

# Do personal characteristics of finance ministers affect the development of public debt?

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## **Abstract:**

Using a unique dataset about personal characteristics of national finance ministers in Europe (1980 – 2007) I show that both a finance minister's experience and education affect the development of public debt. Political experience is decisive: The more experience a finance minister has gained in former positions, the lower is the budget deficit. Concerning the educational background, there is a debt enhancing (reducing) impact of economists (lawyers). As compared to finance ministers with other education, the change of the debt to GDP ratio is positive (negative) if the finance minister is an economist (lawyer). Especially the impact of the experience measure is robust to the inclusion of the personal characteristics of the prime minister.

**Key Words:** public finance, public debt, role of finance minister, personal characteristics

**JEL Classification:** D78, H30, H62

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## 1 Introduction

Do personal characteristics of finance ministers affect the development of public debt? This question seems to be relevant in both a political and an economic context. If a country's debt performance is also explained by the personal characteristics of the finance minister, guidelines for the challenge "who should be appointed as national finance minister" can be set. A growing literature looks at the personal impact of political decision makers, see, e.g., the investigations by Besley et al. (2011), Dreher et al. (2009) and Göhlman and Vaubel (2007). In most of the papers, however, the focus relies on the personal impact of the heads of states on reform policies or growth. Findings in the field of fiscal policy decisions, by contrast, are still scarce. Thus, the aim of this research is to investigate whether personal characteristics of national finance ministers have an impact on the development of public debt.

Why especially the minister of finance? The answer is straightforward: The finance minister is the only minister in cabinet who has a personal interest in sound public finance. With respect to institutions, the finance minister is the central player within the budget process, both preparing and executing the annual budget draft. Furthermore, the finance minister's incentives to exploit pork barrel projects are diminished. Compared to the remaining ministers in cabinet he is not responsible for particular projects or particular groups in the society. This dissolves his personal incentives to attract as much funds as possible for his own ministry. Quite the contrary: The finance minister's challenge is to resist the emerging spending pressures of his colleagues. Since he takes over responsibility for the whole budget and its development, his incentives to ensure sustainable public finances should be highest among the cabinet members.

But what is about the prime minister? Surely, in most countries a finance minister's personal impact also depends on the backing of his prime minister. The prime minister's function, however, first and foremost is to be the head of government. This includes setting the general policy guidelines and "pulling the team together". The finance minister, on the contrary, should be the fiscal expert of the government. This implies that a finance minister who is experienced and well educated should retain his personal impact on fiscal policy decisions. Nonetheless, it is also important to control for the personal impact of the prime minister and possible interaction effects.

To answer these questions I use a unique dataset about personal characteristics of European national finance ministers and their prime ministers for the period 1980 – 2007. In a nutshell the results reveal that especially a finance minister's former experience as national spending minister is decisive. The change of public debt is negative and the greater, the more experience a finance minister has gained in former positions as national cabinet member. Furthermore, the educational background seems to have an impact on the development of public debt. As compared to finance ministers with other studies than economics or law, the change

of public debt is positive if the finance minister is an economist. The opposite occurs for finance ministers with a legal background. A finance minister's ideology, by contrast, seems to have no impact on the implemented debt policies. With respect to the personal characteristics of the prime minister, the debt enhancing impact of economists is confirmed. However, especially the finance minister's experience seems to be very important and remains robust to the inclusion of the prime minister's characteristics. Concerning possible interaction effects between both politicians, the importance of an economic education is underpinned. Finance ministers who have studied economics retain excessive debt growth in bad times but enhance debt reduction in good times. However, the educational results are sensitive and depend on the selection mechanism of finance ministers.

The paper is organised as follows: In the next section the relevant literature concerning the meaning of the minister of finance and the relevance of personal characteristics is reviewed. Section 3 describes the collected data and the estimation procedure. The results and further discussions are given in section 4, whereas concluding remarks are offered in section 5.

## **2 Relevance of the finance minister and personal characteristics**

Most of the public choice literature concerning the development of public finance refers to the role of institutions, political determinants or budgetary procedures. In the field of fiscal policy, however, the personal impact of the acting politicians is so far largely neglected. This is somewhat surprising given the growing number of studies concerning the personal impact of decision makers (discussed below).

With respect to the development of public debt, the meaning of the minister of finance is very important. In comparison with the remaining ministers in cabinet, the finance minister is the member of cabinet who has the strongest interest in sound public finance. In order to convince their voters and to enhance their re-election chances, each of the national spending ministers want to attract as much funds as possible. The finance minister's constituency, on the contrary, is the whole electorate instead of just one group of the society. Except from his original budget task there is no further particular area of responsibility. This dissolves his incentives to exploit pork barrel projects. The finance minister is thus the only minister who has personal incentives in sound public finance and has a comprehensive view on the budget. He is expected to act as the fiscal conscience of the government which also includes policies aimed at debt reducing or at least at debt retaining strategies. While the latter argument also holds true for the prime minister, the prime minister's function first and foremost is to be the head of government. With respect to budgetary outcomes instead of general policies, the minister of finance therefore is much more important in terms of a sustainable debt management. However, the interplay between a national finance minister and his prime minister is important and must be regarded as well.

The meaning of the finance minister is also stressed by the literature. Von Hagen (2002), Borge (2005) and Hallerberg et al. (2007) refer to the importance of a “strong minister of finance”. The strength of the finance minister thereby is derived from the budget process: A finance minister seems to be strong, if the delegation approach (i.e. the finance minister is vested with particular prerogatives) is used. Jochimsen and Nuscheler (2010) view a finance minister as strong if he belongs to the same party as the prime minister. They show that governments with weak finance ministers issue significantly more debt as compared to governments with strong finance ministers. In all these articles, however, the (personal) impact of a finance minister is derived from an institutional perspective and lacks the inclusion of personal characteristics of the respective incumbent.

Solely Jochimsen and Thomasius (2011) explicitly focus on the personal characteristics of finance ministers. The study refers to the personal impact of finance ministers on the development of public deficits in the Western German Länder from 1960 – 2009. The authors show that especially a finance minister’s former professional background, e.g. in the financial sector, leads to lower deficits. However, to the best of my knowledge there is no paper, which explicitly investigates the impact of personal characteristics of national finance ministers on the development of public debt. To shed light on this issue I employ three different types of personal characteristics: experience, education and ideology. The existing evidence concerning these indicators is discussed in the following.

#### (1) Experience

There are several studies in which measures of a politician’s experience are included. For instance, in a time-series analysis of fiscal policy for Switzerland, Feld and Schaltegger (2010) have used the time the finance minister has spent in office. They show that more experienced finance ministers increase the budget surplus and reduce government spending. The authors, however, do not find a significant impact of a finance minister’s experience on the development of public debt. With respect to the implementation of market liberalizing reforms, Dreher et al. (2009) also use the time the chief executive has been in office to measure experience. They find a negative impact, significant at the 10-percent level, meaning that the pace of implementing reforms decreases the longer the incumbent has spent in office.

Concerning the development of public debt, a finance minister’s experience should matter for several reasons. The more experienced a finance minister is, the better are his chances to influence policy decisions. As compared to a finance minister who is relatively inexperienced, a senior finance minister knows all about the tricks of his cabinet colleagues to attract more money. More experience thus strengthens the finance minister’s chances to resist spending pressures by his colleagues. Furthermore, a senior finance minister is well aware of the political snares in which an inexperienced colleague might entangle. This argument refers to both, the internal and the external competition: A finance minister has to convince his cabinet col-

leagues and the public. Thus, the greater his experience is, the greater should be his power of persuasion.

While there are several possibilities to measure experience, I have decided to use two different measures (explained below), which can be grouped in technical and political experience. Technical experience means experience in the field of fiscal policy, i.e. the finance minister's time to work in is reduced since he is well aware with the technical details. This also implies that he knows about the country's respective problems which facilitates both the possibilities to identify the causes of mounting debt and to develop starting points for solutions which are then capable of winning a majority. Political experience, by contrast, refers to a finance minister's knowledge about the political game being played. He knows about the political way of decision making, has knowledge in the field of media relations and communication to the public on the national level and is on familiar ground with political intrigues.

