

Heinemann, Friedrich; Janeba, Eckhard; Moessinger, Marc-Daniel; Schröder, Christoph

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Revenue Autonomy Preference in German State Parliaments

Friedrich Heinemann* (ZEW Mannheim and University of Heidelberg)
Eckhard Janeba (University of Mannheim)
Marc-Daniel Moessinger (ZEW Mannheim)
Christoph Schröder (ZEW Mannheim)

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Abstract

Federal states in Germany are characterized by low fiscal autonomy. Equalization systems in place balance revenue differences to a considerable extent and states cannot independently set taxes of any major relevance. Although these features of German federalism are notorious for their disincentives none of the recent reform initiatives of German federalism have been able to change the system. This study makes use of a unique survey among the members of all 16 state parliaments to explain the formation of autonomy preferences. It tests to which extent the preferences of state policy makers for tax autonomy and fiscal equalization are driven by states' self-interest, party ideology and individual characteristics. The results point, inter alia, to the role of state deficit and the structural differences between states. States with high permanent deficits are more opposed to tax autonomy and more in favour of higher fiscal equalization transfers.

JEL Classification: H63, H74, H77

Keywords: fiscal equalization, tax competition, fiscal federalism

* Corresponding author

Friedrich Heinemann
ZEW Mannheim
L7, 1
68161 Mannheim
Germany
+49-621-1235-149
heinemann@zew.de

1 Introduction

Germany's federal system is characterized by both an intense equalization across sub-national jurisdictions and a high degree of vertical tax sharing. Furthermore, fiscal sovereignty with respect to tax autonomy is quite low at the state level. As a consequence, states lack any significant degree of revenue autonomy. While recent constitutional reforms have increased state independence in several fields of legislation all reform attempts towards larger state revenue autonomy have failed. Reform options like an independently set state surcharge on national income taxes were discussed but are far from popular among many state representatives. Therefore, a consensus for a constitutional reform in this regard has so far been out of reach.

It is the objective of this study to shed light on the nature of this reform resistance. Since the seminal paper of Zodrow and Mieszkowski (1996), the public finance literature has paid heavy attention to the normative side of tax autonomy and tax competition. By contrast, political-economic aspects have received much less attention. Here, our contribution comes in. Based on a unique database we study the factors that explain to which extent an individual member of a state parliament (MSP) supports or rejects revenue autonomy. The core of our database is a survey among all 16 German state parliaments which was conducted in 2011/12. These survey results are combined with both the individual characteristics of MSPs and state characteristics. This set-up allows for a refined testing of different hypotheses related to the role of state self-interest, party ideology or individual characteristics like education or parliament experience.

Our preliminary results indicate that ideology does play a role, although only with respect to the preferences regarding the level of the financial equalization scheme and not with respect to tax autonomy preferences. For example, compared to their left colleagues, MSPs from the right of the political spectre tend to view the current level of the financial equalization scheme to be too far-reaching. State interests also seem to play a role for the explanation of individual preference heterogeneity. Structural differences among states seem to influence politicians' preferences with respect to tax autonomy and fiscal equalization to a large extent.

The paper is structured as follows: Section 2 gives a brief summary on German federalism with a focus on sub-national states' current degree of revenue autonomy. Section 3 develops our hypotheses followed by descriptive (section 4) and econometric (section 5) evidence.

2 German state autonomy and the reform debate

The federal setting in Germany comprises three distinct layers with different but partly overlapping areas of responsibility: (1) the federal level (Bund) which is responsible, e.g., for foreign and defence policy and social welfare programs, (2) the state level (Länder) which bears responsibility for, e.g., education, police, but also road and railway construction, and (3) the municipal level (Kommunen) which is in charge of, e.g., preschools, fire departments, or waste management (Werner, 2006). For the state and municipal levels, however, tax competencies do not mirror the fiscal weights of the tasks assigned. Instead, the revenue situation is characterized both by a large degree of equalization across sub-national jurisdictions and by vertical tax sharing.

Those taxes which have the largest yields are shared between the federal layers (see Table 1). These so called joint taxes comprise the income tax (including the wage tax), the final withholding tax on interest and capital gains, the corporation tax and the value added tax (VAT) (Federal Ministry of Finance, 2011). Among these, both the income tax and the VAT generate by far the most revenue. Taxes whose proceeds exclusively flow into state budgets are only of minor relevance, with the inheritance tax and the real estate transfer tax being the most important ones. Among those two, the states have a limited tax rate autonomy only for the latter whereas the inheritance tax rates are fixed by federal law.¹ Unlike in other federal countries like the US or Switzerland, German states have no competency to levy tax surcharges on top of tax rates determined by the federal level.

Table 1: Distribution of tax income on different types of taxes

Type of tax	Revenue (million Euro)	Percent of overall tax revenue
Joint taxes	403,567	70.38
Federal taxes	99,134	17.29
State taxes	13,095	2.28
<i>Inheritance tax</i>	4,246	0.74
<i>Real estate transfer tax</i>	6,366	1.11
<i>Lottery tax</i>	1,420	0.25
<i>Fire service tax</i>	365	0.06
<i>Beer tax</i>	702	0.12
Municipal taxes	52,984	9.24
Custom duties	4,571	0.79
Overall tax revenue	573,351	

Data for 2011.

Source: Federal Statistical Office (2012)

¹ The German states are allowed to set real estate transfer tax rates within a bandwidth of 3.5 % to 5 %.

Thus, the German federal system is based on a rather cooperative fiscal federalism and lacks elements of competitive federalism (Braun, 2007). This is not only visible from the lacking sub-national tax autonomy but also from an intense fiscal equalization system (FES). This largely offsets the differences in the states revenue capacities and actual earnings. This system has its legal basis in Article 106 of the German constitution (Grundgesetz), which stipulates that living conditions in all geographic areas of Germany should be more or less equivalent and revenues must be distributed between the different federal levels according to the needs of the layers to fulfil the specified tasks.

The FES has four different stages: (1) the vertical distribution of tax revenue between the different federal layers, (2) the horizontal assignment of tax revenues among the German states, (3) the redistribution between poor and rich states, and (4) supplementary federal grants (Federal Ministry of Finance, 2012a).

(1) Vertical distribution of tax revenue

At the first stage of the FES, joint taxes are distributed to the three different federal levels. With exception of VAT revenues, the federation's and state's shares of the remaining joint taxes are identical (see Table 2).

Table 2: Assignment of joint taxes to different federal levels

	Federation	States	Municipalities
Income tax	42.5 %	42.5 %	15 %
Withholding tax	44 %	44 %	12 %
Corporation tax	50 %	50 %	-
Value added tax ¹	53 %	45 %	2 %

¹ As compared to the shares of the remaining taxes which are established in the constitution, the shares of the VAT are regulated by simple law and change annually. The given figures are the last years' average.
Source: Federal Ministry of Finance (2011)

(2) Horizontal distribution of tax revenue

At the second stage of the FES the sum of the aforementioned joint state taxes is distributed to the different states according to the principle of local revenue (i.e. each state earns the revenue which was collected through the state's tax authorities). The income tax and the withholding tax are allotted according to the residence of the taxpayers, whereas the corporation tax is allotted according to the place of business. On the contrary, the allotment of revenue from VAT is split into two parts: To close the gap between fiscally weak and fiscally rich states, as a first step, up to 25 % of the total states' share is distributed to states where the average tax

capacity without VAT revenue is below the all-state average.² The at least remaining 75 % are then allocated according to the number of state residents.

