus I conclude that the effect of the 1994 electoral system change on the overall level of spending in Italy is statistically insignificant.

This indicates that the two-candidate competition at the district level did not push through to the national level and is very much in line with [Bordignon and Monticini \(2012\)](#) who find that the number of parties in the coalition governments as well as in the parliament increased in the wake of this electoral system change. Similarly, [Ferrara and Herron \(2005\)](#) argue that small parties form a coalition with larger parties in mixed-member electoral systems if voters cast two votes (dual ballot) and if the tiers operate separately. Hence the number of parties does not decrease due to a shift of the electoral system from a proportional rule towards a mixed-member one.

### 6.3 The Effect on Social Spending

To uncover the effect of the 1994 electoral system change in Italy on social spending I use social expenditure as percentage of GDP as dependent variable. To predict social spending I use the share of elderly people in the total population as well as the unemployment rate. These variables are accompanied by lagged social spending of the years 1990 and 1993. Looking at social expenditure data of Italy in the 1980s reveals that social spending increased slightly from 20.5 percent in 1984 to 21.2 percent in 1989, fell to 19.9 percent in the following year and increased again until 1993 (20.9 percent). As this unique development cannot be approximated adequately by the potential comparison

units, the pre-intervention period covers the years 1990 to 1993. Due to missing data in the pre-intervention and the post-intervention period, Estonia, Hungary, Israel, the Slovak Republic and Slovenia had to be removed from the sample described in section 3. The donor pool thus contains 23 countries.

The  $w$ -weights are given in table 11. Synthetic Italy consists of Luxembourg, the Netherlands and Norway. Luxembourg stands out with a  $w$ -weight of almost 79 percent and Norway contributes to Synthetic Italy with a  $w$ -weight of 21 percent. The predictor balance is given in table 12. Except for the unemployment rate the approximation of social spending in Italy works very well. The pre-intervention RMSPE amounts to 0.09.

Figure 19 exhibits the graphical result. In the first year of the post-intervention period Italy exhibits a clear decrease of social spending compared with Synthetic Italy. In 1996, however, social spending rockets and it further increases in the subsequent years. Obviously, such a development can hardly be attributed to a change of the electoral system. In fact, Italy passed a major pension reform in 1995 that replaced the public defined-benefit pension scheme by a defined-contribution pension plan. While pension payments were based on benefits with a weak link to payments of contributions under the former rule, pension payments depend much more heavily on contributions since then. Basically, pension expenditures can be assumed to decrease in the wake of the alternation from a defined-benefit to a defined-contribution pension scheme. [Franco and Sartor \(2006\)](#), however, argue that the opposite can occur in the transition from the former to the latter. This is because a remarkable increase of the contribution rate would be necessary in order to keep the level of pension benefits. In a framework where contributions are detracted from wages this would mean a substantial increase in labour costs. Thus the pension reform probably caused an increase of old-age spending in the short run since the public sector beared that cost. To uncover the effect of the 1994 electoral system change on social spending in Italy, I consequently restrict the calculation of the average treatment effect to the year 1995. It amounts to 1.533 percentage points.

The result of the placebo tests can be seen in figure 20. Italy exhibits the second largest post-pre-ratio. The p-value equivalent is  $2/24=0.083$ . To test the robustness of this result I eliminate the country with the smallest  $w$ -weight (the Netherlands) from the donor pool and rerun the analysis.<sup>30</sup> The graph (not shown) looks very similar to the baseline estimation and the pre-intervention RMSPE amounts to 0.09. Running placebo tests again leads to figure 21. Italy stands out with the largest post-pre-ratio and the p-value equivalent is  $1/23=0.044$ .

Once more I drop the country with the smallest  $w$ -weight (Norway) and rerun the analysis.<sup>31</sup> Except for the year 1992 in which the approximation is a little less precise the graph (not shown) looks very similar to the baseline estimation and the pre-intervention

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<sup>30</sup>This leads to the following  $w$ -weights: Luxembourg 0.786 and Norway 0.214.

<sup>31</sup>This leads to the following  $w$ -weights: Belgium 0.124 and Luxembourg 0.876.



RMSPE amounts to 0.14. Figure 22 shows that Italy exhibits the second largest post-pre-ratio. The p-value equivalent is  $2/22=0.091$ . The effect of the 1994 electoral system change on social spending in Italy is thus statistically significant at the ten percent level.

## 7 The Alteration from the MMM Electoral System to ListPR in Italy in 2006

### 7.1 Institutional Setting

The mixed-member majoritarian electoral system contributed to the consolidation of the party system in the sense that two coalitions competed for political power. However, these coalitions consisted of a fairly large number of parties and were thus rather heterogenous. Due to the existence of the list tier small parties could afford to keep their sovereignty. The party system was thus heavily fragmented under the MMM electoral rule. The debate on returning to a proportional electoral rule thus never stopped and led to the revision of the electoral rule (Bull and Pasquino, 2007).

Beyond that, the introduction of a new electoral system that would give a premium of votes to the winning party was just in the interest of the parties of the governing centre-right coalition ‘House of Freedoms’ (Baldini, 2011). This coalition lost ground in the 2005 regional elections and was faced with negative polls in the run-up to the forthcoming general election in 2006. While the Union of Centre (one party of that coalition) was in favour of a return to proportional representation since it hoped to become the third largest party, Forza Italia (another coalition partner) was in favour of a return to proportional representation as it underperformed at the nominal tier of the MMM electoral system due to its geographical dispersion in the country.

Finally, the government headed by Silvio Berlusconi altered the electoral system thanks to its parliamentary majority and introduced a proportional electoral rule in 2005. Under this rule voters cast their vote for a closed party list in 26 multi-member districts. Preference voting was not reintroduced. The electoral rule is equipped with a majority bonus assigned to the leading party or coalition. That is, the party or coalition of parties that polls the plurality of votes is immediately awarded 340 seats of the assembly, which amounts to 55 percent. Additionally, several party thresholds were adopted. Coalitions of parties need to have at least ten percent of the national vote to be represented in parliament. Parties that are part of a coalition need to have at least two percent of the national vote to be represented in parliament. Parties that are running on their own, i.e. without being part of a coalition, need to have at least four percent of the national vote to be represented in parliament (Nunez, n.d.).

Mirror-inverted to the previous electoral system change in Italy the alteration from the MMM electoral system to list proportional representation removed the nominal tier and thus the election of candidates. Thus this change can be expected to have strengthened the candidates’ alignment towards their parties. Furthermore, small parties are not forced

to participate in coalitions anymore. Consequently, I expect the overall level of spending as well as social spending to increase in the wake of this transformation.

## 7.2 The Effect on Overall Spending

To uncover the effect of the 2006 electoral system change in Italy on the overall level of spending I use total central government expenditure as percentage of GDP as dependent variable. To predict overall spending I use the natural logarithm of GDP per capita, the share of elderly people in the total population and the unemployment rate. These predictors are accompanied by lagged overall spending of the years 2001, 2004 and 2005. Total central government spending steadily decreased in Italy from 38.6 percent in 1994 to 26 percent in 2000. It increased in 2001 up to 27.8 percent and remained rather constant until 2005 (26.7 percent). As this development cannot be approximated adequately by the potential comparison units, the pre-intervention period covers the years 2001 to 2005. The post-intervention period covers the years 2007 to 2011. Due to missing data in the pre-intervention and the post-intervention period, Chile, Israel and Turkey had to be removed from the sample described in section 3. The donor pool thus contains 25 countries.