## (2) Education

The educational background of a finance minister is the second personal characteristic of interest. There are several studies investigating the impact of better trained and better educated politicians on policy outcomes. With respect to an economy's growth, Besley et al. (2011) have shown that having a better educated leader enhances a country's growth. As well as Jones and Olken (2005) the authors use random leadership transitions and show that the better (worse) educated a departing leader is, the lower (higher) is the growth of GDP after the leader transition. Results in a similar vein are given by Dreher et al. (2009). In their paper the authors investigate the impact of a political leader's profession and education on the implementation of market liberalizing reforms. In particular a leader's professional background, e.g. being a former entrepreneur, is a significant determinant in explaining a country's reform orientation. With respect to presidents of the United States, Congleton and Zhang (2009) show that higher educated presidents have a positive impact on the economy's growth. Referring to monetary policy, Göhlmann and Vaubel (2007) also underpin the impact of a central banker's former occupation on his inflation preferences. Especially former members of the central bank staff prefer lower inflation rates as compared to former politicians. These results are endorsed by Farvaque et al. (2009, 2011), who use more recent data.

The impact of an economic education has been shown by O'Roark and Wood (2011). The authors present evidence in the field of public policy and show that US congress members who are graduated economists are significantly less likely to vote for a minimum wage increase. Evidence in the same direction is presented by Heinemann et al. (2009). European Parliament members having an academic background in economics are more opposed to the introduction of an EU tax as compared to non-economic trained parliament members. Taken together, the evidence supports the assumption that a politician's educational background impacts on policy decisions.

With respect to fiscal policy, however, only few studies look at the educational impact of politicians on either the debt or deficit development. Somogyi (2011) investigates the personal impact of political leaders on public finance. Both the professional and educational background of national leaders in 22 OECD countries is used. The author shows that particularly former white collar workers minimize the public surplus. The same holds true for natural scientists and leaders with university degrees other than economics and law. By employing sub-national data for the German Länder, Hayo and Neumeier (2011) focus on the impact of the socio-economic status of prime ministers on fiscal performance. This socio-economic status is “determined by the individual’s endowment with certain resources and attributes considered as valuable by society” (Hayo and Neumeier, 2011, p. 9). This comprises, e.g., a person’s occupation and education, his income but also his prestige. Especially a politician’s parental status but also a variable indicating a status advancement prove to be highly significant in explaining the development of public expenditure and public deficit. The better a prime minister’s parental status but also his own status are, the lower is the public borrowing. However, the two last-named studies solely focus on the personal impact of the head of government. As explained before, there are good arguments supporting that the personal impact of the minister of finance should be even more important. Furthermore, if both impacts are investigated separately, the interaction of both the finance minister’s and the prime minister’s personal impact is also of great interest.

### (3) Ideology

The third personal characteristic concerns a finance minister’s ideology. Two theories can be consulted to shed light on this issue. On the one hand, the partisan approach supports the meaning of a party’s ideology, i.e. politicians implement those policies which correspond to their voter’s preferences. On the other hand, the political business cycle approach states that party ideology is rather negligible and party policies converge. This especially holds true before elections, i.e. to enhance their re-election chances both left-wing and right-wing parties are in favour of expansionary policies. However, the empirical evidence concerning these theories is mixed (for an overview of recent studies see Potrafke, 2012).

Concerning the partisan approach, there are good arguments supporting the assumption for the public spending to be higher if there is a left-wing government or a head of state with left ideology. For instance, it is commonly assumed that left-wing governments are more in favour of stabilization policies and redistribution whereas right-wing governments are rather fiscal conservatives and care about financial variables like price stability and small deficits (Cusack, 1997). If the public spending is higher for leftist governments, this should also have an effect on public deficits and public debt, i.e. the public debt should be higher for left-wing governments than for right-wing governments (Neck and Getzner, 2001). However, de Haan and

Sturm (1994, 1997) and Hahm et al. (1996) do not find a significant impact of ideology on public debt growth.

Turning to the theory of political business cycles, in two seminal theoretical contributions Alesina and Tabellini (1990) and Persson and Svensson (1989) have shown that the development of public debt might also be influenced by the re-election chances of the respective government. The “public debt can be used by a policymaker to influence the choices of its successors” (Alesina and Tabellini, 1990, p. 412) which may result in higher debt for right-wing as compared to left-wing-governments. Pettersson-Lidbom (2001, p. 582) supports these theoretical predictions empirically. He finds that right-wing governments increase “its level of debt by 15 percent, whereas a left-wing government decreases its debt by 11 percent, both believing that they will be replaced with certainty rather than remain in office with certainty”. This result might also be explained by the role of signalling information to the electorate. To enhance his general credibility, a politician might act in the opposite way as expected by his own constituency (Cukierman and Tommasi, 1998; for an empirical investigation see Tavares, 2004). Thus the predictions whether there is an impact of a finance minister’s ideology on the development of public finance are rather vague. The public debt might be higher if the finance minister is leftist, however, the public debt might also be lower as compared to centre- and right-wing politicians, because the finance minister wants to signal credibility to the whole electorate. It is thus important to control for both the ideological leaning and potential political business cycles. I will account for these issues in the regressions.

### **3 Data and Method**

#### ***3.1 Data, hypothesis and descriptive statistics***

I have created a unique dataset about different personal characteristics of national finance ministers. The data are collected for 15 Western-European countries (Austria, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom) and cover the time period 1980 – 2007. All personal data originate from research on official national websites, e.g. websites of national ministries of finance or parliamentary websites, and are matched with several macro-economic, structural and political data (explained below).

##### **(1) Experience measures**

The first personal characteristic of finance ministers refers to a finance minister’s experience. Like explained before, experience can be subdivided into technical and political experience. While technical experience refers to experience in the field of fiscal policy, political experi-

ence implies that the finance minister already understands the rules of the political game and knows about political snares. Taken together, both sorts of experience should facilitate a finance minister's chances to reduce public debt and to overcome political and public veto players. I therefore expect the change of the public debt to be negative the more experienced a finance minister is.

I have chosen two different indicators which are grouped in experience gained before and experience gained after a particular finance minister was appointed. Concerning the experience measure before appointment, I have created a variable indicating the number of years the finance minister has served as national spending minister in previous legislative periods (*ministerial experience*). The second indicator refers to experience gained after the appointment as minister of finance (*office experience*). It measures the years which a minister of finance has served as national finance minister at a particular point in time. The variable is continuous and increases by one for every additional year the finance minister has spent in office for at least eight months. If this was not the case, for instance because there was a change of incumbency, the variable remains constant. Further on there are finance minister who have left office but again have come into office after some waiting time. In these cases the initial value of the variable *office experience* for the second period is the highest value of *office experience* from the first period.

Concerning the distinction in technical and political experience, the underlying implications of both variables differ. The variable *ministerial experience* indicates political experience. The finance minister already knows how to act as a minister on the national level. He thus should be able to pursue his personal targets much easier as compared to other finance ministers without such experiences. On the contrary, the measure of *office experience* comprises both technical and political experience. With every additional year in office, the general understanding of the game played and the technical understanding concerning fiscal policy increases.