(3) Redistribution between poor and rich states

Redistribution between fiscally poor and fiscally rich states rests on the assumption that the financial needs per inhabitant for the provision of public goods and services are identical in all states. Therefore, the financial capacity per state and inhabitant (sum of all state receipts and 64 % of the municipalities' receipts divided by the number of inhabitants) is calculated. Since the financial needs in the three city states Berlin, Bremen and Hamburg are regarded to be higher as compared to the needs of the area states, the number of inhabitants in these three states is (fictitiously) increased by 35 %.³ Redistribution then takes place using a linear-progressive skimming-off schedule which partially closes the financing gap of those states where the (fictitious) financial capacity per state falls short of the average of all states financial capacity per inhabitant.⁴ The regulations ensure, however, that the order of the states after redistribution is the same as before redistribution (Federal Ministry of Finance, 2011). The recent data for the extent of redistribution are given in Table 3.

(4) Supplementary federal grants

Finally, there are general and special supplementary federal grants (SFG). General supplementary federal grants are given to those states whose financial capacity after redistribution falls short of 99.5 % of the states' financial capacity's average. This shortfall is then closed proportionally by 77.5 %, which ensures a considerable and substantial equalization of the states' financial capacity (see Table 3).

² The exact amount of apportionment depends on the difference of a state's capacity to the overall average. A linear-progressive tax schedule is used (Federal Ministry of Finance, 2012a).

³ The same, albeit to a lesser extent, holds true for three sparsely populated states of the former German Democratic Republic (GDR): Brandenburg, Mecklenburg-Western Pomerania and Saxony-Anhalt.

⁴ Depending on the difference, up to 95 % of the gap is closed.

Table 3: Redistribution at different stages of FES

Stage of the FES	Financial capacity per inhabitant as a percentage of average financial capacity per inhabitant		
	(2) Before state redistribution	(3) After state redistribution	(4) With general SFG
Bavaria	115.6	105.5	105.5
Hesse	116.0	105.7	105.7
Baden-Wuerttemberg	109.5	103.8	103.8
Hamburg	102.1	101.1	101.1
Schleswig-Holstein	97.4	98.7	99.3
Saarland	94.3	97.4	99.0
Lower Saxony	97.6	98.8	99.3
North Rhine-Westfalia	98.5	99.2	99.4
Rhineland-Palatinate	95.5	97.8	99.1
Mecklenburg-West Pomerania	86.5	95.1	98.5
Brandenburg	90.6	96.3	98.8
Bremen	74.1	91.9	97.8
Thuringa	88.0	95.5	98.6
Saxony-Anhalt	88.0	95.5	98.6
Saxony	88.3	95.6	98.6
Berlin	68.1	90.5	97.5

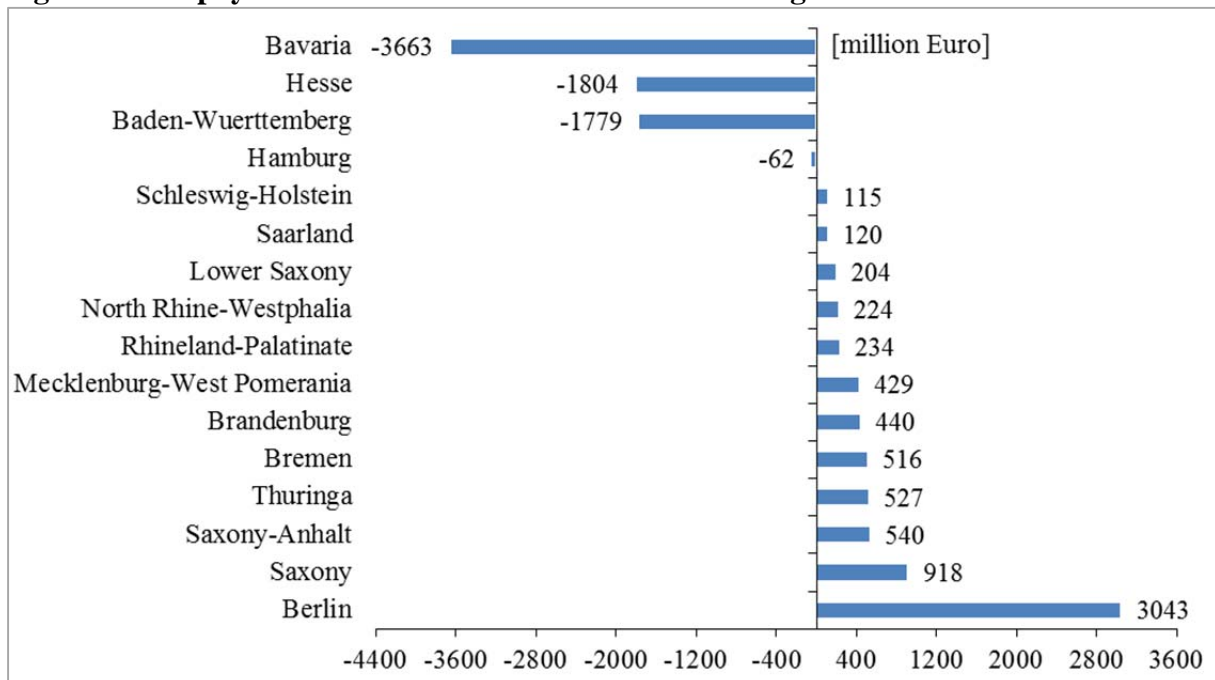
Data for 2010.

Source: Federal Ministry of Finance (2011)

Special SFG on top compensate specific states for additional burdens which can be traced back to German reunification or disproportionately high burdens due to administrative costs. The exact amounts of the grants are laid down by the Law on Financial Equalization (Finanzausgleichsgesetz). In 2010 the transfers to the Eastern German states and Berlin amounted to Euro 8.7 billion (Federal Ministry of Finance, 2012a).

Taken together, the FES considerably harmonizes the financing capacities of the German states. Before any fiscal equalization takes place, the difference in financial capacity amounts to 47.5 percentage points (115.6 percent in Bavaria compared to 68.1 percent in Berlin). Through all FES instruments described, this difference is reduced to only 8.2 percentage points. A major share of the equalization takes place horizontally, i.e. on the state level. In recent years, in particular four countries (Bavaria, Hesse, Baden-Wuerttemberg and, to a lesser extent, Hamburg) have financed the transfers to the remaining 12 states (see Figure 1).