The  $w$ -weights are given in table 13. Synthetic Italy consists of Belgium, the Slovak Republic, Spain and Sweden. Sweden stands out with a  $w$ -weight of almost 58 percent and Spain contributes to Synthetic Italy with a  $w$ -weight of 30 percent. Belgium and the Slovak Republic contribute to the approximation with distinctly smaller  $w$ -weights. The predictor balance is given in table 14 and indicates that the approximation works very well. The pre-intervention RMSPE amounts to 0.068.

Figure 24 provides the graphical result. In the post-intervention period government expenditures of Italy exceed government expenditures of Synthetic Italy. Moreover, the trajectories run parallel over the entire period. The average treatment effect amounts to 2.2 percentage points. The result of the subsequently conducted placebo tests can be seen in figure 24. Italy stands out with the largest post-pre-ratio. The probability of finding a country in the pool with a post-pre-ratio the size of Italy or even larger is  $1/26=0.038$ .

To test the robustness of the result I eliminate the country with the smallest  $w$ -weight (the Slovak Republic) from the donor pool and rerun the analysis.<sup>32</sup> The graph (not shown) looks very similar to the baseline estimation and the pre-intervention RMSPE amounts to 0.07. Running placebo tests again leads to figure 25. Again, Italy exhibits the largest post-pre-ratio. The p-value equivalent is  $1/25=0.04$ .

Once more I drop the country with the smallest  $w$ -weight (Belgium) from the donor pool and rerun the analysis.<sup>33</sup> The approximation in the pre-intervention period works somewhat imprecise. This is reflected by the pre-intervention RMSPE which amounts to 0.167. However, the treatment effect looks very similar to the baseline estimation. Figure

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<sup>32</sup>This leads to the following  $w$ -weights: Belgium 0.121, Spain 0.303 and Sweden 0.576.

<sup>33</sup>This leads to the following  $w$ -weights: Spain 0.326 and Sweden 0.674.

26 shows that Italy exhibits the second largest post-pre-ratio. The p-value equivalent is  $2/24=0.083$ . The effect of the 2006 electoral system change on central government expenditures in Italy thus is statistically significant at the nine percent level.

### 7.3 The Effect on Social Spending

To uncover the effect of the 2006 electoral system change in Italy on social spending I use social expenditure as percentage of GDP as dependent variable. To predict social spending I use the sum of imports and exports as percentage of GDP as well as the fraction of people employed in the industry sector. These predictors are accompanied by lagged social spending of the years 2001, 2003 and 2005. The pre-intervention period covers the years 2000 to 2005 and the post-intervention period covers the years 2007 to 2012. Due to missing data in the pre-intervention and the post-intervention period, Switzerland and Turkey had to be removed from the sample described in section 3. The donor pool thus contains 26 countries.

The  $w$ -weights are given in table 15. Synthetic Italy consists of France, Portugal, Slovenia and the United Kingdom. France and the United Kingdom contribute to Synthetic Italy with a  $w$ -weight of 41 percent each. The predictor balance is given in table 16. It indicates that the approximation works very well with respect to lagged social spending. It works fairly well regarding the sum of imports and exports and employment in the industry sector. This is reflected by the pre-intervention RMSPE which amounts to 0.104.

Figure 27 exhibits the graphical result. In the post-intervention period social spending of Italy exceed social spending of Synthetic Italy. Again, the trajectories run parallel over the entire period. After a small reduction of social spending in the year right after the intervention it rises by about 3 percentage points followed by a sideward movement from 2009 to 2012. The average treatment effect amounts to 0.42 percentage points. The result of the placebo tests can be seen in figure 28. Italy is located among the countries with a small post-pre-ratio. The p-value equivalent is  $15/27=0.556$ . Thus I conclude that the effect of the 2006 electoral system change on social spending in Italy is statistically insignificant.

## 8 Conclusions

This paper investigates the effects of electoral system changes in Japan, New Zealand and Italy on the overall level of spending as well as on social spending. In 1996 Japan replaced the Single Non-Transferable Vote by the Mixed-Member Majoritarian System. In the same year New Zealand abolished the Plurality Rule and introduced the Mixed-Member Proportional System. Italy switched from an Open List Proportional Representation to the Mixed-Member Majoritarian System with a vote linkage of tiers in 1994 and turned

(back) to (closed) List Proportional Representation with a majority bonus for the leading party in 2006.

By using the Synthetic Control Method I find that the electoral system changes from a majoritarian rule to a proportional rule in New Zealand and Italy (2006) increased the overall level of spending by 2.2 and 3.36 percentage points. Where the former result is statistically significant at the 9 percent level the latter result is statistically insignificant. The change of the electoral system from a proportional rule to a majoritarian rule in Italy (1994) reduced the level of overall spending by 2.13 percentage points. This result is statistically insignificant.

Concerning the composition of government spending I find that the electoral system changes from a majoritarian rule to a proportional rule in Japan, New Zealand and Italy (2006) increased social spending by 0.42, 0.45 and 2.08 percentage points.<sup>34</sup> Where the treatment effect in New Zealand is statistically significant at the six percent level the effect on social spending in Japan and Italy (2006) is insignificant. The electoral system change in Japan increased old-age spending by 0.934 percentage points. This result is significant at the ten percent level. The change of the electoral system from a proportional rule to a majoritarian rule in Italy (1994) decreased social spending by 1.53 percentage points, the result being statistically significant at the ten percent level.

That is, I cannot find a clear significant effect of the electoral system changes under review on the overall level of spending. I can find a clear significant effect on social spending only in New Zealand. This might be due to the fact that New Zealand switched from a pure majoritarian rule to an almost pure proportional rule. Italy and Japan switched from a pure proportional or a pure majoritarian rule to a mixed-member rule. In that, this paper also contributes to the literature dealing with the effects of mixed-member electoral systems.

These results are in contrast to the outcomes provided by [Persson and Tabellini \(2002, 2003, 2004\)](#) with respect to the size of the effect and regarding the statistical significance.<sup>35</sup> They find a significant difference between the majoritarian rule and the proportional rule that amounts to five percentage points with respect to the overall level of spending and two or three percentage points regarding the effect on social spending. My results, however, correspond to the results provided by [Persson \(2002\)](#) and [Funk and Gathmann \(2013\)](#) and lend some support to the argumentation of [Acemoglu \(2005\)](#).

As the literature shows the effect of electoral systems on social spending might be indirect and thus caused by a simultaneous shift in the ideology of parties and the government. [Funk and Gathmann \(2013\)](#) as well as [Iversen and Soskice \(2006\)](#) point to the fact that left-wing parties prevail under proportional representation. If that is true the

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<sup>34</sup>Japan switched from the SNTV to the MMM electoral system. However, the MMM electoral system is more proportional than the SNTV.

<sup>35</sup>Concerning the effect on the overall level of spending these results are also in contrast to the outcomes provided by [Blume et al. \(2009\)](#).