Descriptive statistics about the experience measures of finance ministers are shown in Table 1. The first column indicates the total number of finance ministers within the regarded period (1980 - 2007). As obvious, Luxembourg is different from other countries: Within the regarded 27 years there were only two ministers of finance. Except this particularity, there are further differences between the selected countries. While in the Netherlands, Germany and Spain only five or six different ministers served as finance minister, in France, Italy and Portugal 13, twelve and eleven finance ministers were at work. In the Scandinavian countries Norway, Sweden and Finland ten or nine finance ministers were needed. In the next two main-columns the two different measures of experience are shown. Looking at the experience as national minister before appointment as minister of finance, in each of the selected countries at least one finance minister has worked as national spending minister before his appointment. However, remarkable differences between the countries exist: In Denmark and Ireland, for in-

stance, all or nearly all finance ministers have served as national spending ministers before their appointment. On the contrary, in the Netherlands, Norway and the United Kingdom, only 20 to 30 percent of finance ministers have gained some ministerial experience before coming to office. The average years of former ministerial experience are also important. Finance ministers in the Netherlands have served as national cabinet member for nine years on average before becoming minister of finance. This is remarkable, especially concerning the rather low share of finance ministers with former ministerial experience. On the contrary, finance ministers in Austria and Portugal have only gained two years of cabinet experience before their appointment. The second measure of experience is depicted in column 3. The average time a national finance minister has spent in office per country is shown. Finance ministers in Italy, France, Portugal and Greece only gain experience of one or two years on average. On the contrary, finance ministers in the Netherlands, Germany or Spain work for five years on average.

**Table 1: Descriptive Statistics: Experience measures for Finance Ministers (1980 – 2007)**

	Finance Minister		Ministerial Experience			Avg. Office Experience
	Unit	Number	Number	Percent	Average (Years)	Years
Austria		9	4	44	2.0	4.1
Denmark		8	8	100	3.5	4.1
Finland		9	4	44	4.5	3.1
France		13	7	54	4.4	2.0
Germany		6	2	33	4.0	4.8
Greece		11	4	36	3.3	2.4
Ireland		10	9	90	4.7	2.6
Italy		12	6	50	2.7	2.1
Luxembourg		2	1	50	6.0	14.0
Netherlands		5	1	20	9.0	5.6
Norway		10	3	30	4.0	2.7
Portugal		11	3	27	2.0	2.4
Spain		6	2	33	5.5	4.7
Sweden		10	4	40	3.8	3.1
United Kingdom		7	2	29	5.0	3.4
Sample		129	60	47	-	-

Notes: The table refers to the period 1980 – 2007 and includes two different experience measures for finance ministers. Ministerial experience indicates that the finance minister has served as cabinet member in previous legislative periods. Office experience is a measure of the years the finance has stayed in office.

## (2) Educational variables

The second personal characteristic concerns the finance minister's educational background. With respect to debt reducing strategies, economists should have advantages compared to lawyers or finance ministers with other educational background. These advantages range from a faster identification of the problems to a better implementation of solution principles. Furthermore, based on personal reputation, there also might be communication advantages with

respect to the remaining cabinet members or to the public. I therefore expect the change of the public debt to be negative for finance ministers who have studied economics compared to lawyers.

Since most finance ministers in the regarded period have either studied economics, law or both economics and law, a further subdivision of the remaining educational categories is abortive. I have coded four different categories of education: *economic education*, *law education*, *other education* and *unknown education*. The variables are coded as dummy variables which equal one if the finance minister has an educational background in this course of study (zero otherwise). Students of business administration are coded as economists. *Other education* subsumes remaining (but known) university studies and further professional trainings. If a finance minister has studied both economics and law, he is denoted with an educational background in economics and an educational background in law, respectively.

Information about the educational background of the selected finance ministers is shown in Table 2. The first part of the table indicates the number of finance minister per educational category while the second part of the table gives information about percentage shares in relation to the overall number of finance ministers per country. As can be seen in the last line, nearly one half of the finance ministers have studied economics while there are equal shares of law and other education. Most of the finance ministers in Norway, the Netherlands, Austria and Denmark have studied economics as opposed to only 15 to 20 percent of finance ministers in France, Finland and Ireland. In Luxembourg both finance ministers have studied law. Concerning the remaining countries, ten to 20 percent of the finance ministers have studied law. The exception is the United Kingdom with a share of approximately 40 percent. Countries like Sweden and Finland further rely on finance ministers with educational background other than economics or law.

### (3) Ideological leaning

The third personal characteristic concerns a finance minister's ideology. Since the literature about the impact of (a government's) ideology on public debt is miscellaneous, no clear hypothesis can be drawn. One the one hand the public debt might be higher if the finance minister is leftist, on the other hand the public debt might be lower as compared to centre- and right-wing politicians, because the finance minister wants to signal credibility to the whole electorate. Thus, the answer whether and how a finance minister's ideology has an impact on the development of public debt remains to empirics. For the regressions, I use party affiliation as a proxy. The dummy variable *left ideology* is coded one if the finance minister is member of a left party (zero otherwise).<sup>1</sup> The data about a party's ideological leaning are taken from the DPI database (Beck et al., 2001).

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<sup>1</sup> Finance ministers who are independent are labelled to the ideological majority of the governing parties.

**Table 2: Descriptive Statistics: Educational Background of Finance Ministers (1980 – 2007)**

Country	Number of Finance Ministers	Number					Percent				
		Economic education	Law education	Economics and Law	Other education	Unknown education	Economic education	Law education	Economics and Law	Other education	Unknown education
Austria	9	7	2	0	0	0	78	22	0	0	0
Denmark	8	5	1	0	1	1	63	13	0	13	13
Finland	9	2	1	0	4	2	22	11	0	44	22
France	13	2	3	1	4	3	15	23	8	31	23
Germany	6	3	1	0	2	0	50	17	0	33	0
Greece	11	5	2	1	1	2	55	18	9	9	18
Ireland	10	2	3	0	5	0	20	30	0	50	0
Italy*	12	6	3	2	1	0	50	25	17	8	0
Luxembourg	2	0	2	0	0	0	0	100	0	0	0
Netherlands	5	4	1	0	0	0	80	20	0	0	0
Norway	10	4	2	1	3	0	40	20	10	30	0
Portugal	11	10	1	0	0	0	91	9	0	0	0
Spain	6	3	1	2	0	0	50	17	33	0	0
Sweden	10	3	1	0	6	0	30	10	0	60	0
United Kingdom	7	2	3	0	2	0	29	43	0	29	0
Sample	129	58	27	7	29	8	45	21	5	22	6

Notes: The table refers to the period 1980 – 2007 and includes the educational background for finance ministers per country.

\* Until 2001, several ministries in Italy were charged with financial topics (*Ministero delle Finanze*, *Ministero del Tesoro*, *Ministero del Bilancio e della Programmazione economica* and *Ministero delle Partecipazioni Statali*). Concerning the development of public debt, only the *Ministero del Tesoro* (Treasury) is decisive. Thus, all collected data for Italian ministers of finance refer to this ministry (Ministero dell'Economica et delle Finanze, 2001).

#### (4) Further variables

The selection of covariates is based on the literature on the determinants of public debt development (Roubini and Sachs, 1989b, a; Edin and Ohlsson, 1991; de Haan and Sturm, 1994, 1997; Hallerberg et al., 2007). Three different groups are distinguished: macro-economic, structural and political controls. These data are collected from various sources. A detailed description is given in the appendix (Table A 5).

Macro-economic controls include a country's *unemployment rate*, the *lagged debt level*, the *real growth of GDP* and the *real long term interest rates*. These variables are suspected to work as automatic stabilizers, i.e. a lower unemployment rate and a higher GDP growth should reduce public debt. The impact of the lagged debt level, however, is ex ante not that clear. While it captures the inter-temporal budget constraint, i.e. raising debt levels in the past should lead to declining levels in the future, there also might be some path dependency, causing persistent mounting debt levels. The same holds true for real long term interest rates.

Concerning the structural covariates, a country's *population* and a measure of a country's *openness* are included. *Openness* is defined as the sum of exports and imports as a share of GDP. Since more open countries benefit from greater global competitiveness, they should be less likely to suffer from global economic shocks. This should also have a negative impact on a country's debt growth. The effect of a greater population, on the contrary, is not that clear. Due to economies of scale, a rising population reduces per capita costs for public good provision and thus in the long run can reduce public debt. Going back to Brecht's law (1932), however, a rising population might also push public debt through rising spending pressure of the society.