Figure 1: Net-payer and net-receiver states of the FES stage 3 in 2011



Source: Federal Ministry of Finance (2012b)

Obviously, this unbalanced redistribution scheme implies several biases. First, FES transfers generate a common pool problem, where spending decisions are unconnected to taxing decisions. In fact, spending decisions in one state are (co-)financed by taxpayers of the remaining jurisdictions (Rodden, Eskeland and Litvack, 2003). As was shown by Velasco (1999), this results in excessive deficits and debt accumulation. The bail-outs of Bremen and Saarland in the late 1980s are examples in the German context (Seitz, 1999). Second, the system suffers from notable disincentives for the states to promote activities that increase a state's revenue capacity or tax income, since above average revenues are taxed with at high marginal rates (Stehn and Fedelino, 2009). Von Hagen and Hepp (2001) present evidence on this issue and show that the correlation of German state tax revenue and state GDP has declined over time. Third, disincentives also extend to the field of tax administration. Since, for instance, tax inspections at the firm level do only partially pay off in terms of additional state revenue, state governments may face incentives to reduce tax inspections and related staff at the cost of the remaining states (Krause-Junk, 2010).

The current system is not uncontested and regularly provokes resistance from the net-payers. For example, in summer 2012 the Bavarian government has announced to file a suit against the current FES. Events like this reveal the states' different views on the FES and point to the reform debate. In the annual report of 2003, the German Council of Economic Experts, for instance, suggests two possible alternatives: a full separation of tax competencies and the end

of vertical tax sharing, or specific tax surcharges/deductions for German states and municipalities (Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, 2003). While these alternatives also suffer from drawbacks, both proposals can also contribute to (at least partially) dissolve the aforementioned biases (Deubel, 2007). Since the current FES is being phased out in 2019 and has to be renegotiated for the subsequent period, it is important to have a better understanding of the heterogeneity of political views in this reform debate.

3 Theoretical expectations

Very different factors can influence an individual MSP's view with respect to state revenue autonomy. We distinguish between three dimensions: (1) State self-interest, (2) party ideology and government self-interest, as well as (3) individual characteristics related to information, education and parliamentary role and experience.

(1) State self-interest

Our predictions related to self-interest are straightforward for fiscal equalization but less so for tax autonomy preference. MSPs from states which are receivers of (contributors to) the fiscal equalization system should tend to be in favour (against) a more intense equalization. Preference formation should have a forward-looking character in this regard: It is not necessarily the history of burden sharing but the expected payment pattern which should drive the views of rational and forward-looking politicians.

With respect to tax autonomy the prediction is more complex. A normative argument against tax autonomy relates to the possible inefficiencies of tax competition. Horizontal tax competition may lead to welfare losses and a suboptimal level of taxes (Zodrow and Mieszkowski, 1986) whereas vertical tax competition has the opposite possible outcome, i.e. taxes are too high (Keen and Kotsogiannis, 2002). Insofar as these models' assumptions are valid for tax competition within Germany they are able to explain general resistance to tax autonomy but not the heterogeneity of views. For this, it is essential to which regard a MSP expects that her state will benefit from tax competition. In the political debate the argument has been influential that poor countries would lose from tax autonomy and might even be confronted with a vicious cycle of rising taxes and outward flows of mobile tax bases (high income individuals, companies). From a theoretical point of view this is not the necessary

outcome. Fuest (2008) presents a model of tax competition with fiscal equalization and heterogeneity in state financial capacity. He distinguishes between two possible sources of a poor financial capacity: first, revenue shortage because of a low per capita income and, second, expenditure pressure because of special circumstances like a particularly high level of debt or pension obligations. The state government optimizes the welfare resulting from citizens consuming both private and public goods. With tax autonomy, a government is able to trade-off private good consumption against public good consumption through its tax decisions. The prediction from this model is that there should be two types of states with an interest in setting taxes different from the countrywide average. States with a low income and without any significant expenditure pressure should opt for particularly low taxes: Through lower taxes they can advance their citizens' welfare by providing room for a higher consumption of private goods. By contrast, states with high income and expenditure pressure should prefer high taxes because this enables a welfare maximizing shift from private to public goods. High population mobility even strengthens the case that low income countries would opt for a low tax policy.

One first insight from this consideration is that we do not necessarily expect a high correlation with respect to our two survey questions in focus. Fiscal equalization and tax autonomy might be assessed by state representatives in a differentiated way. While strong equalization is clearly in the interest of poor states, there is a theoretical case to be made that very poor and very rich states could welcome tax autonomy whereas "average" states can well live with a uniform countrywide level of taxation.

Additional to this expectation, we also expect that large states are relatively more opposed to an increase in states' tax autonomy compared to small states. Bucovetsky and Wilson (1991) present a model with jurisdictions of different size but with the same capital-to-labour ratio. Labour is immobile whereas capital is the mobile production factor. In the non-cooperative equilibrium of this setup larger states are worse off compared to small states because small states have an incentive to set lower tax rates, which attracts capital and, eventually, leads to rising wages. In our set-up, of course, the underlying assumptions are not fulfilled. However, we still expect small states (in terms of population) to be more in favour of tax autonomy than large states when controlling for structural state characteristics e.g. city states, which fear labour mobility.

We can summarize our expectations as follows:

MSPs from rich states which are contributing to fiscal equalization should be more opposed to extensive equalization compared to MSPs from receiving poorer states.

For income, we expect a non-linear impact: States with incomes (far) above and below the mean income should favor tax autonomy whereas states with an average position should have less interest in tax autonomy.

MSPs from small states (in terms of population) are relatively more in favor of tax autonomy than representatives from large states.

Special state handicaps in tax competition should matter: States with high legacy debt and/or permanently high deficits should be more opposed to tax competition compared to low debt states.

(2) Party program and government participation

Party programs differ with respect to the weights they assign to concepts like “solidarity”, “incentives” or “individual responsibility”. Similar to welfare state reforms, decisions on the parameters of a federal constitution imply decisions on trade-offs between distributive preferences and efficiency. We would expect that parties from the left will assign a larger weight to the notion of inter-state solidarity relative to individual state responsibility. In contrast, market-liberal parties should rather stress the importance of state competition and incentives with a critical view on intense equalization and lacking tax autonomy.

Independent of party affiliation it could make a difference whether a MSP belongs to the government’s parties or not. From the perspective of an opposition MSP, receipts from a generous equalization system may be less appealing since the political advantage of this resource inflow goes to the government. Vice versa, opposition MSPs in rich states might be more favourable to the burden of payments into the equalization system since it constrains the incumbent government. Of course, all these considerations will also be subject to the expectations on a possible power shift between parliamentary parties.

Our expectation is as follows:

MSPs from the political left should be more supportive of equalization payments and more critical on tax autonomy compared to other parties and market-liberal parties, in particular.

Compared to government MSPs, opposition MSPs in poor states (rich states) should be more critical to (supportive of) intense equalization.

