

Individuals Vs. Institutions. The Impact of Political Leaders' Education and Profession on Public Deficits

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Abstract

Political economy explanations of public debt and deficit policy have a tradition of more than 30 years, and research in this field did not cease so far. Yet, international differences in public debt and deficit still remain unexplained in considerable parts. While most of the literature concentrates on differences in political and budget institutions in order to explain debt and deficit differences, the original contribution of our paper is to shift focus to the personal characteristics of political agents, i.e. their expertise, their political experience, their political attitudes, preferences, values etc. We show that the personal background of a political leader considerably contributes to the explanation of his/her respective deficit policy. For instance, those political leaders who have been professional science economists before becoming politicians generate significantly *higher* deficits than the average. Also, whole work life politicians (i.e. leaders who have been professional politicians for their whole work life) with law education generate significantly higher deficits than whole work life politicians with other educational background.

JEL Codes: D72, E62, H62, I21

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Introduction

The political economy literature on public debt and deficits has so far concentrated on two main aspects: political actors and political institutions. While early contributions to the literature have mainly concentrated on the self-interest of political actors, relatively soon the focus shifted towards the analysis of political institutions. However, the politico-economic literature can only claim partial success in explaining public deficits and public debt. Therefore, we take a step further by going back to start, that is, we focus on political actors. In the early papers, differences in preferences and strategic interaction between political actors played a major role in explaining the emergence and persistence of public deficits. Differing preferences were, however, not explained, but merely assumed. In this paper, we argue that one source of different preferences lies in the different socialization of policymakers, which is reflected by their education and profession. We test for our hypotheses using pooled time-series cross-section (panel) data for 22 OECD countries for the period of 1970-2004.

The relationship between a person's education and his or her behavior in economic decision making has been studied by Frank, Gilovich, and Regan (1993, 1996), Frey, Pommerehne, and Gygi (1993), Frey and Meier (2003) and Rubinstein (2006). Frank et al. (1993) report evidence that students of economics tend to be more selfish and less cooperative than students of other faculties. In a natural experiment, Frey and Meier (2003) find substantial differences in donation behavior between students of various faculties. However, they find that it is not economists, but business students that are more selfish. In addition, they find that these differences are not due to a brainwash during the studies, but due to a self-selection of selfish people into the respective fields of study. Rubinstein (2006) conducts a survey among students of four different faculties at Tel Aviv University, among readers of an Israeli business newspaper and among Harvard PhD students, finding strong differences in attitudes towards profit maximization and firing workers between students and former students of different faculties.

Such differences in behavior might of course not only be limited to current or recent students, but are likely to remain during the lifetime of a person. In addition to the education, other influences might shape a person's preferences and attitudes, a clear candidate being the profession the person exerts after receiving his education.

In this paper, we make use of this circumstance in order to find a new explanation for international differences in public finance. In most early contributions to the literature on public deficits and debt, preferences of and strategic interaction between political actors play a major role. Wagner (1976) and Buchanan and Wagner (1977) argue that voters overestimate the value of (current)

government expenditure and underestimate the future tax burden. To win the favor of voters, opportunistic incumbents will hence run deficits to finance current overspending.

A related inter-temporal approach is taken by Browning (1975), Tabellini (1991, 2000) and Cukierman and Meltzer (1989), who argue that current generations vote in favor of issuing government debt, which has to be repaid by generations that do not yet take part in the voting process.

A strategic interaction approach is taken by Persson and Svensson (1989), Alesina and Tabellini (1990), and Tabellini and Alesina (1990). They argue that policymakers strategically issue debt in order to tie the hands of a possible successor from another party, leading to an overissuance of debt compared to what would be optimal. In a similar approach, Aghion and Bolton (1990) argue that policymakers make strategic use of debt policy to endogenously affect election outcomes. The idea is that by influencing the economic environment that an opponent will inherit after an election, the incumbent can affect the electorate's expectation of macroeconomic performance under that opponent, which in turn influences the election probability of the opponent.