Political controls are a dummy variable for *election years*, thus controlling for electoral cycles, a dummy variable for *EMU membership* and a measure of *government fragmentation*. As has been pointed out by Volkerink and de Haan (2001) and Perotti and Kontopoulos (2002), government fragmentation is an important determinant of explaining deficit growth. The more fragmented a government is, the higher is the growth of deficits. The evidence for electoral cycles is ambiguous: Shi and Svensson (2006) show, for instance, that the timing of elections impacts on budget deficits. The effects, however, are mostly driven by developing countries; see also Drazen (2001). Both variables are taken from the database of political institutions (DPI) provided by Beck et al. (2001). The dummy variable *election year* is equal to one if there was a legislative or executive election in a particular year. *Government fragmentation* is defined as the probability that two deputies picked at random from among the government parties will be of two different parties and is given in percent. Thus, the higher this share is, the more fragmented is the government. Finally, the dummy variable *EMU membership* captures the effect of EMU membership on the development of public debt growth.

The summary statistics for all variables are given in the appendix (Table A 1).

### 3.2 Estimation procedure

I estimate pooled time-series cross-section (panel data) regressions. The basic equation takes the following form:

$$(1) \quad \Delta CGD = \beta_0 + \beta_1 Experience_{i,t} + \beta_2 EducationalBackground_{i,t} \\ + \beta_3 LeftIdeology_{i,t} + \beta_4 Controls_{i,t} + TimeTrend_{i,t} + \alpha_i + \varepsilon_{i,t}$$

The dependent variable is the change of the central government debt (CGD) for country  $i$  in year  $t$  (instructed below). Due to a lack of data for the dependent variable, the sample is restricted to years after 1980 and ends in 2007 to avoid biases in line with the financial and debt crisis arising in 2008.<sup>2</sup> *Experience* is the vector of experience measures for finance ministers; *EducationalBackground* represents the set of different educational variables and *LeftIdeology* is the measure of a finance minister's ideology. *Controls* is the vector of the macroeconomic, political and structural control variables explained before. *TimeTrend* is a linear country specific time trend to control for changes of public debt per country over time whereas  $\alpha_i$  are fixed country effects and  $\varepsilon_{i,t}$  is the disturbance term. As estimation method I use OLS with country fixed effects and heteroscedasticity-corrected robust standard errors. The error terms are clustered on an individual level for each finance minister.

The focus of this research relies on the personal impact of finance ministers on the development of public debt. This development is measured as the change in the central government debt. It is given in percentage points ( $\Delta CGD_{i,t} = CGD_{i,t} - CGD_{i,t-1}$ ) whereas CGD is the ratio of a country's central government debt in percent of a country's GDP. The use of central government debt is straightforward: Since the impact of personal characteristics of finance ministers on public debt changes is investigated, the dependent variable should not be biased by influences not under direct control of the national finance minister. Using general public debt instead would bias the estimation, since the debt evolvement then is also influenced by subnational and local developments. Even if changes in general government debt are mainly influenced on the national level, using central government debt instead of general government debt should be the appropriate measure.

Due to national elections, in some years more than one minister of finance bears responsibility for public finance. Thus, the raw data for finance ministers are merely a cross-section instead of panel data. Hence, particular finance ministers must be excluded from the raw data to enable panel estimations. In the basic specification the algorithm is as follows: If the national finance minister within a particular year changes once, e.g. due to elections or for other rea-

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<sup>2</sup> Since the dependent variable is the change of central government debt, the first observation is in 1981.

sons, the finance minister who served longest remains in the dataset. If both finance ministers have served for six months, only the finance minister who served in the second half of the year is kept. This also holds if there is more than one change of incumbency of finance ministers within a particular year, i.e. only the finance minister who served longest is retained. An overview about the excluded ministers is given in the appendix (Table A 2).<sup>3</sup>

Due to missing observations for further variables, the final dataset is an unbalanced panel. In particular observations for the variables *central government debt* and *openness* are missing for some years in some countries. An overview about the included timespan per country is given in the appendix (Table A 3).

## 4 Results

### 4.1 The personal impact of finance ministers on public debt

Table 3 shows the results about the impact of personal characteristics of finance ministers on the development of public debt. In the first five columns the separate impact of the different personal characteristics is shown, while the joint impact of all variables is given in column 6.

Starting with the specific questions of this research, a finance minister's experience seems to have an impact on the development of public debt. Especially the years of experience a finance minister has gained as a national spending minister in previous legislative periods (*ministerial experience*) are decisive. With every year of additional former experience as cabinet member the debt to GDP ratio declines by approximately 0.28 percentage points (column 2). The impact further remains robust if other personal characteristics are included (column 6). Thus, a finance minister's political experience seems to be a crucial determinant concerning debt reducing strategies. There also is a debt reducing impact of a finance minister's *office experience*, i.e. the measure of experience gained in office as national finance minister. This variable is marginally significant and implies that the change of the debt to GDP ratio is negative and declines by 0.19 percentage points for every additional year of experience (column 1). However, the impact is not very robust, i.e. the significance of the variable is lost if either the second measure of experience (*ministerial experience*, column 3) or the full set of personal characteristics is included (column 6).

Turning to the educational variables, there is significant and robust evidence for a debt enhancing impact of finance ministers with an educational background in economics. Compared to finance ministers with other education than economics or law, former students of economics are responsible for positive changes of the debt to GDP ratio. If the finance minister is an

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<sup>3</sup> A second algorithm how to derive panel data is part of the robustness checks (explained below).

economist, the change of public debt is positive and on average 0.9 percentage points higher as compared to finance ministers with other education (column 4). On the contrary, finance ministers who have studied law have a debt reducing impact. Both measures of education are significant at the ten percent level and are further marginally insignificant if the full set of personal variables is included (column 6).

Concerning the ideological impact, a finance minister's ideological leaning has no significant impact on changes of a country's central government debt.

Turning to the set of covariates, most of the control variables are highly significant and impact on public debt as expected. Automatic stabilizers work: A decline of unemployment and a higher growth of real GDP reduce the budget deficit. Also the inter-temporal budget constraint holds: Higher debt levels in the past reduce debt evolvement in the future. Brecht's law is also underpinned: A rising population increases spending pressure and comes along with positive changes of public debt. Finally, the budget deficit increases if a country is member of the EMU but decreases, the more open a country is. There is no evidence concerning the existence of budget cycles (dummy variable *election year*) or with respect to an impact of government fragmentation.