(3) Individual characteristics

Besides state interests and ideological imprint, individual education, information and parliamentary experience could matter. We are able to control for individual characteristics by including numerous variables in this regard ranging from age, gender over educational attainments and specialization up to the membership in the budget or legal committee and the number of years in parliament. We do not have clear sign predictions.

4 Survey details

We conducted our survey among the members of all 16 German state parliaments. The questioning of the MSPs was conducted over three rounds. Parliaments of Bavaria, Brandenburg, Lower Saxony, Saarland, Schleswig-Holstein and Thuringia were surveyed in March and April 2011. The second round was conducted in Saxony, Saxony-Anhalt, North Rhine-Westphalia, Hesse and Hamburg in December 2011 and January 2012. The final, third round in April and May 2012 completed the survey by questioning the MSPs of Baden-Württemberg, Rhineland Palatinate, Bremen, Berlin and Mecklenburg-West Pomerania. The reason for this sequential implementation was the different timing of the elections in the states. Specifically, surveys were conducted approximately at mid-term of an electoral cycle, such that members of parliament did not face electoral campaigns or post-election government formation procedures.

The first step in each survey was a contact with the respective parliament's presidential office. We informed the presidency on the survey's academic intentions and asked to recommend participation to the MSPs. Subsequently, the MSPs were approached individually by written letters. Letters were addressed to the MSPs' offices in their election district and not to the parliament's address. This decentralized addressing was chosen to lower the risk of any coordinated answering e.g. through staff in the parliamentary factions. During the first round non-answering MSPs received a follow-up email with the questionnaire attached. If they did not answer, we contacted them by phone calls. In the second and third rounds the email to non-answering politicians additionally included a link to an online platform which allowed them to answer the questionnaire online. 639 MSPs finally participated in the survey which resulted in a response rate of 34%. Response rates differ along the dimensions state and party

affiliation (see Table 4 for response rates across states) but also along individual characteristics of state politicians (see non-response analysis in section 5).

Table 4: Survey participation by state

	No. of MSP	Responses	Response rate
Baden-Wuerttemberg	138	77	55.80 %
Bavaria	187	75	40.11 %
Berlin	149	30	20.13 %
Brandenburg	88	19	21.59 %
Bremen	83	18	21.69 %
Hamburg	124	39	31.45 %
Hesse	114	50	43.86 %
Mecklenburg-West Pomerania	71	17	23.94 %
Lower Saxony	152	54	35.53 %
North Rhine-Westphalia	181	51	28.18 %
Rhineland-Palatinate	101	50	49.50 %
Saarland	51	20	39.22 %
Saxony	133	45	33.83 %
Saxony-Anhalt	106	47	44.79 %
Schleswig-Holstein	95	29	30.53 %
Thuringia	88	36	40.91 %
Total	1861	639	34.34 %

Table 5: Survey participation by party

	No. of MSP	Responses	Response rate
CDU/CSU	681	284	41.70%
FDP	123	41	33.33%
Green Party	239	75	31.38%
Left Party	200	47	23.50%
SPD	559	173	30.95%
other	59	19	32.20%
Total	1861	639	34.34%

Politicians were guaranteed confidentiality on the individual response but were informed that aggregate results would be published. Data were collected non-anonymously so that it is possible to match them with individual characteristics of MSPs which are publicly available on MSPs' official websites. The questionnaire consists of questions related to the new German constitutional debt brake, expenditure preferences and preferences on fiscal equalization and tax autonomy. The latter are the focus of this analysis and are formulated as follows:

Tax autonomy question:⁵ *“It is repeatedly discussed to grant German states more tax autonomy. One of the options debated is, for example, a competency to levy surcharges on income or corporate taxes. Would you be in favour of states being allowed to levy these surcharges and determining their level autonomously?”*

Answers are given on a discrete 9 point scale from -4 (“no”) to +4 (“yes”) with 0 indicated as “undecided”.

Fiscal equalization question:⁶ *“Also the current construction of the state fiscal equalization system is subject to an ongoing debate. How do you assess the current extent of redistribution among the states (including all instruments of the federal equalization system)? The current equalization in the financial capacity across states through the fiscal equalization is ...”*

Answers are given on a discrete 9 point scale from -4 (“too low”) to +4 (“too far reaching”) with 0 indicated as “appropriate”.

Expenditure preference question: *“Assume that your state has (after cyclical adjustment) a permanent budget surplus. How would you want to use this surplus? (multiple answers possible)”*

Of any 100€ surplus, I would use (please make sure that your answers sum up to 100€)

for debt service

to lower taxes and fees

for higher expenses for schools/schooling

for higher expenses for universities and research

for higher expenses for allocations to communalities

for higher expenses for the police

for higher expenses for state administration

for higher expenses for traffic infrastructure

⁵ The questions (like the whole questionnaire) are in German. The original German formulation is as follows: *“Immer wieder wird diskutiert, ob deutsche Bundesländer eine höhere Besteuerungsautonomie erhalten sollen. Im Gespräch ist dabei beispielsweise ein Zuschlagsrecht auf die Einkommen- und Körperschaftsteuer. Würden Sie es begrüßen, wenn die Bundesländer solche Zuschläge erheben und die Höhe dieser Zuschläge eigenständig festlegen dürften?”*

⁶ The original German formulation is as follows: *„Ebenso wird die derzeitige Ausgestaltung des Länderfinanzausgleichs immer wieder diskutiert. Wie beurteilen Sie das derzeitige Ausmaß der Umverteilung zwischen den Bundesländern (unter Einschluss aller Instrumente des bundesstaatlichen Finanzausgleichs)? Die derzeitige Angleichung in der Finanzausstattung zwischen den Bundesländern über den Finanzausgleich ist... zu gering/angemessen/zu weitgehend.“*

___for higher expenses for culture and sports
 ___for higher expenses for environment and agriculture
 ___for higher expenses for other:_____

To make sure respondents are not influenced by the ordering of answering possibilities we randomized the ordering (6 different orders).

For this study, we only make use of the share allocated to “lower taxes and fees” as a control within the analysis of the preference for tax autonomy.

The descriptive results show that tax autonomy preferences are highly diverse. Figure 2 shows that there is – with a thin margin – an absolute majority of respondents who tend to support higher state tax autonomy compared to the status quo (51 percent) whereas 10 percent have a neutral position and 39 percent are opposed. The mode falls on the strongest rejection of tax autonomy. Thus, opponents have a more determined view compared to the supporters of tax autonomy.