Institutional aspects are highlighted in the seminal contribution by Alesina and Drazen (1991), who argue that disagreement between groups about the burden of taxation leads to persistent and probably worsening deficits. The model was extended by Spolaore (1993), who shows that coalition governments would delay fiscal adjustment relative to single party governments. In addition, he finds that this inefficiency is increasing in the number of parties in the government. However, Drazen (2000) argues that the effect could go either way, as a larger number of parties in the government gives way to the formation of sub-coalitions. Roubini and Sachs (1989) argue that coalition members have different constituencies with possibly divergent interests. They face a prisoner's dilemma with respect to budget cuts: all the partners prefer comprehensive budget cuts with respect to the continuing large deficits; however, each of them has an incentive to protect a particular part of the budget from cuts. The non-cooperative solution prevails over the cooperative one and therefore the budget does not get adjusted.

Similar results on the sources of government deficits and persistent growth of public debt are found in common property (pork barrel) models¹, where interest groups try to expend resources to try to get a larger share of some common property. Both approaches, war-of-attrition and common property, have the theoretical implication that the severity of deficit and debt rises in the amount of political fragmentation and polarization both within the government and the whole legislative, in the number of spending ministers and in the number of parties in the coalition, and decreases vice

¹ E.g. Velasco (1998).

versa in the strength of the finance minister and the strength of the government versus the parliament.

Empirical evidence on these and other institutional variables, such as the number of government lawyers, differences between presidential and parliamentary systems or federal vs. centralistic states, is however rather weak and mixed.² Franzese (2001) argues that all politico-economic approaches taken together can only explain about 50 per cent of international differences in government debt. This leaves a lot of room for new explanations, and finding a new explanation for variations in fiscal policy is the task of this paper.

We argue that the socialization, the character and preferences – short: the personality – of policymakers, shaped by their education and profession, is a key determinant of fiscal performance. Employing panel data over the period 1970-2004, we present empirical evidence based on the Dreher et al. (2006) data set covering profession and education of political leaders prior to entering office from 22 OECD countries. In a nutshell, our results show that compared to professional politicians, economic scientists, union executives and blue collar workers generate significantly higher deficits. The result for economic scientists is found to be driven by economists that are members of left wing parties.

The paper proceeds as follows: the next section presents theory and hypotheses. In section 3, we give a detailed explanation of our data and empirical strategy. The results of our regressions are discussed in the fourth section. Section 5 concludes.

Theory and Hypotheses

How far did researchers really get with explaining public debt and deficit? The disappointing answer is: although politico-economic explanations of public finance have a relatively long tradition – the first papers date back more than 30 years – and research in this field did not cease so far, international and time differences in public debt and deficit still remain unexplained in considerable parts.

The classical research questions posed in the literature are: why have some countries higher public debts and deficit ratios, and larger government shares, than others? In other words, what explains the big international differences in public finances? And: why do some countries hold low debt ratios or generate low deficit ratios at particular times, but high debt or deficit ratios at other times? In this paper, we use a novel approach, namely to focus on personal characteristics of policymakers, to answer these questions.

² See e.g. Roubini and Sachs (1989a,b), Grilli, Masciandaro and Tabellini (1991).

The personal characteristics of a political leader that we suspect to be the most relevant for policy making are the following: (a) political attitude or ideological affiliation, (b) theoretical knowledge about fiscal policy issues, or economic (policy) issues in general, as being measured by the type of the politician's education and former profession, and (c) practical experience in economic policy-making or policy making in general.

Point (a) has already been tested sufficiently. In contrast, point (b) and (c) have not been tested so far, although they can be assumed to be highly relevant. Thus, we formulate the following two hypotheses:

Hypothesis 1 (Personal Values): The public deficit is the higher, the less the political leaders have been concerned with economic issues in their education and former profession.

Hypothesis 2 (Experience): The public deficit is the higher, (a) the less the political leaders have gained practical experience in policy-making, and (b) the less they have exercised leadership in their former profession.

The above hypotheses are relatively straightforward. Nevertheless, we will provide some considerations to underpin their theoretical validity in the following.

Every kind of education does not only convey factual knowledge, but implies the internalization of the fundamental values that a certain field of studies is based upon. The same applies to the influence of profession on personality: every profession has its own written and unwritten rules, its own fundament of values, which over time leave a cultural imprint in a person's behavior. This cultural imprint will not only be visible when the person acts in his or her own field, but will also influence behavior in other situations. For example, an education or profession in economics or business leads to the insight that a budget should be balanced, at least in the long run. Hence, policymakers with this background can be expected to be less prone to overspend, or to run short-sighted deficit policies.