Synthetic Control Method is not able to disentangle adequately the changes within the party system from the electoral system change. Indeed, the ideological composition of government changed in Japan due to the election in 1996 but the percentage of right-wing parties in government increased with a simultaneous increase in social spending and old-age spending. The 1994 electoral system change in Italy caused an increase in the proportion of left-wing parties. Nevertheless social spending decreased slightly in 1995. The 2006 electoral system change in Italy caused a shift from right-wing dominance to left-wing dominance which in 2008 switched back to a right-wing dominance. However, social spending increased in 2007 and 2008. In New Zealand there was no change in party ideology in the time under review ([Armingeon et al., 2013](#)). So there is no clear indication that the effect on social spending is driven by government ideology.

As these results are derived from case studies, the external validity is limited. Nevertheless I would conclude that the chance to observe a sizeable effect of an electoral system change, e.g. like in the case of Great Britain (see section 1), on overall spending is rather slight. An effect on social spending might be expected if the superseding electoral rule is much more (dis)proportional than the superseded.

## **9 Acknowledgements**

I thank Ivo Bischoff, Benedikt Fritz, Jerg Gutmann, Konstantinos Matakos and Orestis Troumpounis for helpful comments and insightful discussions. I thank Sabine Pfeil for enduringly supporting my academic work. I gratefully acknowledge comments and suggestions from participants of a Workshop on Political Economy at the University of Cambridge (UK), a seminar at the University of Kassel, a seminar at the Walter Eucken Institute, the Annual Meeting of the EPCS in Cambridge (UK), the 3rd ICOPEAI in Baiona and the 4th Annual Conference of the EPSA in Edinburgh. Excellent research assistance from Andrea Montgomery and Emma Karlake is gratefully acknowledged. Many thanks to Toke Aidt for his generous hospitality in 2013.

## Tables and Figures

State	$w$ -Weight	State	$w$ -Weight
Chile	0.465	Portugal	0.535

Table 1: Social Expenditure in Japan,  $w$ -Weights

Variable	Treated	Synthetic
lnGDP	10.217	9.374
POP65	13.134	10.613
Union density	24.535	22.774
Social Expenditure 1990	11.121	11.291
Social Expenditure 1993	12.6	12.71
Social Expenditure 1995	14.077	13.989

Table 2: Social Expenditure in Japan, Predictor Balance

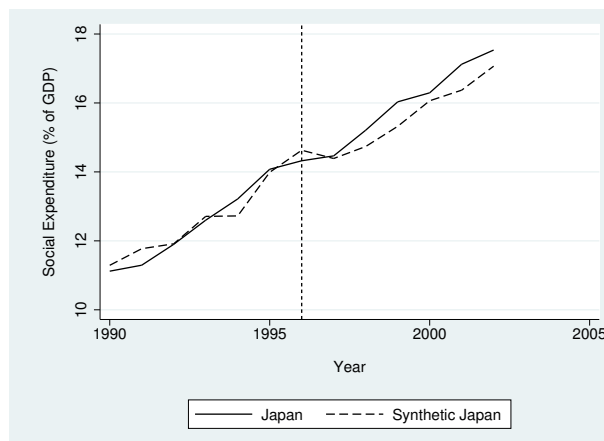


Figure 2: Social Expenditure in Japan

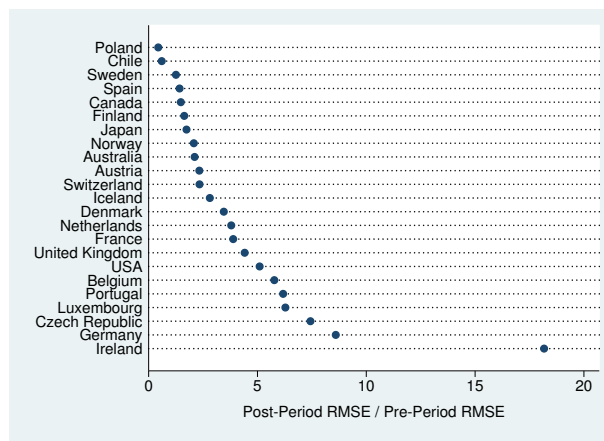


Figure 3: Social Expenditure in Japan, Post-Pre-Ratios

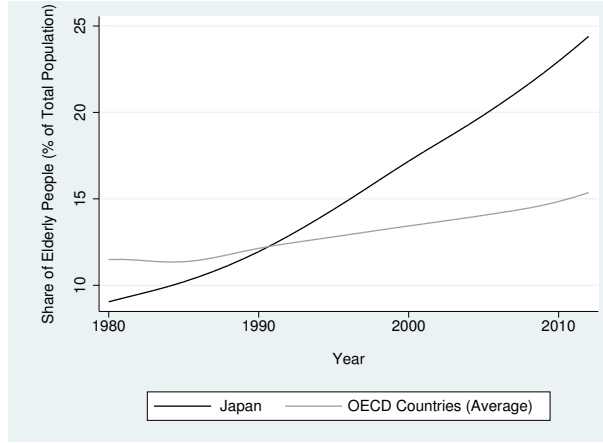


Figure 4: Share of Elderly People in Japan & OECD Countries

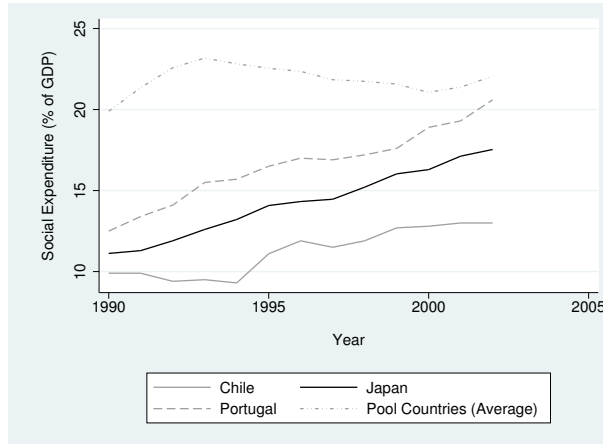


Figure 5: Social Expenditure in Chile, Japan, Portugal & Pool Countries

State	$w$ -Weight	State	$w$ -Weight
Australia	0.248	Iceland	0.147
Germany	0.053	Portugal	0.552

Table 3: Old-Age Expenditure in Japan,  $w$ -Weights

Variable	Treated	Synthetic
POP65	13.134	13.176
Unemployment rate	2.5	6.208
Employment, Service	59.083	59.713
Old-Age Expenditure 1990	4.03	4.024
Old-Age Expenditure 1992	4.33	4.33
Old-Age Expenditure 1995	5.24	5.237