Figure 2: Tax autonomy preferences – overall result

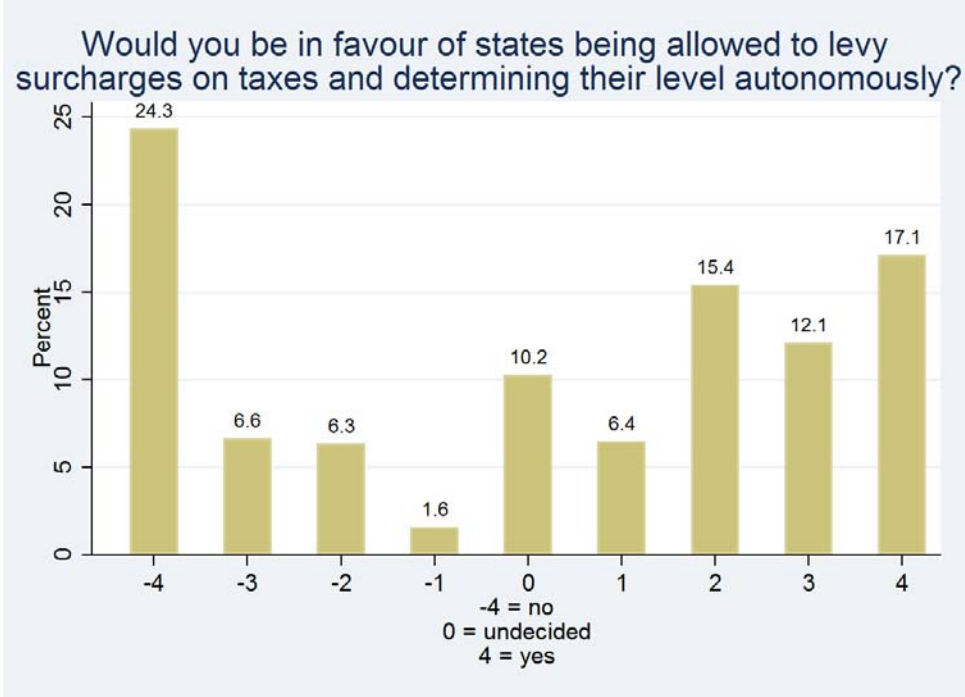
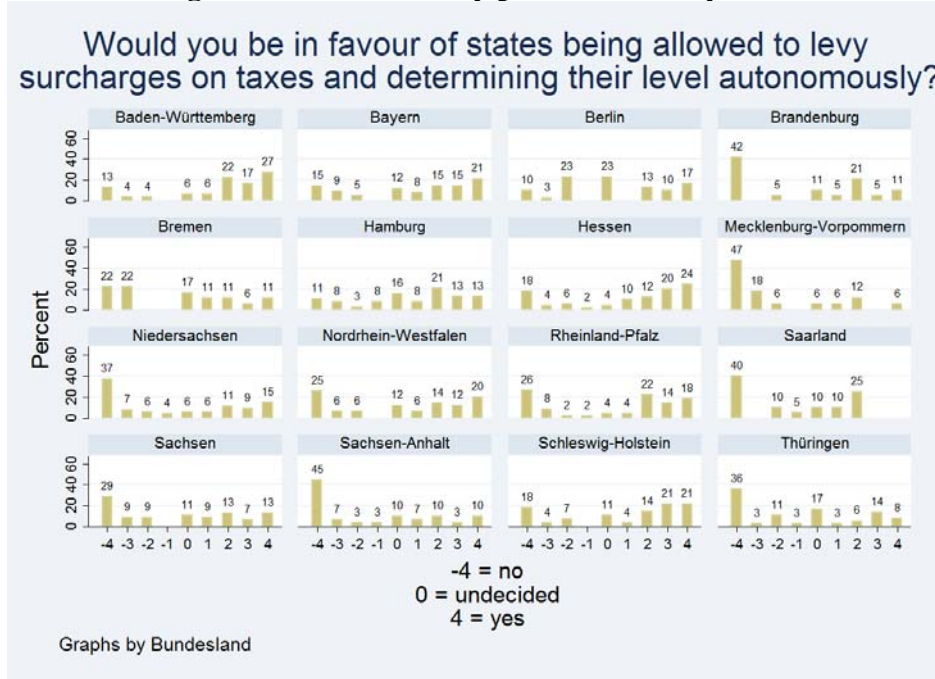


Figure 3: Tax autonomy preferences – by state



On first sight, answering patterns differ mainly across states and ideology. Using an analysis of variance (ANOVA), the null hypothesis that mean answers across states are equal can be rejected at all conventional significance levels (see also Figure 3). Interestingly, MSPs from net-paying states (within the fiscal equalization scheme) are more in favour of tax autonomy (mean answer is 0.95) than those from net-recipient states (mean answer is -0.41), where this difference is significant at the one percent level (see Table 5). The pattern across parties is visually not as clear cut, but the null hypothesis that mean answers do not differ across parties can also be rejected at the one percent level. Mean answers also differ significantly at the five percent level, if ideology is measured by categorizing parties as right and left parties, as can be seen in

Table 7⁷. On average, politicians affiliated to right parties are more in favour of tax autonomy (mean answer is 0.35) than politicians from left parties (mean answer is -0.17).

⁷ Left Party, Green Party and SPD classified as “left”. CDU/CSU and FDP classified as “right”. Parties like the Bavarian Free Voters are unclassified. Therefore, the number of total observations drops to 572.

Table 6: Tax autonomy question by status in inter-state fiscal equalization scheme

	Observations	Mean	Standard deviation	Min	Max
Total	637	0.107	3.043	-4	4
Net-paying states	240	0.954	2.827	-4	4
Net-recipient states	397	-0.406	3.058	-4	4

ANOVA, P-Value of F-Test 0.000

The Null hypothesis of the ANOVA is that groups have equal means.

Table 7: Tax autonomy question by ideology

	Observations	Mean	Standard deviation	Min	Max
Total	572	0.122	3.039	-4	4
Members of right parties	325	0.348	3.093	-4	4
Members of left parties	247	-0.174	2.946	-4	4

ANOVA, P-Value of F-Test 0.042

The Null hypothesis of the ANOVA is that groups have equal means.

Preferences on fiscal equalization reveal a pattern which is very different from tax autonomy preferences. Figure 4 reveals that the mode is now the neutral position with a share of 30 percent, implying that most MSPs think the equalization scheme is just right as it is. The share of MSPs who wish for a lower extent of equalization (47 percent), however, clearly exceeds the share of those who would opt for an even higher transfer level (23 percent).

By and large, Figure 5 displays that this pattern also holds for many states individually. However, where a majority of MSPs in Bremen (one of the most prominent net receiving states) think the current fiscal equalization scheme to be too low, a majority in the three main net paying states assess it to be too far-reaching, which is quite intuitive.