The same result can be expected from policymakers that are more experienced than others. As has been well established in the literature,³ interest group pressure can cause a tendency towards over-expenditure, resulting in budget deficits and an excessive size of the budget. However, the more a political leader is experienced in policy-making, and the more he has exercised leadership in his former profession, the more likely it is that he will be able to resist the interest group pressure and, thus, keep fiscal policy on a sound basis. Furthermore, policymaking is not only about having the

³ See e.g. Drazen (2000) for an excellent survey.

right ideas and goals, but also, and probably more importantly, about implementation. Policymakers, at least in democratic states, have to organize majorities and need to overcome institutional obstacles in realizing their goals. Hence, we can expect more experienced policymakers to be more successful in implementing policies.

Data and Empirical Strategy

As outlined above, we investigate the influence of political leader's education and profession on public finances.

We use pooled cross-section time-series (panel) data for 22 OECD countries covering the period 1970-2004. Our main dependent variable is the primary public deficit in percent of GDP as provided by the OECD (2008) Economic Outlook database.

As main explanatory variables, we use education and profession data that has been taken from Dreher et al. (2006), who collected data on the education and former profession of more than 500 country leaders from 73 countries for the period 1970-2005. Education is measured with the help of seven sub-categories: university education in (a) political science, (b) economics, (c) law and (d) natural sciences; in addition (e) other university education, (f) non-university education and (g) unknown education. Profession is split into eight sub-categories, namely (a) "whole work life politicians" (i.e. leaders who have been professional politicians for their whole work life), (b) economic scientists, (c) entrepreneurs, (d) union executives and workers ("blue collars"), (e) managers ("white collars"), (f) lawyers, (g) other scientists, and (h) country leaders with other professions.

Furthermore, we employ various political economy variables taken from the Beck et al. (2001) database of political institutions in order to test for the theories presented in the literature overview. Specifically, we use a dummy variable indicating whether the country leader is from a left wing party [leftchiefparty]⁴, a variable indicating the years the head of government has been in office [tio],⁵ and a variable indicating the time the party of the chief executive has been in office so far [prtyin]. In order to test for fractionalization (Roubini and Sachs 1989) and war-of attrition effects as postulated by Alesina and Drazen (1991) and Spolaore (1993), we employ two variables measuring the fragmentation and polarization within the government [govfrac and polariz].⁶ The strength of the government is measured by a variable indicating the majority degree the government has in the legislature [maj]. In order to control for the effects of different political systems, we use a

⁴ Names in brackets are the names of the series in the original data set of Beck et al. (2001).

⁵ See Dreher et al. (2007).

⁶ See also Ricciuti (2004).

dummy variable [system] categorizing the countries into three political systems: direct presidential, strong president elected by assembly and parliamentary. Also, we control for differences between federal and centralistic states with a dummy variable for federal states. Political business cycle theories are implemented into our empirical model with a dummy variable indicating whether there is a legislative election in a specific year [legelec].

In addition to these political economy variables, we include some variables reflecting the countries' current economic condition. These are the growth in GDP⁷ [grgdp_WDI], which is taken from World Bank (2007), and the change in the unemployment rate [chavur], which was collected from various sources.

Finally, in line with Volkerink and de Haan (2002), we control for a budgetary item that is not in the hand of the current government, but a result of past fiscal policy: gross government interest payments. Data for this variable was taken from OECD (2008).

In our model we view the government budget deficit in country *i* at time *t* as a function of the education and/or profession of the country leader and a set of country-specific controlling factors. Country and year dummy variables account for unobserved country heterogeneity due to time-invariant national characteristics and year-specific (but country-unspecific) factors (such as world-wide shocks). We tested for the need of time and country fixed effects as well as for the existence of cross section correlation and autocorrelation. Our test results yield that time and country dummies are both needed, and that cross section and first order serial correlation is existent. Second order autocorrelation is not found in the data.

Thus, the appropriate model is either a panel corrected standard error model (PCSE) with a first order serial correlation option or a PCSE model including a lagged dependent variable. We preferred the latter model, as employing a lagged dependent variable is standard in the literature. As reference category for profession we chose "whole work life politicians"; our reference category for education is "political science"

Results

The results of our regressions are shown in Table 1. We have run three regressions, one only with the education variables as main explanatory variables (column 1), one with only the profession variables as main explanatory variables (column 2) and one regression including both education and profession (column 3).

⁷ This variable has a correlation of 0.81 with inflation which we consequently did not include in our regressions.