**Table 3: The impact of personal characteristics of finance ministers on the change of public debt**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>CONTROLS</b>						
Unemployment rate	0.843*** [4.166]	0.898*** [4.440]	0.896*** [4.422]	0.871*** [4.372]	0.855*** [4.114]	0.929*** [4.521]
Lagged debt level	-0.158*** [-4.783]	-0.173*** [-5.415]	-0.175*** [-5.441]	-0.163*** [-5.281]	-0.158*** [-4.603]	-0.185*** [-5.729]
Real growth of GDP	-0.492*** [-3.104]	-0.488*** [-3.289]	-0.481*** [-3.184]	-0.469*** [-3.020]	-0.500*** [-3.206]	-0.459*** [-3.000]
Real long term interest rate	0.473*** [2.913]	0.511*** [3.338]	0.510*** [3.444]	0.326* [1.969]	0.456*** [2.701]	0.379** [2.594]
Population	0.954** [2.054]	0.852* [1.671]	0.935* [1.905]	0.769 [1.632]	0.825* [1.692]	0.842* [1.695]
Election year	0.400 [1.372]	0.369 [1.211]	0.405 [1.389]	0.400 [1.316]	0.362 [1.185]	0.452 [1.537]
Government fragmentation	0.0187 [1.172]	0.0194 [1.318]	0.0176 [1.197]	0.0215 [1.454]	0.0239 [1.453]	0.0203 [1.431]
Openness	-0.0543 [-1.334]	-0.0523 [-1.534]	-0.0563 [-1.627]	-0.0711* [-1.952]	-0.0478 [-1.204]	-0.0723** [-2.107]
EMU membership	1.935*** [2.833]	2.209*** [2.906]	2.197*** [3.066]	1.636** [2.386]	1.932*** [2.649]	1.937*** [2.831]
<b>FINANCE MINISTER</b>						
Office experience	-0.192* [-1.905]		-0.155 [-1.551]			-0.151 [-1.562]
Ministerial experience		-0.283*** [-3.569]	-0.261*** [-3.163]			-0.229** [-2.593]
Economic education				0.904* [1.841]		0.734 [1.622]
Law education				-0.785* [-1.970]		-0.586 [-1.589]
Unknown education				0.256 [0.483]		0.599 [0.950]
Left ideology					0.332 [0.820]	0.315 [0.880]
Constant term	-76.43** [-2.093]	-68.57* [-1.730]	-74.41* [-1.949]	-61.73 [-1.662]	-67.43* [-1.751]	-66.48* [-1.719]
Observations	301	301	301	301	301	301
R <sup>2</sup>	0.695	0.705	0.710	0.703	0.687	0.721
Adjusted R <sup>2</sup>	0.649	0.661	0.666	0.655	0.641	0.673
Cluster	87	87	87	87	87	87

Notes: The dependent variable is the change of a country's central government debt, measured in percentage points. The estimation method is OLS with country fixed effects. The t-statistics are given in brackets. A linear country specific time trend is included in all estimations. Standard errors are clustered at the individual level for each finance minister. Asterisks indicate significance at the 10(\*), 5(\*\*) and 1(\*\*\*) percent level. Base category for the educational variables is "other education".

## 4.2 Further discussion

However, the finance minister is not a single player. Although his position differs from other spending ministers, the finance minister is a member of the cabinet team which is headed by the prime minister. For this reason, the personal characteristics of the prime ministers could also have an impact on the development of public debt.<sup>4</sup> To solve this omitted variable problem, I have included the personal characteristics of a country's prime minister in the regressions. The data are coded in the same way as the finance minister data are. To measure a prime minister's experience, I use the years the prime minister has spent in office. The measure of this variable is identical to the measure of a finance minister's *office experience*, i.e. the variable increases by one for every additional year the prime minister spends in office. To measure a prime minister's ideology, I again use party affiliation as a proxy: The dummy variable *left ideology (PM)* is coded one, if the prime minister is a member of a left party (zero otherwise). Data for both variables are taken from the DPI database (Beck et al., 2001). Data about the prime minister's educational background are taken from Dreher et al. (2009). The authors provide dummy variables for seven different educational categories. To facilitate the comparison, the data are summarized to the four categories used before. That is, the categories "natural science", "political science", "other university" and "not university" are pooled as *other education (PM)*.

The results are presented in Table 4. The structure of the table is similar to Table 3, i.e. in the first columns the separate impact of the personal variables is shown whereas in the last column the joint impact of all variables is given. All estimations include the full set of macroeconomic, structural and political control variables as discussed before. Concerning the results, neither the sign nor the significance level of the covariates change. Due to space limitations, however, the covariates are not presented.<sup>5</sup>

In each column, the analogous personal characteristics of the finance minister and the prime minister are included. As can be seen, the final results for the experience measures of finance ministers are not affected. Especially the deficit reducing impact of a finance minister's *ministerial experience* remains. If only the measures of a finance minister's and a prime minister's office experience are included, there also is a marginal significant impact of a finance minister's experience (column 1). However, this impact dissolves if further personal characteristics are included.

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<sup>4</sup> First evidence concerning this impact is given by Somogyi (2010).

<sup>5</sup> The results are available upon request.

**Table 4: The impact of personal characteristics of finance ministers on the change of public debt: Additional control variables concerning the prime minister**

	(1)	(2)	(3)	(4)	(5)	(6)
CONTROLS	✓	✓	✓	✓	✓	✓
FINANCE MINISTER						
Office	-0.180*		-0.131			-0.0916
experience	[-1.705]		[-1.240]			[-0.931]
Ministerial		-0.299***	-0.278***			-0.274***
experience		[-3.932]	[-3.497]			[-3.136]
Economic				0.800		0.629
education				[1.490]		[1.298]
Law				-0.778*		-0.515
education				[-1.909]		[-1.416]
Unknown				0.274		1.024
education				[0.478]		[1.171]
Left ideology					0.571	0.680
					[1.298]	[1.585]
PRIME MINISTER						
Office	-0.0462	-0.104	-0.0812			-0.0673
experience (PM)	[-0.668]	[-1.460]	[-1.107]			[-0.937]
Economic				0.821*		0.788
Education (PM)				[1.897]		[1.638]
Law				0.235		0.520
education (PM)				[0.484]		[1.022]
Unknown				-0.752		-1.316*
education (PM)				[-0.841]		[-1.847]
Left ideology (PM)					-0.620	-0.682*
					[-1.341]	[-1.721]
Constant term	-77.17**	-71.20**	-75.58**	-65.30*	-76.69*	-81.21**
	[-2.173]	[-2.021]	[-2.125]	[-1.748]	[-1.886]	[-2.023]
Observations	301	301	301	301	301	301
R <sup>2</sup>	0.695	0.709	0.713	0.706	0.691	0.730
Adjusted R <sup>2</sup>	0.649	0.664	0.667	0.655	0.643	0.678
Cluster	87	87	87	87	87	87

Notes: The dependent variable is the change of a country's central government debt, measured in percentage points. The estimation method is OLS with country fixed effects. The t-statistics are given in brackets. A linear country specific time trend is included in all estimations. Standard errors are clustered at the individual level for each finance minister. Asterisks indicate significance at the 10(\*), 5(\*\*) and 1(\*\*\*) percent level. Base category for the educational variables is "other education". The full set of macro-economic, structural and political control variables is included. The additional control variables "Prime minister" all refer to the country's prime minister.

Concerning the educational variables, the significant impact of a finance minister's economic education reduces, if variables about the prime minister's educational background are included (column 4). On the contrary, a prime minister's economic education seems to be important. The effect is similar to the impact of finance ministers: If a prime minister has studied economics, the change of public debt is positive and higher as compared to prime ministers with other education (column 4). However, the prime minister's impact also becomes marginally insignificant, if the full set of personal characteristics is included (column 6). Concerning a legal educational background, the debt reducing impact of finance ministers remains. The change of public debt is negative and higher as compared to finance ministers with other educational background than law or economics (column 4). The effect, however, becomes marginally insignificant, if all personal characteristics are included (column 6). A prime minister's ideology also seems to be important. If I control for the full set of variables, there is evidence that the budget deficit is smaller, if the prime minister is member of a left party. The contrasting effect occurs concerning the finance minister, i.e. there is a positive change of public debt. However, the effect is slightly insignificant (column 6).

The results thus indicate that both the personal characteristics of the finance minister and the prime minister matter. If I control for the personal impact of both politicians, especially a finance minister's former ministerial experience seems to be decisive concerning the development of public debt. This supports the before mentioned assumption that primarily politicians who have a sound understanding of the political game are able to retain their personal impact on policy decisions.