Figure 4: Fiscal equalization preferences – overall results

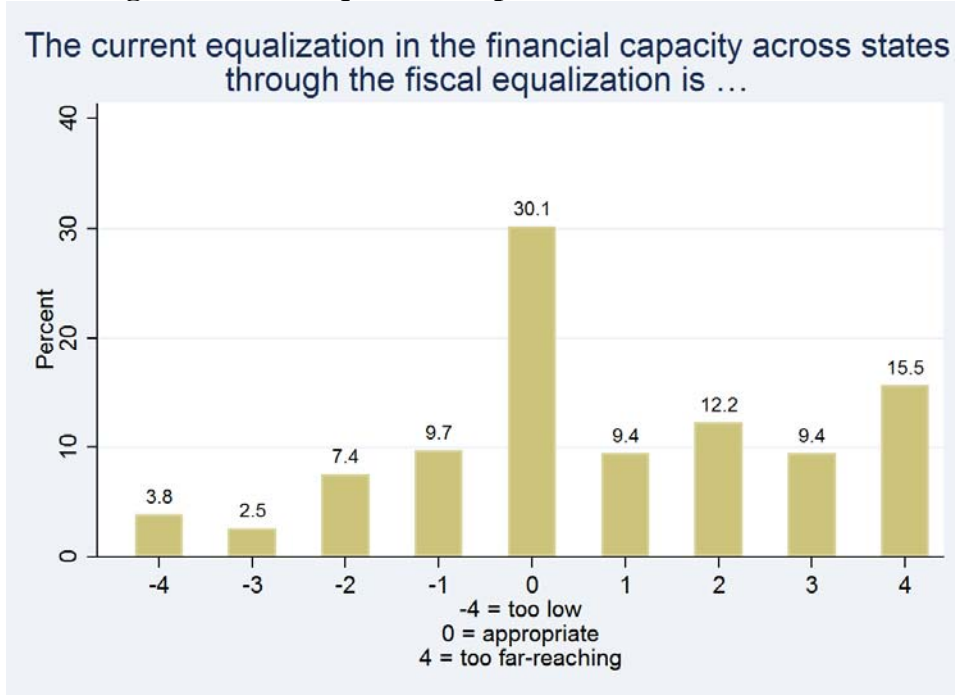
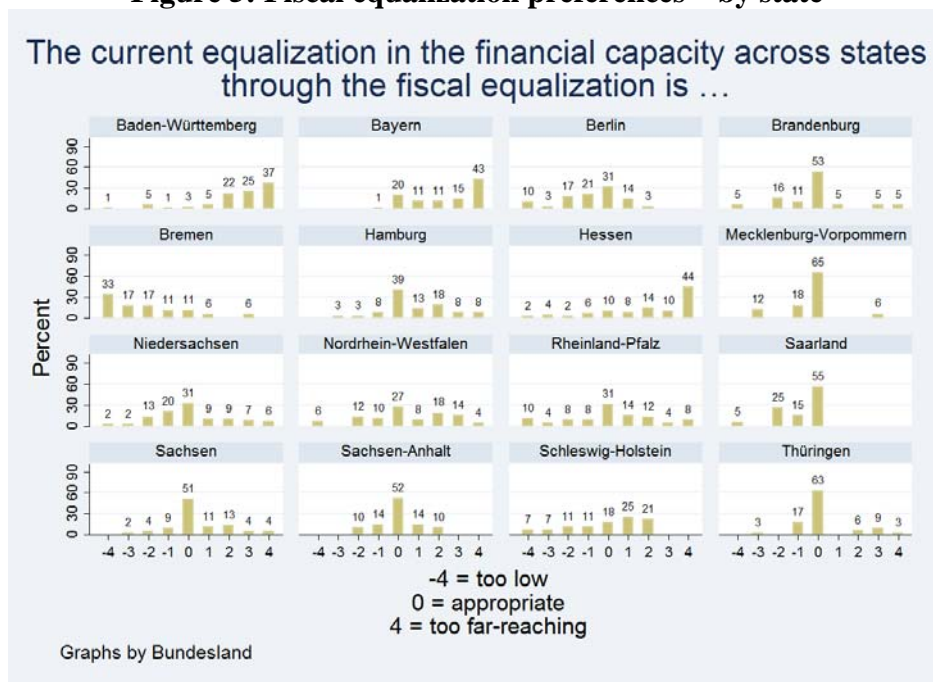


Figure 5: Fiscal equalization preferences – by state



When partitioning states according to their status within the inter-state fiscal equalization scheme (Table 8), net-recipients on average favour the current intensity of equalization (mean answer is -0.08), whereas MSPs from net-paying states clearly advocate a less ambitious redistribution (mean answer is 2.16). This difference in means is again significant at the one percent level. Differences also exist along party lines. As Table 8 shows, none of the political camps think fiscal equalization should be intensified. However, politicians from right parties

(mean answer is 1.06) are rather in favour of cutbacks compared to MSPs from the left (mean answer is 0.28).

Table 8: Fiscal equalization question by status in inter-state fiscal equalization scheme

	Observations	Mean	Standard deviation	Min	Max
Total	631	0.765	2.136	-4	4
Net-paying states	239	2.159	1.896	-4	4
Net-recipient states	392	-0.0842	1.802	-4	4
ANOVA, P-Value of F-Test	0.000				
<i>The Null hypothesis of the ANOVA is that groups have equal means.</i>					

Table 9: Fiscal equalization question by ideology

	Observations	Mean	Standard deviation	Min	Max
Total	566	0.723	2.149	-4	4
Members of right parties	324	1.056	2.105	-4	4
Members of left parties	242	0.277	2.131	-4	4
ANOVA, P-Value of F-Test	0.000				
<i>The Null hypothesis of the ANOVA is that groups have equal means.</i>					

5 Econometric results

Before we present the main results on MSPs' preferences regarding state fiscal autonomy and the level of fiscal equalization, we have to investigate on the different response rates by conducting a non-response analysis for unit non-response⁸. We then conduct an econometric analysis of the response data for the two questions by means of a non-linear estimation approach appropriate for the data structure.

5.1 Non-response analysis

First, it is important to mention, that we can almost entirely foreclose the fact that any non-response might be due to an inability to contact the state politicians, since we sent the

⁸ Unit non-response means that a person did not answer the questionnaire at all. We do not look at item non-response, which means that a person who did answer the questionnaire missed out on a particular question. Item non-response does not seem to be a problem for our study, since the unit non-response rate amounts to at most only 0.8 percent (depending on the question), which is a negligibly small number.

questionnaire by mail and email to their official addresses. We also sent reminders to non-respondents which further diminishes the probability that they simply forgot to respond. Thus, any unit non-response will most likely be due to the individual decision to not respond, be it for lack of motivation, lack of time, or disbelief in our promise to keep all answers confidential.

By conducting a unit non-response analysis we can identify variables at the individual and state level that might have affected politicians' decisions to answer the questionnaire or not. If there are systematic non-responses, including those factors that influenced the probability of answering into our main regressions for the preferences concerning fiscal autonomy as well as the level of fiscal equalization transfers will greatly reduce any potential estimation bias. However, to be sure, we also estimate weighted regressions. This is a "common method of adjustment for unit non-response" and it is "primarily viewed as a device for reducing bias from unit non-response" (Little and Vartivarian, 2005).

To find out about the major influences on politicians' inclination to respond we run a probit regression with a dummy for responses (=1) and non-responses (=0) as our dependent variable (see Table 1). We control for individual characteristics such as educational background, information on political functions within the state parliaments, age, sex, and individual party affiliation. Further, we control for state characteristics by simply including state dummy variables. Standard errors of all regressions presented here are clustered at the party-state level⁹.