Across all regressions, indicating a strong robustness of the results, the economic control variables are significant with coefficients of the expected signs and of the same magnitude in either regression. As can be expected, the budget deficit is negatively related to GDP growth. An increase in the unemployment rate is found to raise public deficits significantly. The same holds for a rise in government interest payments.⁸

Similarly robust results are found for the political control variables. We find evidence that left wing country leaders run significantly larger deficits than center or right wing politicians in all three regressions. This finding contradicts most of the previous literature. We counted 27 papers testing whether left wing parties generate higher deficits. Only two of them found a significant impact (Clingermayer and Wood (1995) for the U.S. states and Volkerink and de Haan (2002) for 20 OECD countries in the seventies, but not in the eighties).

Evidence for Hypothesis 2 (Experience) is found looking at the results for the variable measuring the time country leader's party has been in office. We find in two out of three regressions (columns 2 and 3) that the surplus is the higher, the longer the party has been in office.

In all three regressions we find that the higher government fractionalization, the larger are public deficits. This is strong empirical evidence for the validity of the theoretical analyses of Roubini and Sachs (1989), Alesina and Drazen (1991) and Spolaore (1993).

We also find some evidence that parliamentary systems (intermediate systems with a strong president elected by an assembly) generate higher deficits compared to intermediate systems with a strong president elected by an assembly (presidential systems). This is in line with the findings of Franzese (2002), which is to our knowledge the only paper that has studied this relationship so far.

The majority degree of the government is found to have a strongly negative relationship with the budget deficit, i.e. the larger the majority of the government in the legislature, the lower the deficits. This results points to the relevance of the budget institutions theory. One of the hypotheses of this theory is that the stronger the position of the government compared to the parliament in the budgetary process, the lower is the deficit (e.g. von Hagen and Harden, 1995).

Finally, we find strong evidence for the existence of political budget cycles.⁹ In all three regressions, we find that in legislative election years the budget deficit is significantly larger than in other years.

Now, let us turn to the variables that are of our main interest – the profession and education variables:

⁸ Note that we use the primary surplus, i.e. the budget balance before interest payments, as dependent variable.

⁹ See e.g. the seminal papers of Nordhaus (1975), Lindbeck (1976) and McRae (1977) and the excellent survey in Drazen (2000, ch. 7).

From table 1, column 2 one can see that, compared to the reference group, namely those persons have been politicians for all or most of their work life (“whole work life politicians”), science economists, white collar workers and blue collar workers generate significantly higher deficits. A simple F test shows that union executives or workers and science economists do not perform significantly different.

Most interesting for the test of our hypotheses is the result for economic scientists. Hypothesis 1 must be rejected. However, it seems that hypothesis 2 holds; chief executives who are former science economists (a) have gained less practical experience/skill in policy-making, and (b) they have exercised less leadership in their former profession than chief executives who have always been politicians; hence, they are less able to resist interest group pressure and, thus, they tend to make higher deficits. Note that when excluding the pre-1980 years, nothing changes. Hence, the hypothesis that the science economists of the seventies – being inveigled by Keynesianism and the hope of future surpluses – generated higher deficits during the recession years of the early and late seventies than “whole work life politicians” is not a valid explanation of our empirical result.

Our results concerning the education variables are rather weak. When only the education variables in the dataset are included in the regression, we get the following result (cf. table 1, column 1): Strongly negative effects on the budget are found for natural scientists and politicians with other university education. Also, politicians with unknown education, economists, and politicians with education outside of university are associated with significantly higher deficits than politicians of the base category (education in political science). Politicians with an educational background in law are found to generate deficits that are not different from those of the base category. However, these findings are not robust to the inclusion of both education and profession variables into the regression.

When we include the education and profession variables in one single regression (cf. table 1, column 3), the results for the latter are pretty unchanged, whereas the results for the former turn out to be not robust. Concerning professions, the results for economic scientists, white collar workers, union executives, and other professions remain the same in sign, significance and magnitude. In addition, professional lawyers are now negatively significant, while other scientists are associated with lower deficits. In contrast, as regards education, only the (negative) result for natural scientists remains the same, while now also law education turns positive and significant.

As a critique, one might argue that voters vote for certain types of politicians in certain (adverse) economic situations, which would cause endogeneity problems in our analysis. However, we have not found a single occasion where a politician has used his education or profession as an argument in an electoral campaign. Hence, we believe that endogeneity is not an issue here. Furthermore,

Dreher and Lamla (2007) show that selection of politicians with various backgrounds is almost idiosyncratic. They establish that profession and education of politicians is clearly not related to fundamental political and economic variables.