Further questions now concern possible interaction effects. I have created several interaction terms which refer to a finance minister's *ministerial experience* and education. The results are shown in Table 5. Again both the personal variables of the finance ministers and those of the prime ministers are included. In addition, each column contains an interaction term. In the first three columns, the interaction effects of an economic education of finance ministers with two macro-economic controls (*unemployment rate* and *real GDP growth*) and the *economic education* of the prime minister are shown. The next three columns contain similar interaction terms for prime ministers with legal education. As can be seen in the first two columns, there is significant evidence for an interplay of a finance minister's economic education and automatic stabilizers. If the unemployment rate increases, the positive change of public debt is smaller if the finance minister is an economist as compared to a finance minister with other education (column 1). A similar result occurs concerning the real growth of GDP. The negative change of the debt to GDP ratio in line with rising real GDP growth is larger if the finance minister is an economist (column 2). Taken together, the economic education of finance ministers pays off: Finance ministers who have studied economics retain excessive debt growth in bad times but enhance debt reduction in good times. The opposite occurs concerning finance ministers with legal education. An increase in real growth of GDP leads to smaller

negative changes of the debt to GDP ratio, if the finance minister has a legal background (column 5). However, there is no significant impact concerning the unemployment rate (column 4). With respect to the educational background of both the finance minister and the prime minister, there is no significant interaction effect of economists (column 3). If, by contrast, both the finance minister and the prime minister have a legal background, the negative change of the debt to GDP ratio enlarges (column 6).<sup>6</sup>

Further tests concerning the sensitivity of the results refer to the selection of the finance ministers, i.e. the coding scheme presented above. To derive panel data, particular finance ministers must be excluded from the regressions. If there is one or more change of incumbency within a year, the finance minister who has not served longest is excluded from the data. Changes of this algorithm therefore could have an impact on the final results. I have checked for this by using another algorithm referring to the start of incumbency: If a finance minister was in office on January, 1, the respective year is completely ascribed to this minister. Thus, all finance ministers who came to office later in the same year are excluded. Especially the significant positive impact of the measure of former ministerial experience remains while the significant impact of the educational variables is lost. The results are presented in the appendix (Table A 5). Nonetheless it is important to stress the disadvantage of the second algorithm: Only finance ministers who are appointed on January, 1 are included. The algorithm, however, does not control for the particular impact of the respective ministers. If a finance minister was voted out of office in March, his personal impact in the respective year should be very low or even non-existing. I therefore strongly prefer the first algorithm.

Further tests now concern an indicator about the strength of the finance minister. Like it is done by Jochimsen and Nuscheler (2010), I have coded a dummy variable indicating that the finance minister belongs to the same party as the prime minister. However, contrary to the findings of Jochimsen and Nuscheler (2010) for the German subnational level, this measure of a finance minister's strength has no impact on public debt changes on the national level.<sup>7</sup> The results are not shown but are available upon request.

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<sup>6</sup> Further interaction terms refer to a finance minister's ministerial experience and macro-economic controls and educational variables. However, none of these interactions have any significant impact on changes of public debt. The results are presented in the appendix (Table A 4).

<sup>7</sup> Jochimsen and Thomasius (2011) have also controlled for gender effects. However, only five female finance ministers are kept in the data in the regarded period, which results in too little information to control for gender effects.

**Table 5: The impact of personal characteristics of finance ministers on public debt: Interaction effects**

	(1)	(2)	(3)	(4)	(5)	(6)
CONTROLS	✓	✓	✓	✓	✓	✓
Unemployment rate	1.224*** [6.072]	0.921*** [4.790]	0.975*** [4.926]	1.003*** [4.893]	0.958*** [4.603]	0.990*** [4.947]
Real growth of GDP	-0.386*** [-2.805]	-0.217 [-1.654]	-0.427*** [-2.860]	-0.441*** [-2.986]	-0.559*** [-3.184]	-0.445*** [-3.025]
FINANCE MINISTER						
Office experience	-0.126 [-1.254]	-0.0875 [-0.943]	-0.0970 [-0.957]	-0.0940 [-0.959]	-0.0809 [-0.837]	-0.0911 [-0.985]
Ministerial experience	-0.299*** [-3.198]	-0.310*** [-3.483]	-0.273*** [-3.124]	-0.278*** [-3.128]	-0.273*** [-3.165]	-0.296*** [-3.323]
Economic education	3.194*** [2.976]	2.056*** [2.985]	0.705 [1.320]	0.702 [1.360]	0.640 [1.306]	0.822 [1.606]
Law education	-0.500 [-1.388]	-0.455 [-1.229]	-0.572 [-1.487]	0.174 [0.181]	-1.513** [-2.499]	0.131 [0.350]
Unknown education	0.191 [0.191]	1.346 [1.622]	1.031 [1.180]	1.018 [1.146]	1.109 [1.237]	1.509* [1.744]
Left ideology	0.778* [1.694]	0.577 [1.312]	0.660 [1.521]	0.666 [1.552]	0.682 [1.618]	0.541 [1.280]
PRIME MINISTER						
Office experience (PM)	-0.0403 [-0.572]	-0.0849 [-1.208]	-0.0635 [-0.882]	-0.0639 [-0.910]	-0.0600 [-0.838]	-0.0654 [-0.932]
Economic Education (PM)	0.495 [0.932]	0.720 [1.448]	1.210* [1.672]	0.785 [1.610]	0.653 [1.320]	0.766 [1.607]
Law education (PM)	0.834* [1.671]	0.369 [0.739]	0.516 [1.016]	0.492 [0.978]	0.481 [0.974]	1.077* [1.808]
Unknown education (PM)	-2.236*** [-3.163]	-1.097 [-1.543]	-1.206 [-1.529]	-1.137 [-1.409]	-1.543** [-2.341]	-1.348** [-1.989]
Left ideology (PM)	-0.351 [-0.923]	-0.584 [-1.456]	-0.659 [-1.632]	-0.642 [-1.527]	-0.737* [-1.852]	-0.549 [-1.291]
INTERACTION TERMS						
Economic Educ. × Unemployment	-0.364** [-2.622]					
Economic Educ. × Real Growth		-0.499*** [-2.956]				
Economic Educ. × Economic (PM)			-0.585 [-0.622]			
Law Education × Unemployment				-0.0766 [-0.699]		
Law Education × Real Growth					0.388* [1.980]	
Law Education × Law (PM)						-1.901** [-2.587]
Constant term	-53.28 [-1.591]	-63.09* [-1.701]	-81.67** [-2.031]	-74.34* [-1.918]	-84.67** [-2.203]	-63.07 [-1.591]
Observations	301	301	301	301	301	301
R <sup>2</sup>	0.742	0.742	0.731	0.731	0.736	0.738
Adjusted R <sup>2</sup>	0.690	0.690	0.677	0.678	0.683	0.685
Cluster	87	87	87	87	87	87

Notes: The dependent variable is the change of a country's central government debt, measured in percentage points. The estimation method is OLS with country fixed effects. The t-statistics are given in brackets. A linear country specific time trend is included in all estimations. Standard errors are clustered at the individual level for each finance minister. Asterisks indicate significance at the 10(\*), 5(\*\*) and 1(\*\*\*) percent level. Base category for the educational variables is "other education". The full set of macro-economic, structural and political control variables is included. Coefficients for the unemployment rate and real GDP growth are given for interpretation. The additional control variables "Prime minister" all refer to the country's prime

Two limitations of this study should be stressed. First, both the hypothesis and the final results include assumptions concerning a desirable development of public debt, i.e. rising budget surpluses and declining levels of public debt are judged as valuable for the society. While there are many arguments supporting this value judgement (think e.g. of the problems in line with the debt crisis starting 2008), there also are arguments backing the contrasting view. That is, even if a finance minister confines excessive spending by his colleagues, he might prefer a moderate advance of public debt to meet the society's preferences. Second, there might be confounding effects concerning the educational results. Especially economists could be nominated in the face of rising debt. I have controlled for this issue by comparing the means of  $\Delta$ CGD only for cases in which the finance minister has changed. The results are shown in Table 6. In the first main column only cases in which the finance minister changed from a minister with legal or other educational background to a finance minister with an educational background in economics are regarded. The second column, by contrast, indicates the mean values of the change of central government debt if both the incumbent and his predecessor have studied economics. The results do not support the argument of a simultaneity bias. The mean values of  $\Delta$ CGD are lower, if the finance minister changes from a legal or other educational background to an economist as compared to a change from an economist to an economist. However, these results might be also driven by the number of observations.