We include the different blocks of variables (individual information, party affiliation, state dummies) separately and jointly to be sure that results are robust.

When looking at individual characteristics, we find that politicians who studied economics or business and/or are a member of the respective state parliament's budget committee exhibit a significantly higher inclination to having answered our questionnaire. This might be due to the fact that they are more interested in the issue at hand than non-economists or politicians who are not concerned with their state's budget directly. Furthermore, members of one of the governing coalition parties have been significantly less inclined to responding probably because some of them have a time-consuming function in the government. Female politicians also took part in our survey with lower probability than their male colleagues. Compared to the base category of the liberal democrats (FDP), only members of the Christian Democratic

⁹ Politicians are nested within states and parties. One and the same party, however, often differs across states, which is why we chose to cluster politicians at the party-state level, instead of the state or party level only.

or Christian Social sister parties (CDU/CSU) responded with a higher probability, whereas politicians from all other parties do not differ significantly in their inclination to respond.

Some of the variables characterizing the different states also have a significant impact on the probability of responding, even though most coefficients are only significant at the 10% level. Only, politicians from former Eastern German states have been significantly (at the 1% level) less inclined to take part in our survey.

Using the information we gained from this non-response analysis, we now know which variables we have to incorporate as controls into our analyses necessarily and which variables we could potentially disregard without risking any biased results, if we are not directly interested in their individual impact.

Table 10: Probit estimation for unit non-responses

Probit regressions with response (=1) or non-response (=0) as dependent variable							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Education:</i>							
College entrance qualification	-0.138 [-0.975]	-0.158 [-1.131]	-0.162 [-1.153]		-0.186 [-1.339]		
Tertiary degree	0.150 [1.140]	0.151 [1.105]	0.140 [1.074]		0.138 [1.036]		
Economics/business degree	0.170* [1.834]	0.182* [1.831]	0.200** [2.236]		0.232** [2.528]		
Law degree	0.068 [0.744]	0.089 [0.963]	0.117 [1.270]		0.160* [1.745]		
<i>Information:</i>							
Member of budget committee	0.360*** [4.680]	0.333*** [4.384]	0.353*** [4.623]		0.322*** [4.280]		
Member of legal committee	0.046 [0.500]	0.029 [0.335]	0.032 [0.353]		0.008 [0.096]		
Number of years in parliament	-0.004 [-0.697]	-0.002 [-0.341]	0.000 [0.002]		0.002 [0.364]		
Member of government coalition	-0.169** [-2.328]	-0.204** [-2.185]	-0.106 [-1.502]		-0.124 [-1.257]		
<i>Other individual characteristics:</i>							
Female	-0.274*** [-4.122]	-0.280*** [-4.256]	-0.308*** [-4.583]		-0.320*** [-4.836]		
Age in years	0.003 [0.822]	0.005 [1.321]	0.003 [0.807]		0.005 [1.337]		
<i>Party affiliation^a:</i>							
CDU/CSU	0.283** [2.496]	0.250* [1.705]		0.242** [2.347]		0.221 [1.607]	
SPD	0.102 [0.810]	0.026 [0.152]		0.004 [0.036]		-0.067 [-0.409]	
Green Party	0.065 [0.506]	0.043 [0.232]		-0.033 [-0.254]		-0.054 [-0.340]	
Left Party	-0.118 [-0.739]	-0.259 [-1.404]		-0.148 [-1.044]		-0.292* [-1.780]	
Other parties	0.059 [0.240]	-0.094 [-0.291]		0.121 [0.485]		-0.031 [-0.094]	
<i>State^b:</i>							
Baden-Württemberg	0.468*** [4.331]		0.511*** [3.674]	0.551*** [6.582]			0.563*** [3.668]
Bavaria	0.107		0.141	0.118			0.166

Berlin	[0.827] -0.408***	[0.836] -0.407**	[1.013] -0.392***	[0.992] -0.420***
Brandenburg	[-3.007] -0.283**	[-2.460] -0.326**	[-3.073] -0.301***	[-2.637] -0.369***
Bremen	[-2.093] -0.357**	[-2.292] -0.341	[-3.399] -0.335**	[-2.747] -0.366*
Hamburg	[-2.082] -0.101	[-1.560] -0.085	[-2.167] -0.030	[-1.727] -0.066
Hesse	[-0.816] 0.238	[-0.480] 0.247	[-0.213] 0.261*	[-0.320] 0.262
Mecklenburg-West Pomerania	[1.478] -0.276*	[1.391] -0.300*	[1.840] -0.250*	[1.557] -0.291*
Lower Saxony	[-1.914] 0.015	[-1.845] 0.046	[-1.841] 0.030	[-1.865] 0.046
North Rhine-Westphalia	[0.085] -0.230	[0.257] -0.198	[0.145] -0.163	[0.246] -0.161
Rhineland-Palatinate	[-1.458] 0.398**	[-0.862] 0.444***	[-0.843] 0.395***	[-0.583] 0.405***
Saarland	[2.262] 0.095	[2.760] 0.079	[2.856] 0.167	[2.580] 0.143
Saxony-Anhalt	[0.332] -0.140	[0.241] -0.148	[0.588] -0.159	[0.449] -0.185
Schleswig-Holstein	[-1.075] -0.100	[-0.862] -0.085	[-1.244] -0.090	[-1.159] -0.092
Thuringia	[-0.539] 0.259**	[-0.387] 0.234	[-0.667] 0.232**	[-0.484] 0.187
	[2.414]	[1.375]	[2.392]	[1.135]

Regression diagnostics:

Observations	1,861	1,861	1,861	1,861	1,861	1,861	1,861
Pseudo-R ²	0.065	0.038	0.059	0.043	0.028	0.013	0.035
p-value joint significance of all variables	0.000	0.000	0.000	0.000	0.000	0.003	0.000
p-value joint significance of individual characteristics	0.000	0.000	0.000	n.a.	0.000	n.a.	n.a.
p-value joint significance of party dummies	0.007	0.010	n.a.	0.002	n.a.	0.003	n.a.
p-value joint significance of state dummies	0.000	n.a.	0.000	0.000	n.a.	n.a.	0.000

Notes: This table displays regression coefficients, */**/** denote significance at the 10%/5%/1% level; standard errors in brackets are clustered at the state level; ^a base category is the liberal democratic party “FDP”; ^b base category is Sachsen, since it comes closest to the overall average response rate.

5.2 Tax autonomy and fiscal equalization preferences

The results of the ordered probit regressions are shown in Table 11 (tax autonomy preference) and Table 12 (fiscal equalization preference). As explained above, we include as independent variables personal educational and informational characteristics of MSPs, their party affiliation or ideological camp as well as relevant state characteristics. A summary of descriptive statistics of all variables is given in the appendix (Table A2).

For both models, we apply two different sets of variables to measure ideology. The first column comprises a differentiated set of party dummies whereas the second column uses a mere distinction in right vs. left party affiliation.