Table 4: Old-Age Expenditure in Japan, Predictor Balance

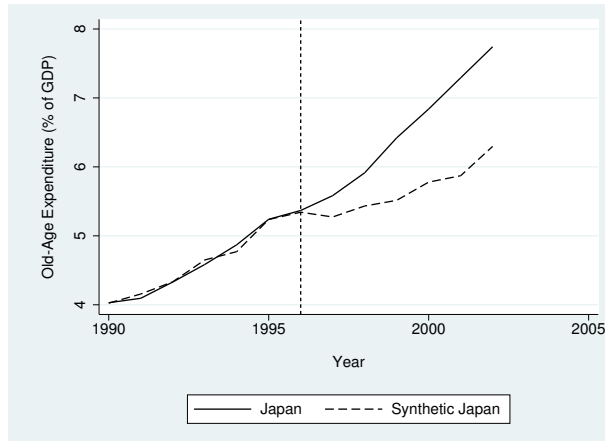


Figure 6: Old-Age Expenditure in Japan

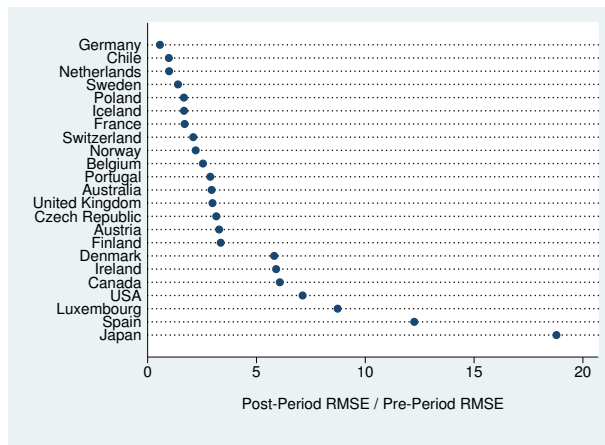


Figure 7: Old-Age Expenditure in Japan, Post-Pre-Ratios

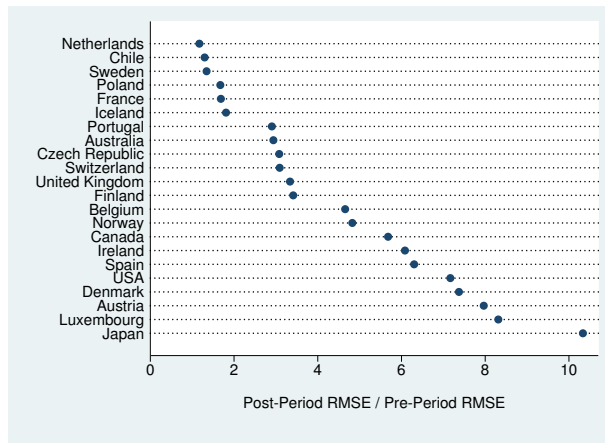


Figure 8: Old-Age Expenditure in Japan (without DEU), Post-Pre-Ratios



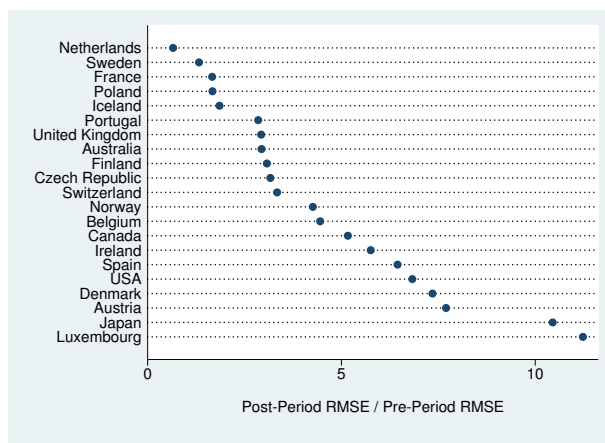


Figure 9: Old-Age Expenditure in Japan (without CHL, DEU), Post-Pre-Ratios

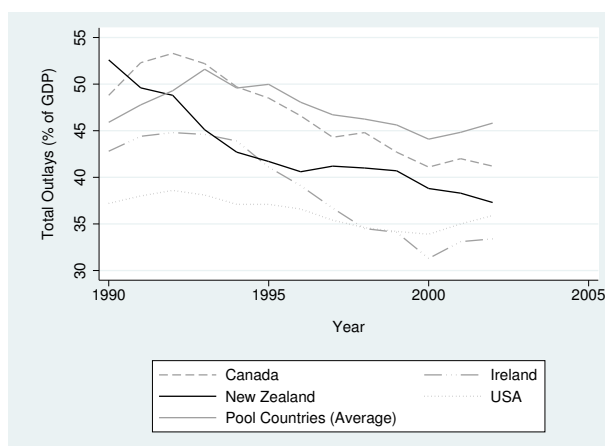


Figure 10: Total Outlays in Canada, Ireland, New Zealand, USA & Pool Countries

State	$w$ -Weight	State	$w$ -Weight
Canada	0.297	USA	0.318
Ireland	0.385		

Table 5: Total Outlays in New Zealand,  $w$ -Weights

Variable	Treated	Synthetic
lnPOP	15.102	17.081
POP14	23.037	22.569
Employment, Industry	24.567	25.206
Total Outlays 1993	45.1	44.79
Total Outlays 1995	41.7	42.026

Table 6: Total Outlays in New Zealand, Predictor Balance

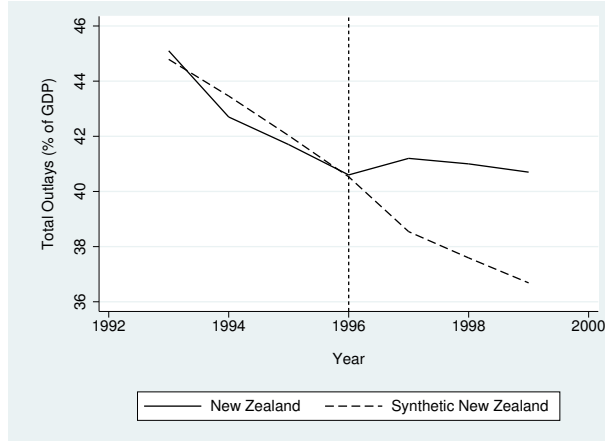


Figure 11: Total Outlays in New Zealand

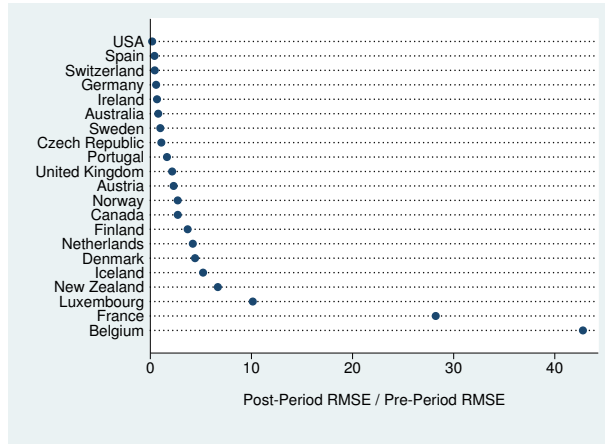


Figure 12: Total Outlays in New Zealand, Post-Pre-Ratios

State	$w$ -Weight	State	$w$ -Weight	State	$w$ -Weight
Australia	0.003	France	0.002	Portugal	0.003
Austria	0.002	Germany	0.002	Spain	0.001
Belgium	0.002	Iceland	0.018	Sweden	0.001
Canada	0.55	Ireland	0.002	Switzerland	0.137
Chile	0.002	Luxembourg	0.003	United Kingdom	0.003
Czech Republic	0.006	the Netherlands	0.091	USA	0.167
Denmark	0.001	Norway	0.002		
Finland	0.001	Poland	0.002		