**Table 6: Comparison of mean values of  $\Delta$ CGD if the finance minister changes**

	Law/Other to Economist		Economist to Economist	
	Observations	Mean	Observations	Mean
$\Delta$ CGD	6	-1.242	44	0.518
Lagged $\Delta$ CGD	6	-0.238	42	1.128

Notes: Only cases in which the finance minister changes are regarded. The first category refers to the predecessor while the second category indicates the new incumbent.

## 5 Conclusion

Answers to the question whether and how personal characteristics of finance ministers affect the development of public debt are important and set strong policy guidelines concerning a finance minister's appointment. A unique dataset about personal characteristics of national finance ministers in 15 Western-European countries is used to shed light on this issue. In particular I have included three different personal characteristics of national finance ministers which account for a finance minister's experience, his educational background and his ideological leaning. The results show that especially a finance minister's experience but also his education affect the development of public debt.

Concerning a finance minister's experience, especially a measure of political experience proves to be important. The more political experience a finance minister has gained as national minister in other ministries before his appointment, the lower is the budget deficit. The same holds true for a finance minister's experience in office, i.e. the change of public debt is negative for every additional year the finance minister spends in office. However, this latter indicator is highly sensitive and depends on the selection of covariates.

With respect to education, a difference between economists and finance ministers with legal background exists. Compared to finance ministers with an educational background different from law and economics, economists are responsible for positive changes of the debt to GDP ratio. The opposite occurs concerning finance ministers with a legal background.

A finance minister's ideology, by contrast, has no impact on public debt changes. The results further remain if I control for the personal characteristics of the respective prime minister. As similar to finance ministers who are economists, prime ministers with an economic background are responsible for higher budget deficits. However, the effects are only slightly significant. A prime minister's experience in office, by contrast, has no significant impact. Taken together the results suggest that the personal impact of both politicians is important, whereas especially a finance minister's political experience seems to be decisive.

The study's limitations concern possible confounding effects with respect to the educational variables and value judgements about a desirable development of public debt. If especially economists are appointment in times of severe fiscal stress, the impact of the educational variables could be biased. The comparison of the mean values of the change of central government debt if the finance minister changes, however, does not suggest a simultaneity bias. Nonetheless, the positive changes of public debt for finance ministers with economic background might simply reflect voter's preferences. This then partially contradicts the underlying assumption that finance ministers aim at retaining public debt growth.

Except these limitations and concerning the overall message of this paper, if a country suffers from excessive debt levels, the prime minister is well-advised to appoint a politically well experienced finance minister to reduce the country's debt service.

## Appendix

**Table A 1: Summary Statistics**

VARIABLES	Obs.	Mean	Std. Dev.	Min.	Max.
<b>DEPENDENT VARIABLE</b>					
Change Central Gov. Debt	301	0.177	3.813	-9.510	17.72
<b>CONTROL VARIABLES</b>					
Unemployment rate	301	7.609	4.367	1.5	24.1
Lagged debt level	301	48.931	25.672	0.82	113.67
Real growth of GDP	301	2.832	2.077	-6.01	11.46
Real long term interest rate	301	3.853	1.986	-2.31	9.05
Population	301	25.553	26.385	0.403	82.534
Election year	301	0.299	0.4585	0	1
Government fragmentation	301	32.125	23.432	0	72.786
Openness	301	81.233	53.939	22.658	341.287
EMU membership	301	0.3222	0.468	0	1
<b>FINANCE MINISTER</b>					
<i>Experience</i>					
Office experience	301	3.372	2.974	0	18
Ministerial experience	301	2.043	2.614	0	10
<i>Education</i>					
Economic education	301	0.522	0.501	0	1
Law education	301	0.296	0.457	0	1
Other education	301	0.236	0.425	0	1
Unknown education	301	0.010	0.010	0	1
<i>Ideology</i>					
Left ideology	301	0.488	0.501	0	1
<b>PRIME MINISTER</b>					
<i>Experience</i>					
Office experience (PM)	301	4.226	3.269	1	16
<i>Education</i>					
Economic education (PM)	301	0.183	0.387	0	1
Law education (PM)	301	0.326	0.469	0	1
Other education (PM)	301	0.385	0.487	0	1
Unknown education (PM)	301	0.013	0.114	0	1
<i>Ideology</i>					
Left ideology (PM)	301	0.468	0.499	0	1

**Table A 2: Excluded ministers of finance**

Country	Name	Education	Start Office	End Office
France	Jean-Louis Borloo	Economics/Law	18.05.2007	19.06.2007
France	Christian Sautter	Unknown	02.11.1999	28.03.2000
France	Hervé Gaymard	Law	30.11.2004	25.02.2005
France	Alain Madelin	Law	18.05.1995	25.08.1995
Germany	Oskar Lafontaine	Other	27.10.1998	18.03.1999
Greece	Antonis Samaras	Economics	02.07.1989	12.10.1989
Greece	Georgios Agapitos	Economics	13.02.1990	11.04.1990
Greece	Ioannis Pottakis	Unknown	09.09.1983	27.03.1984
Greece	Agamemnon Drettakis	Unknown	28.06.1982	05.07.1982
Greece	Georgios Souflias	Other	23.11.1989	13.02.1990
Greece	Georgios Gennimatas	Other	13.10.1993	25.02.1994
Ireland	Charles Haughey	Law	07.11.1991	14.11.1991
Ireland	Gene FitzGerald	Unknown	16.12.1980	30.06.1981
Italy	Berlusconi Silvio	Law	04.07.2004	16.07.2004
Netherlands	G.M.V. van Aardenne	Other	22.02.1980	04.03.1980
Netherlands	J.F. Hoogervorst	Economics	22.07.2002	27.05.2003
Portugal	Guilherme d'Oliveira Martins	Law	03.07.2001	06.04.2002
Portugal	António Bagão Félix	Economics	17.07.2004	12.03.2005
Portugal	Luís Campos e Cunha	Economics	12.03.2005	21.07.2005
Sweden	Odd Engström	Unknown	16.02.1990	27.02.1990

Notes: Summary of finance ministers per country who are excluded from the raw data to obtain panel data. A finance minister was excluded if there was one or more change of incumbency per year and the finance minister has not served for at least eight months or if there were more than one change per year and the finance minister has not served longest as compared to the remaining ministers.

**Table A 3: Included Time Series (Baseline regression)**

Country	Included Period		Number of Observations	Number of Finance Ministers
	Start	End		
Austria	1981	2007	27	8
Denmark	1990	2007	18	4
Finland	1991	2007	17	5
France	1993	2007	15	8
Germany	1981	2007	27	6
Greece	1998	2007	10	3
Ireland	1990	2007	18	5
Italy	1981	2007	27	11
Luxembourg	1994	2007	14	1
Netherlands	1981	2007	27	5
Norway	1983	2007	25	9
Portugal	1995	2007	13	5
Spain	1981	2007	27	6
Sweden	1981	2007	27	9
United Kingdom	1999	2007	9	2
Sample	1981	2007	301	87