So far, we found that the impact of education is rather vague. However, going more into detail, we can show that, in certain respects, education indeed matters. More specifically, we tested the following question: Do those persons who have been politicians for all or most of their work life (“whole work life politicians”) differ in their fiscal policies, depending on their education? This question is important as a relatively large share of the country leaders are “whole work life politicians” (the “whole work life politicians” category comprises about 40% of all the profession observations). Our regressions (Table 2) yield the following: While whole work life politicians with economics or political science education do not run fiscal policies different from the average whole work life politician, the tenure of a politician with law education is associated with significantly larger deficits (column 2). Including all three interactions terms in one regression does not change the results (column 4).

Table 3 presents the results for interactions of political leaning and the profession of a country leader. Specifically, we have interacted the professional economist, union executive and lawyer categories with a dummy equaling one if the governing party is left wing. Contrary to the results presented in Tables 1 and 2, we find no significant effect for professional economists (column 1). However, we find a significantly negative effect for left wing economists. Hence, we conclude that the results presented above, namely that professional economists run higher deficits than whole work life politicians, has been driven by left wing economists, while the average effect of an economist is not different from that of whole work life politicians. Similar effects are found for union executives. While the significantly negative effect of union executives vanishes, we find that union executives in left wing parties run higher deficits (column 2). This is not a surprise, as almost all former union executives are members of left wing parties. For lawyers, the result from Tables 1 and 2 remains the same. Left wing lawyers are not found to behave differently from the average lawyer (column 3). These findings are robust to separate or simultaneous inclusion of the categories into the regression (column 4).

Conclusion

In this paper, we have studied the effect of the education and former profession of political leaders on fiscal policy. We have argued that education and profession shape a person's values, his behavior and his attitudes towards economic and political decision making. Furthermore, we have argued that fiscal performance is not only influenced by a leader's economic expertise, but is also dependent on his political experience. Using panel data for 21 OECD countries covering the period of 1970-2004, we have found substantial evidence for our hypotheses.

Can we infer any general insight from our results, any insight that is not limited to public debt and deficit research, but concerns political economy research as a whole?

Extrapolating our results, we can formulate the following general hypothesis: In order to progress with political economy issues, researchers should not narrow their focus to differences in political institutions. Instead, they should pay more attention to differences between the political agents themselves, i.e. to the different personal characteristics – gender, age, experience, cultural, social, educational and professional background, political attitudes, preferences and values.

Initial steps in to this direction have already been taken by Chattopadhyay and Duflo (2004) and Besley et al. (2005) who study the relation between politicians and quality of decision making in India, by Jones and Olken (2005), who investigate the effects of unexpected changes of heads of government on economic growth, by Adolph (2004) and Göhlmann and Vaubel (2006), who study the effects of central bankers' characteristics on inflation, and Dreher et al. (2006) who study the influence of education and profession of heads of government on economic reforms. In our research, the next steps will be to extend the data set to a larger number of countries and years, and to study the effects of education and profession not only on the budget balance, but also on the size of the budget relative to GDP.

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Table 1: Profession, Education and Budget Surplus, 1970-2004, PCSE