Table 7: Social Expenditure in New Zealand,  $w$ -Weights

Variable	Treated	Synthetic
Unemployment rate	8.233	8.297
Union density	30.154	30.157
Social Expenditure 1993	19.9	19.922
Social Expenditure 1995	18.6	18.62

Table 8: Social Expenditure in New Zealand, Predictor Balance

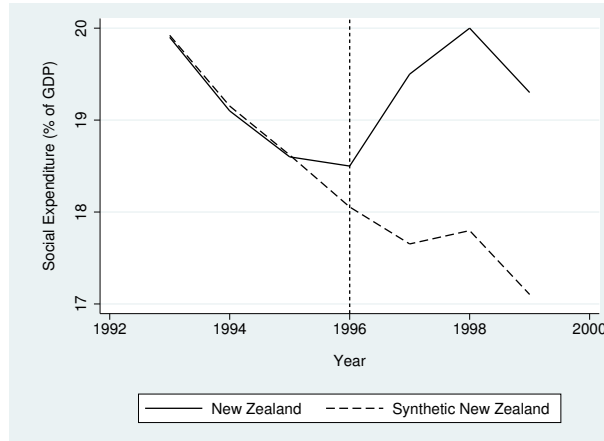


Figure 13: Social Expenditure in New Zealand

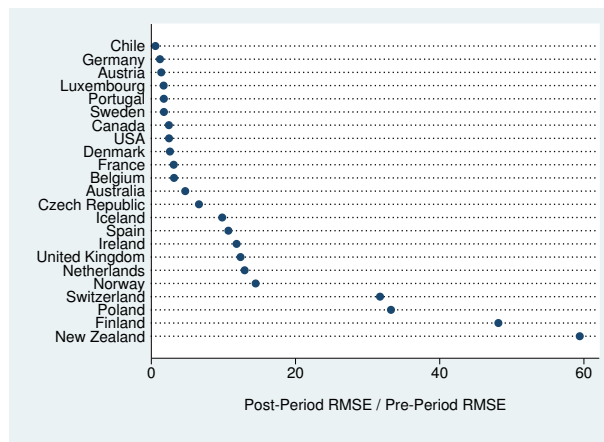


Figure 14: Social Expenditure in New Zealand, Post-Pre-Ratios

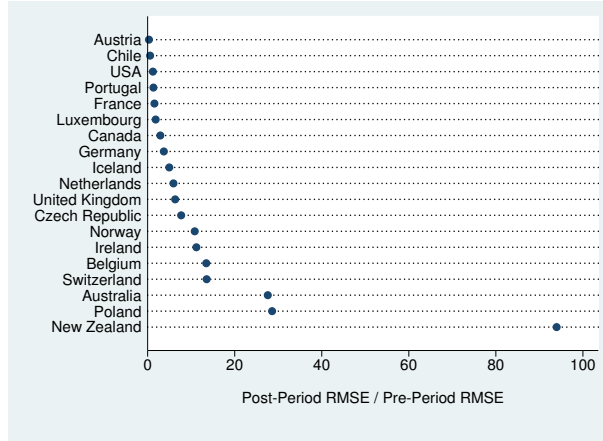


Figure 15: Social Expenditure in New Zealand (without DNK, ESP, FIN, SWE), Post-Pre-Ratios

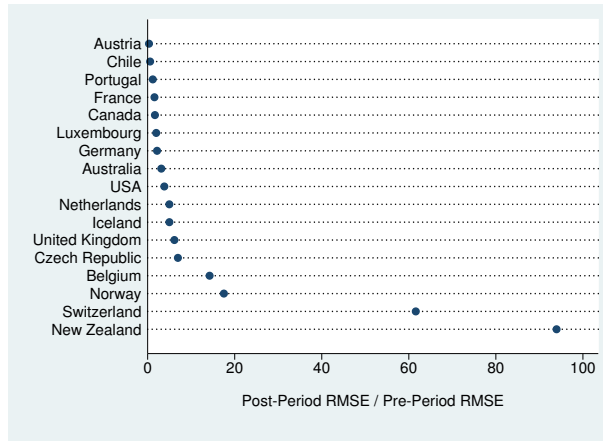


Figure 16: Social Expenditure in New Zealand (without DNK, ESP, FIN, IRL, POL, SWE), Post-Pre-Ratios

State	$w$ -Weight	State	$w$ -Weight
Austria	0.552	Norway	0.376
Finland	0.062	Sweden	0.011

Table 9: Total Outlays in Italy, 1994,  $w$ -Weights

Variable	Treated	Synthetic
POP14	16.113	18.237
Employment, Service	58.78	61.849
Total Outlays 1989	51.5	51.564
Total Outlays 1991	54	53.957
Total Outlays 1993	56.4	56.506

Table 10: Total Outlays in Italy, 1994, Predictor Balance

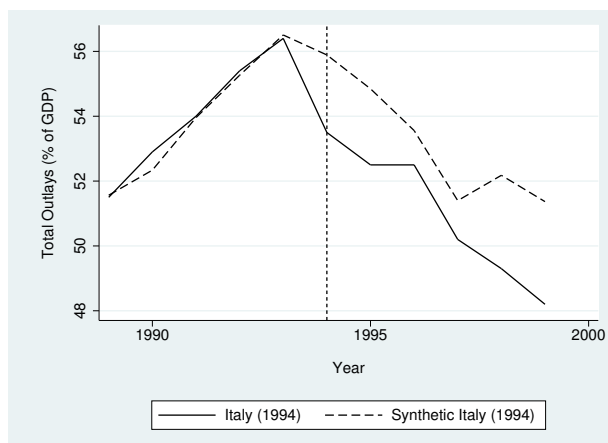


Figure 17: Total Outlays in Italy, 1994

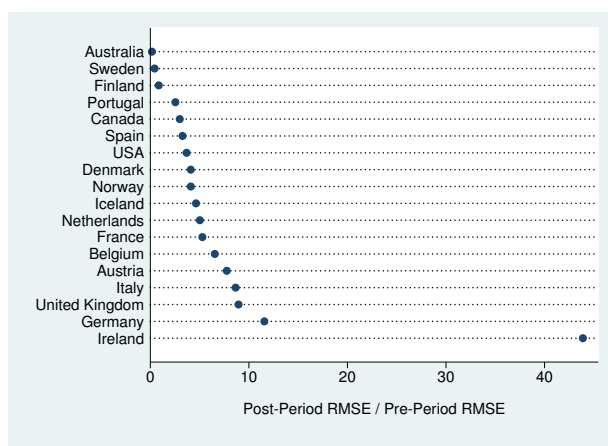


Figure 18: Total Outlays in Italy, 1994, Post-Pre-Ratios

State	$w$ -Weight	State	$w$ -Weight
Luxembourg	0.786	Norway	0.212
the Netherlands	0.001		

Table 11: Social Expenditure in Italy, 1994,  $w$ -Weights

Variable	Treated	Synthetic
POP65	15.479	14.112
Unemployment rate	9.85	2.659
Social Expenditure 1990	19.9	19.766
Social Expenditure 1993	20.9	20.934