**Table A 4: The impact of personal characteristics of finance ministers on public debt: Further interaction terms**

	(1)	(2)	(3)	(4)	(5)
CONTROLS	✓	✓	✓	✓	✓
FINANCE MINISTER					
Office	-0.0916	-0.0977	-0.0605	-0.0959	-0.0939
experience	[-0.931]	[-0.916]	[-0.587]	[-0.970]	[-0.949]
Ministerial	-0.274***	-0.306***	-0.358**	-0.106	-0.245**
experience	[-3.136]	[-2.792]	[-2.564]	[-0.521]	[-2.408]
Economic	0.629	0.526	0.670	0.636	0.619
education	[1.298]	[0.960]	[1.422]	[1.303]	[1.273]
Law	-0.515	-0.513	-0.896**	-0.522	-0.511
education	[-1.416]	[-1.405]	[-2.077]	[-1.477]	[-1.402]
Unknown	1.024	1.056	1.374	0.987	1.004
education	[1.171]	[1.172]	[1.411]	[1.120]	[1.177]
Left ideology	0.680	0.679	0.635	0.795*	0.683
	[1.585]	[1.586]	[1.507]	[1.765]	[1.584]
PRIME MINISTER					
Office	-0.0673	-0.0664	-0.0662	-0.0541	-0.0662
experience (PM)	[-0.937]	[-0.915]	[-0.921]	[-0.758]	[-0.924]
Economic	0.788	0.756	0.956*	0.750	0.749
Education (PM)	[1.638]	[1.532]	[1.715]	[1.573]	[1.558]
Law	0.520	0.532	0.567	0.497	0.527
education (PM)	[1.022]	[1.019]	[1.095]	[0.964]	[1.049]
Unknown	-1.316*	-1.342*	-1.215	-1.444*	-1.309*
education (PM)	[-1.847]	[-1.902]	[-1.590]	[-1.981]	[-1.732]
Left ideology (PM)	-0.682*	-0.665*	-0.795*	-0.638	-0.671*
	[-1.721]	[-1.675]	[-1.965]	[-1.645]	[-1.681]
INTERACTION TERMS					
Ministerial Exp.	0.0580				
× Economic Educ.	[0.371]				
Ministerial Exp.		0.238			
× Law Educ.		[1.315]			
Ministerial Exp.			-0.0233		
× Unemployment			[-1.047]		
Ministerial Exp.				-0.00456	
× Real Growth				[-0.103]	
Left Ideology (PM)					-1.149
× Left Ideology					[-0.932]
Constant term	-78.84**	-70.06*	3.922	-81.87**	-81.74**
	[-2.019]	[-1.747]	[0.882]	[-2.036]	[-2.040]
Observations	301	301	301	301	301
R <sup>2</sup>	0.731	0.732	0.732	0.730	0.732
Adjusted R <sup>2</sup>	0.677	0.679	0.679	0.676	0.678
Cluster	87	87	87	87	87

Notes: The dependent variable is the change of a country's central government debt, measured in percentage points. The estimation method is OLS with country fixed effects. The t-statistics are given in brackets. A linear country specific time trend is included in all estimations. Standard errors are clustered at the individual level for each finance minister. Asterisks indicate significance at the 10(\*), 5(\*\*) and 1(\*\*\*) percent level. Base category for the educational variables is "other education". The full set of macro-economic, structural and political control variables is included. The additional control variables "Prime minister" all refer to the country's prime minister.

**Table A 5: The impact of personal characteristics of finance ministers on public debt: Alternative selection of finance ministers**

	(1)	(2)	(3)	(4)	(5)	(6)
CONTROLS	✓	✓	✓	✓	✓	✓
FINANCE MINISTER						
Office	-0.0980		-0.0435			-0.00190
experience	[-0.852]		[-0.376]			[-0.0176]
Ministerial		-0.350***	-0.344***			-0.364***
experience		[-4.384]	[-4.320]			[-4.164]
Economic				0.800		0.748
education				[1.274]		[1.370]
Law				-0.403		0.0310
education				[-0.875]		[0.0848]
Unknown				0.148		0.987
education				[0.220]		[0.990]
Left ideology					0.161	0.585
					[0.328]	[1.442]
PRIME MINISTER						
Office	-0.0582	-0.107	-0.0991			-0.105
experience (PM)	[-0.908]	[-1.564]	[-1.404]			[-1.589]
Economic				0.807		0.919
Education (PM)				[1.524]		[1.508]
Law				0.231		0.536
education (PM)				[0.464]		[1.062]
Unknown				-0.839		-1.434**
education (PM)				[-1.065]		[-2.210]
Left ideology (PM)					-0.494	-0.659
					[-0.980]	[-1.501]
Constant term	-71.00*	-60.36	-60.47	-67.36	-78.06*	-71.15*
	[-1.857]	[-1.575]	[-1.581]	[-1.645]	[-1.796]	[-1.686]
Observations	301	301	301	301	301	301
R <sup>2</sup>	0.690	0.716	0.716	0.700	0.688	0.730
Adjusted R <sup>2</sup>	0.643	0.672	0.671	0.648	0.640	0.677
Cluster	88	88	88	88	88	88

Notes: The dependent variable is the change of a country's central government debt, measured in percentage points. The estimation method is OLS with country fixed effects. The t-statistics are given in brackets. A linear country specific time trend is included in all estimations. Standard errors are clustered at the individual level for each finance minister. Asterisks indicate significance at the 10(\*), 5(\*\*) and 1(\*\*\*) percent level. Base category for the educational variables is "other education". The full set of macro-economic, structural and political control variables is included. The additional control variables "Prime minister" all refer to the country's prime minister.

Alternative selection approach: Only finance ministers who were in office on January, 1 are kept in the data.

**Table A 6: Variable Description**

Variable	Description	Source
$\Delta$ CGD	Change of central government debt in percent of national GDP (given in percentage points).	OECD
Unemployment rate	Ratio of number of persons unemployed and the number of persons in the labor force (percent). The unemployment rate as defined above is not (or only partial) available for France, Ireland, Luxembourg, the Netherlands and Portugal. For these countries, the harmonized unemployment rate (unemployed persons as a percentage of the civilian labor force) is used (percent).	OECD
Lagged debt level	Lagged level of central government debt in percent of GDP (percent).	OECD
Real growth of GDP	Growth rate of real GDP (percent).	OECD
Real long term interest rate	Real long term interest rate based on Fisher equation: Long term interest rate – inflation rate (percent).	Own computation based on OECD
Population	Population (per million inhabitants).	OECD
Government fragmentation	Government fragmentation: “The probability that two deputies picked at random from among the government parties will be of different parties” (percent), Beck et al. (2001).	DPI
Openness	Sum of exports and imports as a share of GDP, all measured in US \$, constant prices, constant PPPs, OECD base year (percent).	OECD
Election year	Dummy variable = 1 if there was a legislative or executive election in this year (zero otherwise).	DPI
EMU membership	Dummy variable = 1 for every year the country is a member of the European Monetary Union.	Own computation
Office experience	Experience of the minister of finance measured as the time in office as finance minister: plus one, if the minister has served for at least seven months (years).	Various sources
Ministerial experience	Experience, measured in years, a finance minister has gained as a nation cabinet member before appointment as national finance minister (years).	Various sources
Economic education	Dummy variable = 1 if the minister of finance has either economical background or educational background in business administration (zero otherwise).	Various sources
Law education	Dummy variable = 1 if the minister of finance has legal educational background (zero otherwise).	Various sources
Other education	Dummy variable = 1 if the minister of finance has known but other than legal or economical educational background (zero otherwise).	Various sources
Unknown education	Dummy variable = 1 if the educational background of the minister of finance is unknown (zero otherwise).	Various sources
Left ideology	Dummy variable = 1 if the minister of finance is a member of a left oriented party.	Tsebelis (2002)
Office experience (PM)	Experience of the prime minister measured as the time in office: plus one, if the chief executive officer was in office on January 1 or was elected, but had not taken office as of January 1 (years).	DPI
Economic education (PM)	Dummy variable = 1 if the prime minister has either an economical background or educational background in business administration (zero otherwise).	Dreher et al. (2009)
Law education (PM)	Dummy variable = 1 if the prime minister has legal educational background (zero otherwise).	Dreher et al. (2009)
Other education (PM)	Dummy variable = 1 if the prime minister has known but other than legal or economical educational background	Dreher et al. (2009)
Unknown education (PM)	Dummy variable = 1 if the educational background of prime minister is unknown (zero otherwise).	Dreher et al. (2009)
Left ideology (PM)	Dummy variable = 1 if the prime minister is a member of a left oriented party.	DPI

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