	(1)		(2)		(3)	
Lagged surplus	0.738***	[0.013]	0.740***	[0.013]	0.699***	[0.015]
GDP growth	13.255***	[2.287]	13.768***	[2.060]	13.773***	[2.248]
Change in unemployment	-0.412***	[0.058]	-0.402***	[0.056]	-0.394***	[0.057]
Growth in government interest payments	-0.971**	[0.427]	-0.609	[0.469]	-0.780*	[0.400]
Maastricht treaty (dummy)	0.618***	[0.175]	0.605**	[0.246]	0.593**	[0.280]
Education: unknown	-0.482*	[0.284]			-0.253	[0.270]
Education: not university	-0.441*	[0.251]			0.23	[0.241]
Education: economics	-0.358*	[0.197]			0.191	[0.323]
Education: law	0.156	[0.097]			0.508***	[0.187]
Education: natural science	-0.849***	[0.265]			-0.952***	[0.346]
Education: other university	-0.651**	[0.273]			-0.231	[0.216]
Profession: science economist			-0.691**	[0.277]	-0.722*	[0.426]
Profession: entrepreneur			0.325	[0.271]	0.392	[0.310]
Profession: manager/"white collar"			-0.919***	[0.237]	-0.869***	[0.279]
Profession: union executive or worker/"blue collar"			-0.813***	[0.172]	-0.601***	[0.221]
Profession: lawyer			-0.182	[0.158]	-0.438**	[0.189]
Profession: other science			0.103	[0.220]	0.825**	[0.357]
Profession: other			-0.976***	[0.335]	-1.001***	[0.324]
Left wing chief executive party	-0.225**	[0.097]	-0.268**	[0.119]	-0.241**	[0.118]
Chief executive party's years in office	0.01	[0.006]	0.013**	[0.006]	0.015**	[0.007]
Government fractionalization	-0.544**	[0.231]	-0.643**	[0.298]	-0.581*	[0.324]
Parliamentary system	0.042	[0.094]	-0.146*	[0.089]	-0.168	[0.121]
Majority degree of government in legislature	1.215***	[0.454]	1.301**	[0.619]	1.421**	[0.628]
Occurrence of legislative election	-0.414***	[0.113]	-0.394***	[0.117]	-0.405***	[0.117]
Observations		526		526		526
Number of countries		21		21		21

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%; constant, year and country dummies not shown

Base categories: political science education / "whole work life politician" profession

Table 2: Profession, Education and Budget Surplus, 1970-2004, PCSE, interactions of education and profession

	(1)	(2)	(3)	(4)
Lagged surplus	0.720*** [0.015]	0.720*** [0.014]	0.719*** [0.014]	0.719*** [0.014]
GDP growth	13.394*** [2.248]	13.487*** [2.244]	13.259*** [2.173]	13.434*** [2.229]
Change in unemployment	-0.403*** [0.055]	-0.406*** [0.056]	-0.405*** [0.054]	-0.408*** [0.055]
Growth in government interest payments	-0.756* [0.418]	-0.707 [0.438]	-0.756* [0.414]	-0.694 [0.431]
Maastricht treaty (dummy)	0.553** [0.260]	0.577** [0.256]	0.543** [0.267]	0.588** [0.246]
Education: unknown	-0.269 [0.259]	-0.168 [0.260]	-0.18 [0.390]	0.045 [0.373]
Education: not university	0.169 [0.245]	0.383 [0.251]	0.271 [0.320]	0.582* [0.336]
Education: economics	0.065 [0.340]	0.366 [0.295]	0.261 [0.413]	0.509 [0.408]
Education: law	0.469** [0.191]	1.210*** [0.236]	0.548* [0.303]	1.425*** [0.376]
Education: natural science	-0.985*** [0.346]	-0.692** [0.329]	-0.863 [0.538]	-0.472 [0.570]
Education: other university	-0.264 [0.211]	-0.026 [0.220]	-0.165 [0.343]	0.161 [0.357]
Profession: science economist	-0.544 [0.399]	-0.755* [0.427]	-0.693* [0.412]	-0.690* [0.406]
Profession: entrepreneur	0.391 [0.321]	0.098 [0.325]	0.347 [0.316]	0.092 [0.333]
Profession: manager/"white collar"	-0.784*** [0.282]	-1.020*** [0.284]	-0.868*** [0.272]	-1.012*** [0.309]
Profession: union executive or worker/"blue collar"	-0.506** [0.252]	-0.714*** [0.209]	-0.605*** [0.200]	-0.658*** [0.246]
Profession: lawyer	-0.414** [0.189]	-0.917*** [0.214]	-0.447** [0.192]	-0.948*** [0.245]
Profession: other science	0.880** [0.346]	0.644* [0.341]	0.788** [0.367]	0.638* [0.382]
Profession: other	-0.892*** [0.334]	-1.023*** [0.297]	-0.978*** [0.303]	-0.994*** [0.327]
Whole work life politicians w/ econ. education	0.215 [0.302]			0.099 [0.296]
Whole work life politicians w/ law education		-0.777*** [0.181]		-0.807*** [0.195]
Whole work life politicians w/ pol. sci. education			0.07 [0.393]	0.306 [0.367]
Left wing chief executive party	-0.224** [0.106]	-0.182 [0.113]	-0.233** [0.112]	-0.173 [0.109]
Chief executive party's years in office	0.015** [0.006]	0.016*** [0.006]	0.015** [0.006]	0.017*** [0.006]
Government fractionalization	-0.603* [0.311]	-0.574* [0.317]	-0.588* [0.310]	-0.557* [0.319]
Parliamentary system	-0.169 [0.113]	-0.158 [0.127]	-0.164 [0.112]	-0.172 [0.126]
Majority degree of government in legislature	1.378** [0.596]	1.132** [0.573]	1.413** [0.599]	1.128** [0.564]
Occurrence of legislative election	-0.409*** [0.121]	-0.403*** [0.116]	-0.408*** [0.123]	-0.405*** [0.116]
Observations	526	526	526	526
Number of countries	21	21	21	21