Table 12: Social Expenditure in Italy, 1994, Predictor Balance

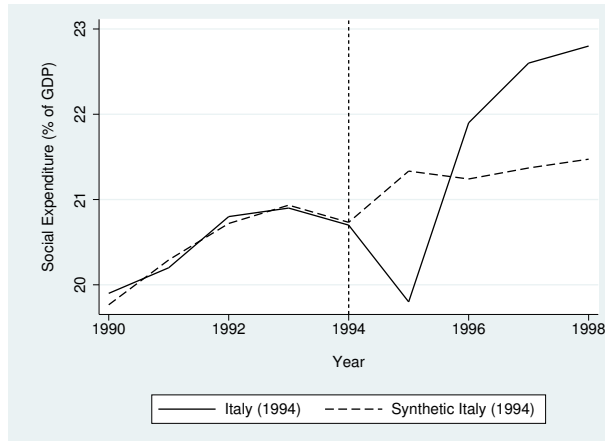


Figure 19: Social Expenditure in Italy, 1994

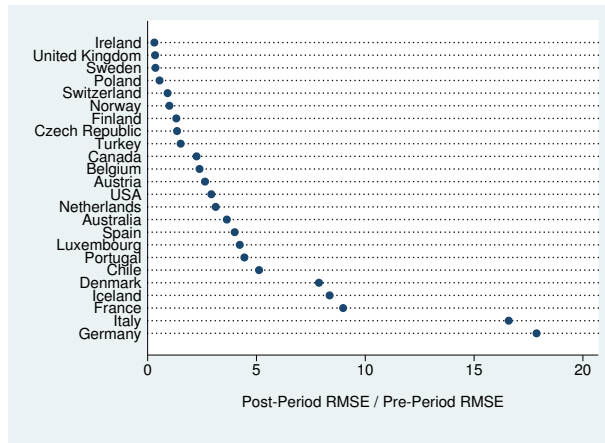


Figure 20: Social Expenditure in Italy, 1994, Post-Pre-Ratios

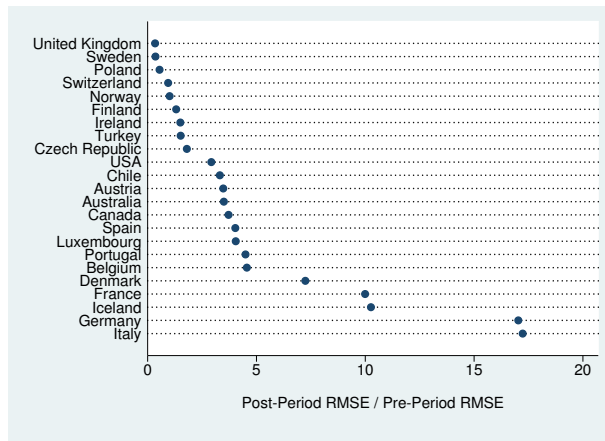


Figure 21: Social Expenditure in Italy, 1994 (without NLD), Post-Pre-Ratios

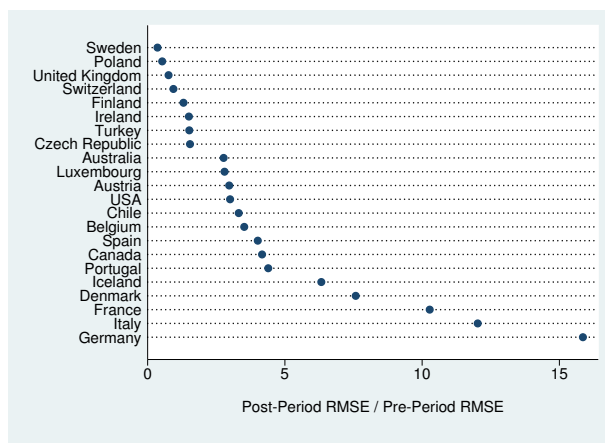


Figure 22: Social Expenditure in Italy, 1994 (without NLD, NOR), Post-Pre-Ratios

State	$w$ -Weight	State	$w$ -Weight
Belgium	0.12	Spain	0.302
Slovak Republic	0.002	Sweden	0.576

Table 13: Central Government Expenditure in Italy, 2006,  $w$ -Weights

Variable	Treated	Synthetic
lnGDP	10.247	10.292
POP65	19.131	17.095
Unemployment rate	8.66	7.669
CG Expenditure 2001	27.835	27.788
CG Expenditure 2004	26.283	26.288
CG Expenditure 2005	26.651	26.676

Table 14: Central Government Expenditure in Italy, 2006, Predictor Balance

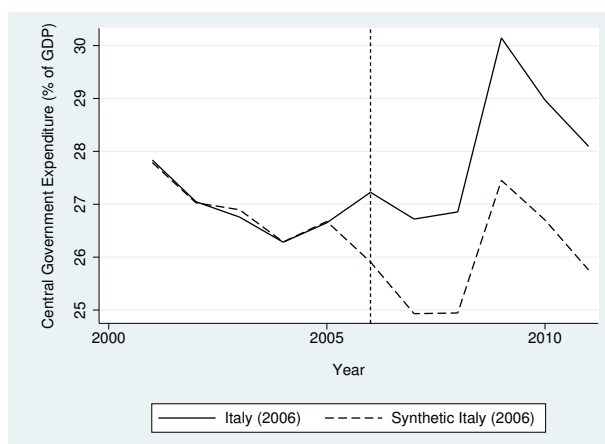


Figure 23: Central Government Expenditure in Italy, 2006

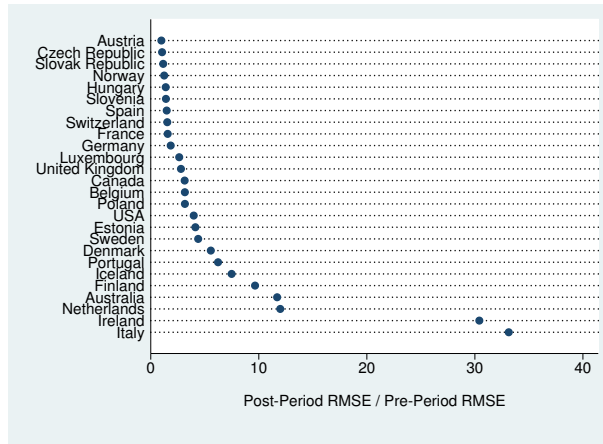


Figure 24: Central Government Expenditure in Italy, 2006, Post-Pre-Ratios

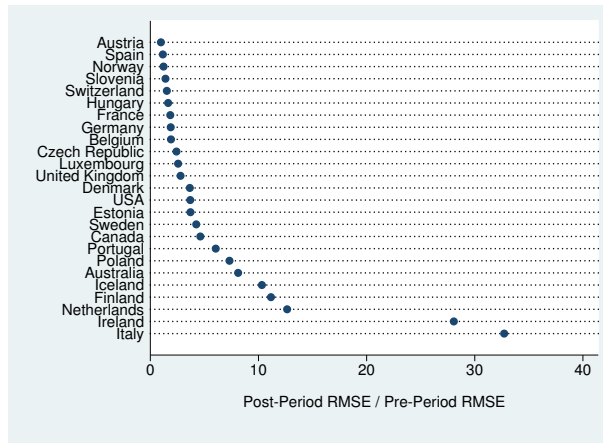


Figure 25: Central Government Expenditure in Italy, 2006 (without SVK), Post-Pre-Ratios

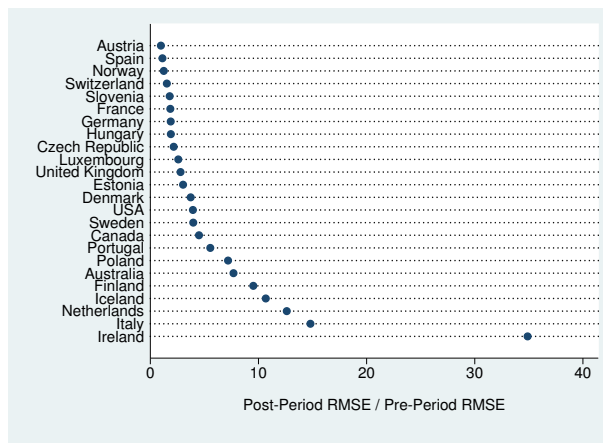


Figure 26: Central Government Expenditure in Italy, 2006 (without BEL, SVK), Post-Pre-Ratios



State	$w$ -Weight	State	$w$ -Weight
France	0.415	Slovenia	0.076
Portugal	0.089	United Kingdom	0.419

Table 15: Social Expenditure in Italy, 2006,  $w$ -Weights

Variable	Treated	Synthetic
Trade	50.786	59.678
Employment, Industry	31.417	25.93
Social Expenditure 2001	23.4	23.338
Social Expenditure 2003	24.2	24.346
Social Expenditure 2005	24.9	24.732

Table 16: Social Expenditure in Italy, 2006, Predictor Balance

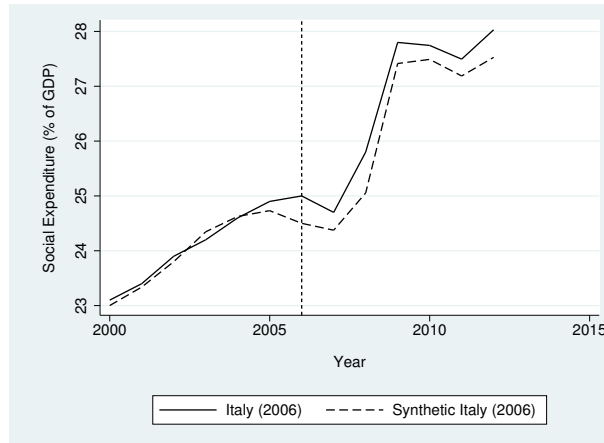


Figure 27: Social Expenditure in Italy, 2006

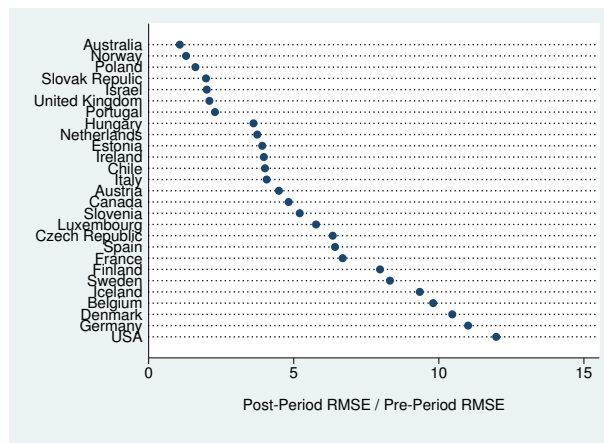


Figure 28: Social Expenditure in Italy, 2006, Post-Pre-Ratio

## **Appendix: Variables**

**CG Expenditure** Total Central Government Expenditure as Percentage of GDP, Source: OECD.Stat and Own Calculations.

**Employment, Agriculture** Employment in Agriculture as Percentage of Total Employment, Source: World Development Indicators.

**Employment, Industry** Employment in Industry as Percentage of Total Employment, Source: World Development Indicators.

**Employment, Service** Employment in Services as Percentage of Total Employment, Source: World Development Indicators.

**High-Tec Exports** High-Technology Exports as Percentage of Manufactured Exports, Source: World Development Indicators.

**lnGDP** Natural Logarithm of GDP Per Capita, Constant 2000-US\$, constant PPPs, Source: OECD.Stat and Own Calculations.

**lnPOP** Natural Logarithm of Total Population, Source: World Development Indicators and Own Calculations.

**Old-Age Expenditure** Old-Age Expenditure of the Public Sector as Percentage of GDP, Source: OECD.Stat and Own Calculations.

**Patents** Patent Applications of Residents per Million People, Source: World Development Indicators and Own Calculations.

**POP14** Population Aged 0-14 as Percentage of Total Population, Source, World Development Indicators.

**POP65** Population aged 65 and Above as Percentage of Total Population, Source, World Development Indicators.

**Social Expenditure** Social Expenditure of the Public Sector as Percentage of GDP, Source: OECD.Stat.

**Total Outlays** Total Outlays (Disbursements) of the General Government Level as Percentage of GDP, Source: OECD Economic Outlook No. 88 database.

**Trade** Imports of Goods and Services Plus Exports of Goods and Services as Percentage of GDP, Source: World Development Indicators and Own Calculations.

**Unemployment Rate** Total Unemployment as Percentage of Total Labour Force, Source: World Development Indicators.

**Union Density** Wage and Salary Earners that are Trade Union Members as Percentage of Employees, Source: OECD.Stat.

**Youth Unemployment** Unemployment of People Aged 15-24 as Percentage of Total Labor Force Aged 15-24, Source: World Development Indicators.

## References

- [1] Abadie, A., Diamond, A., Hainmueller, J., 2010, Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program, *Journal of the American Statistical Association* 105 (490), 493-505.
- [2] Abadie, A., Diamond, A., Hainmueller, J., 2015, Comparative Politics and the Synthetic Control Method, *American Journal of Political Science* 59 (2), 495-510.
- [3] Acemoglu, D., 2005, Constitutions, Politics, and Economics: A Review Essay on Persson and Tabellini's *The Economic Effects of Constitutions*, *Journal of Economic Literature* 43 (4), 1025-48.
- [4] Adema, W., Fron, P., Ladaique, M., 2011, Is the European Welfare State Really More Expensive?: Indicators on Social Spending, 1980-2012; and a Manual to the OECD Social Expenditure Database (SOCX), OECD Social, Employment and Migration Working Papers No.124.
- [5] Armingeon, K., Knöpfel, L., Weisstanner, D., Engler, S., Potolidis, P., Gerber, M., 2013, Comparative Political Dataset 1. 1960-2011, Bern.
- [6] Baldini, G., 2011, The Different Trajectories of Italian Electoral Reform, *West European Politics* 34 (3), 644-63.
- [7] Barker, F., Boston, J., Levine, S., McLeay, E., Roberts, N. S., 2003, An Initial Assessment of the Consequences of MMP in New Zealand, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 297-322.
- [8] Blume, L., Müller, J., Voigt, S., Wolf, C., 2009, The Economic Effects of Constitutions: Replicating - and Extending - Persson and Tabellini, *Public Choice* 139, 197-225.
- [9] Bordignon, M., Monticini, A., 2012, The Importance of the Electoral Rule: Evidence from Italy, *Economics Letters* 117, 322-325.
- [10] Bormann, N.-C., Golder, M., 2013, Democratic Electoral Systems Around the World, 1946-2011, *Electoral Studies* 32, 360-369.
- [11] Bull, M., Pasquino, G., 2007, A Long Quest in Vain: Institutional Reforms in Italy, *West European Politics* 30 (4), 670-91.
- [12] Carey, J. M., Shugart, M. S., 1995, Incentives to Cultivate a Personal Vote: a Rank Ordering of Electoral Formulas, *Electoral Studies* 14 (4), 417-439.