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%; constant, year and country dummies not shown

Base categories: political science education / "whole work life politician" profession

Table 3: Profession, Education and Budget Surplus, 1970-2004, PCSE, interactions of profession and political leaning

	(1)	(2)	(3)	(4)
Lagged surplus	0.716*** [0.015]	0.718*** [0.014]	0.715*** [0.015]	0.714*** [0.014]
GDP growth	13.805*** [2.208]	13.563*** [2.177]	13.301*** [2.165]	14.133*** [2.176]
Change in unemployment	-0.394*** [0.055]	-0.401*** [0.055]	-0.406*** [0.055]	-0.390*** [0.056]
Growth in government interest payments	-0.794* [0.417]	-0.710* [0.424]	-0.798** [0.404]	-0.755* [0.415]
Maastricht treaty (dummy)	0.540** [0.266]	0.573** [0.278]	0.559** [0.274]	0.578** [0.273]
Education: unknown	-0.227 [0.249]	-0.218 [0.256]	-0.211 [0.247]	-0.205 [0.248]
Education: not university	0.211 [0.235]	0.217 [0.237]	0.244 [0.244]	0.213 [0.242]
Education: economics	0.209 [0.310]	0.201 [0.313]	0.19 [0.316]	0.187 [0.311]
Education: law	0.522*** [0.180]	0.517*** [0.181]	0.519*** [0.184]	0.545*** [0.177]
Education: natural science	-0.917*** [0.325]	-0.890*** [0.329]	-0.914*** [0.321]	-0.886*** [0.327]
Education: other university	-0.243 [0.203]	-0.211 [0.204]	-0.196 [0.201]	-0.24 [0.201]
Profession: science economist	-0.354 [0.444]	-0.647 [0.421]	-0.63 [0.436]	-0.27 [0.463]
Profession: entrepreneur	0.419 [0.318]	0.381 [0.318]	0.368 [0.318]	0.46 [0.324]
Profession: manager/"white collar"	-0.873*** [0.261]	-0.833*** [0.276]	-0.815*** [0.270]	-0.827*** [0.276]
Profession: union executive or worker/"blue collar"	-0.603*** [0.206]	-0.342 [0.236]	-0.599*** [0.203]	-0.313 [0.235]
Profession: lawyer	-0.473*** [0.178]	-0.442** [0.180]	-0.578*** [0.194]	-0.517** [0.205]
Profession: other science	0.805** [0.339]	0.803** [0.340]	0.861** [0.361]	0.832** [0.359]
Profession: other	-0.969*** [0.299]	-0.926*** [0.309]	-0.975*** [0.303]	-0.914*** [0.299]
Professional economist, left wing	-1.434* [0.742]			-1.497** [0.753]
Union executive, left wing		-0.483* [0.285]		-0.521* [0.312]
Lawyer, left wing			0.264 [0.240]	0.082 [0.260]
Left wing chief executive party	-0.187* [0.113]	-0.184 [0.115]	-0.296** [0.126]	-0.15 [0.147]
Chief executive party's years in office	0.014** [0.006]	0.013* [0.007]	0.014** [0.007]	0.012* [0.006]
Government fractionalization	-0.461 [0.336]	-0.602* [0.311]	-0.578* [0.318]	-0.461 [0.336]
Parliamentary system	-0.18 [0.115]	-0.127 [0.123]	-0.122 [0.110]	-0.131 [0.122]
Majority degree of government in legislature	1.360** [0.596]	1.495** [0.605]	1.418** [0.595]	1.454** [0.591]
Occurrence of legislative election	-0.397*** [0.122]	-0.410*** [0.121]	-0.404*** [0.120]	-0.398*** [0.119]
Observations	526	526	526	526
Number of countries	21	21	21	21

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%; constant, year and country dummies not shown

Base categories: political science education / "whole work life politician" profession