- [13] Denmark, D., 2003, Choosing MMP in New Zealand: Explaining the 1993 Electoral Reform, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 70-95.
- [14] Dimitras, P. E., 1994, The Greek Parliamentary Election of October 1993, *Electoral Studies* 13 (3), 235-239.
- [15] Donovan, M., 1995, The Politics of Electoral Reform in Italy, *International Political Science Review* 16 (1), 47-64.
- [16] Ferrara, F., Herron, E. S., 2005, Going It Alone? Strategic Entry under Mixed Electoral Rules, *American Journal of Political Science* 49 (1), 16-31.
- [17] Franco, D., Sartor, N., 2006, NDCs in Italy: Unsatisfactory Present, Uncertain Future, in: Holzmann, R., Palmer, E. (eds.), *Pension Reform. Issues and Prospects for Non-Financial Defined Contribution (NDC) Schemes*, Washington DC, 467-492.
- [18] Funk, P., Gathmann, C., 2013, How Do Electoral Systems Affect Fiscal Policy? Evidence from Cantonal Parliaments, 1890-2000, *Journal of the European Economic Association* 11 (5), 1178-1203.
- [19] Hicken, A., Kasuya, Y., 2003, A Guide to the Constitutional Structures and Electoral Systems of East, South and Southeast Asia, *Electoral Studies* 22, 121-51.
- [20] Horcasitas, J. M., Weldon, J. A., 2003, Reforming Electoral Systems in Mexico, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 209-230.
- [21] Iversen, T., Soskice, D., 2006, Electoral Institutions and the Politics of Coalitions: Why Some Democracies Redistribute More than Others, *The American Political Science Review* 100 (2), 165-181.
- [22] Katz, R. S., 1996, Electoral Reform and the Transformation of Party Politics in Italy, *Party Politics* 2 (1), 31-53.
- [23] Katz, R. S., 2003, Reforming the Italian Electoral Law, 1993, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 96-122.
- [24] Katz, R. S., Bardi, L., 1980, Preference Voting and Turnover in Italian Parliamentary Elections, *American Journal of Political Science* 24 (1), 97-114.
- [25] Kontopoulos, Y., Perotti, R., 1999, Government Fragmentation and Fiscal Policy Outcomes: Evidence from OECD Countries, in: Poterba, J. M., von Hagen, J. (Eds.), *Fiscal Institutions and Fiscal Performance*, Chicago, 81-102.

- [26] Lamprinakou, C., n.d., Electoral System Change in Europe since 1945: Greece; taken from the ESCE project, <http://www.electoralsystemchanges.eu>.
- [27] Lijphart, A., 1990, The Political Consequences of Electoral Laws, 1945-85, *American Political Science Review* 84 (2), 481-496.
- [28] Lijphart, A., 1994, *Electoral Systems and Party Systems: A Study of Twenty-Seven Democracies, 1945-1990*, Oxford.
- [29] Massicotte, L., Blais, A., 1999, Mixed Electoral Systems: A Conceptual and Empirical Survey, *Electoral Studies* 18 (3), 341-366.
- [30] Milesi-Ferretti, G. M., Perotti, R., Rostagno, M., 2002, Electoral Systems and Public Spending, *The Quarterly Journal of Economics* 117 (2), 609-657.
- [31] Nishikawa, M., Herron, E. S., 2004, Mixed Electoral Rules' Impact on Party Systems, *Electoral Studies* 23, 753-768.
- [32] Nunez, L., n.d., Electoral System Change in Europe since 1945: Italy; taken from the ESCE project, <http://www.electoralsystemchanges.eu>.
- [33] Perotti, R., Kontopoulos, Y., 2002, Fragmented Fiscal Policy, *Journal of Public Economics* 86, 191-222.
- [34] Persson, T., 2002, Do Political Institutions Shape Economic Policy?, *Econometrica* 70 (3), 883-905.
- [35] Persson, T., Roland, G., Tabellini, G., 2007, Electoral Rules and Government Spending in Parliamentary Democracies, *Quarterly Journal of Political Science* 2 (2), 155-88.
- [36] Persson, T., Tabellini, G., 1999, The Size and Scope of Government: Comparative Politics with Rational Politicians, *European Economic Review* 43, 699-735.
- [37] Persson, T., Tabellini, G., 2002, Do Constitutions Cause Large Governments? Quasi-Experimental Evidence, *European Economic Review* 46 (4-5).
- [38] Persson, T., Tabellini, G., 2003, *The Economic Effects of Constitutions*, Cambridge.
- [39] Persson, T., Tabellini, G., 2004, Constitutional Rules and Fiscal Policy Outcomes, *The American Economic Review* 94 (1), 25-45.
- [40] Pettersson-Lidbom, P., 2008, Do Parties Matter for Economic Outcomes? A Regression-Discontinuity Approach, *Journal of the European Economic Association* 6 (5), 1037-56.

- [41] Reed, S. R., 2001, Duverger's Law is Working in Italy, *Comparative Political Studies* 34 (3), 312-27.
- [42] Reed, S. R., Thies, M. F., 2003a, The Causes of Electoral Reform in Japan, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 152-172.
- [43] Reed, S. R., Thies, M. F., 2003b, The Consequences of Electoral Reform in Japan, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 380-403.
- [44] Reilly, B., 2007, Electoral Systems and Party Systems in East Asia, *Journal of East Asian Studies* 7, 185-202.
- [45] Rodrik, D., 1998, Why Do More Open Economies Have Bigger Governments?, *Journal of Political Economy* 106 (5), 997-1032.
- [46] Sakamoto, T., 1999, Explaining Electoral Reform. Japan versus Italy and New Zealand, *Party Politics* 5 (4), 419-438.
- [47] Shugart, M. S., Wattenberg, M. P., 2003, Mixed-Member Electoral Systems: A Definition and Typology, in: Shugart, M. S., Wattenberg, M. P. (eds.), *Mixed-Member Electoral Systems. The Best of Both Worlds?*, Oxford, 9-24.
- [48] Taagepera, R., Shugart, M. S., 1989, *Seats and Votes: The Effects and Determinants of Electoral Systems*, New Haven.
- [49] Volkerink, B., de Haan, J., 2001, Fragmented Government Effects on Fiscal Policy: New Evidence, *Public Choice* 109 (3-4), 221-242.

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