For now, we only report first stage coefficient estimates and no marginal effects. Thus, we preliminarily interpret only signs of the coefficients and assess their statistical significance to get a gist of the tendencies of the independent variables' impact.

For both questions, the results reveal that there is no significant impact of individual MSP education on preference formation for or against increased tax autonomy or a more intense fiscal equalization. Concerning tax autonomy, however, specific information seems to have some impact. State parliament members who operate in the legal committee seem to be more opposed to tax autonomy. Preference formation may thus be influenced by the awareness of the current legal constraints in the Federal Republic of Germany which set high hurdles for more state tax autonomy including a change of the constitution. Interestingly, there is no statistically significant impact of being a member of the budget committee. Further tests have to show whether the government/opposition dimension has the asymmetric impact in rich and poor countries as hypothesized in the theory section. We can't answer this question from the insignificant result of the overall government coalition dummy. Expectedly, politicians with a higher preference for lower taxes and fees are also more in favor of tax autonomy. By controlling for this partiality, we can also be sure that the party or left-right dummy variables capture rather real ideological effects instead of political economic preferences.

In fact, we cannot find a clear cut effect of party affiliation on the preferences regarding tax autonomy. Only members of the green party seem to be significantly more opposed to tax autonomy on average than politicians from other parties. However, the left right indicator variable is insignificant.

As expected, tax autonomy preferences are influenced by economic prosperity (GDP per capita) and the three-year average deficit relative to GDP. MSPs from states with higher income per capita are in favor of increased tax autonomy whereas state parliament members in fiscally weak states rather oppose increased tax autonomy. Thus, we find support for the hypothesis that special circumstances, like high public deficit, matter in addition to the current income situation. A constantly high deficit seems to be regarded as a handicap to be successful in tax competition.

Finally, when looking at the coefficient to the absolute deviation of state GDP per capita from federal level GDP per capita, we find exactly the opposite effect than hypothesized. Interestingly, states with per capita income different from the mean are in fact more opposed to higher tax autonomy. The effect of population is as expected, though. *Ceteris paribus*,

larger states are more opposed to tax autonomy, probably because they fear a horizontal tax competition where smaller states set low tax rates.

Results for the fiscal equalization question differ quite substantively. By and large, individual characteristics in terms of education and experience do not seem to influence the preferences for fiscal equalization. However, members of the respective state governments have a higher probability to answer in favor of higher levels of fiscal equalization payments most likely because it is their own incumbent government (coalition) that profits from higher transfers. Politicians with a general preference for lower taxes and fees, on the other hand, are on average more likely oppose higher levels of fiscal equalization.

After controlling for this preference for low taxes, ideology still has a significant impact. As expected left-wing parties are rather in favor of higher levels of fiscal equalization whereas right wing parties are rather in favor of lower levels. This result is robust for both specifications the one with individual party dummies as well as the one including a mere right-left indicator.

In terms of state characteristics, we only find that politicians from states who already strongly rely on fiscal equalization (i.e. net recipients of the transfer scheme) are significantly more in favor of higher levels of fiscal equalization than politicians from net paying states, which is straightforward. Also, MSPs from states with (permanently) high deficits want more fiscal equalization than those from states with low deficits or surpluses.

All results presented here are quite robust to changes in variables, clustering and weighting. When including only individual variables or only state controls, results do not change qualitatively. Also weighting the regressions with the inverse of the response rate along the dimensions party, state, sex and political function does not change our main results.

Table 11: Ordered probit estimation for tax autonomy question

Ordered probit regressions with tax autonomy preference (-4=not in favor; 4=in favor) as dependent variable		
	(1)	(2)
<i>Education</i>		
Tertiary degree	-0.165 [0.107]	-0.181* [0.109]
Economics/Business degree	0.075 [0.123]	0.124 [0.123]
<i>Information</i>		
Member of budget committee	-0.081 [0.110]	-0.078 [0.111]
Member of legal committee	-0.241* [0.130]	-0.235* [0.133]
Number of years in parliament	0.011* [0.006]	0.011* [0.006]
Member of government coalition at state level	0.036 [0.080]	-0.004 [0.077]
<i>Other individual characteristics</i>		
Female	-0.133 [0.106]	-0.095 [0.105]
Age in years	-0.007 [0.004]	-0.007* [0.004]
Preference for lower taxes and fees	0.010** [0.005]	0.011** [0.005]
<i>Party affiliation^a</i>		
CDU/CSU	-0.229 [0.211]	
SPD	-0.311 [0.216]	
Green Party	-0.442* [0.231]	
Left Party	0.059 [0.260]	
Other parties	-0.001 [0.255]	
Right parties		0.096 [0.073]
<i>State characteristics^b</i>		
GDP per capita	0.068*** [0.020]	0.062*** [0.021]
Absolute deviation of state GDP per capita from federal GDP per capita	-0.071*** [0.027]	-0.060** [0.027]
Population	-0.040*** [0.014]	-0.039*** [0.014]
Total debt to GDP	0.013* [0.008]	0.014* [0.008]
3 year average of deficit to GDP	-0.378*** [0.100]	-0.386*** [0.110]
Fiscal equalization transfers to GDP	-0.014 [0.051]	-0.026 [0.053]
Former Eastern Germany	-0.104 [0.276]	-0.126 [0.283]
City state	-0.437 [0.314]	-0.513 [0.327]
<i>Regression diagnostics</i>		
Observations	636	617
Pseudo-R ²	0.028	0.026
p-value joint significance of all variables	0.000	0.000
p-value joint significance of individual characteristics	0.015	0.024
p-value joint significance of party dummies	0.047	n.a.
p-value joint significance of state-controls	0.000	0.000

Notes: This table displays regression coefficients, ***/**/* denote significance at the 10%/5%/1% level; standard errors in brackets are clustered at the state level; ^a base category is the liberal democratic party “FDP”; ^b State characteristics are 2010 data for survey waves 1 and 2, which both took place in 2011, and 2011 data for survey wave 3, which took place in 2012.

Table 12: Ordered probit estimation for fiscal equalization question

Ordered probit regressions with preferences regarding the level of fiscal equalization transfers (-4=too low; 4=too far-reaching) as dependent variable		
	(1)	(2)
<i>Education</i>		
Tertiary degree	0.017 [0.086]	-0.015 [0.085]
Economics/Business degree	-0.063 [0.103]	-0.059 [0.107]
<i>Information</i>		
Member of budget committee	0.065 [0.100]	0.083 [0.100]
Member of legal committee	-0.053 [0.129]	-0.052 [0.132]
Number of years in parliament	-0.000 [0.006]	0.001 [0.006]
Member of government coalition at state level	-0.267* [0.139]	-0.317** [0.130]
<i>Other individual characteristics</i>		
Female	-0.049 [0.120]	-0.023 [0.123]
Age in years	-0.002 [0.005]	-0.003 [0.005]
Preference for lower taxes and fees	0.014*** [0.005]	0.014*** [0.005]
<i>Party affiliation^a</i>		
CDU/CSU	-0.062 [0.152]	
SPD	-0.375*** [0.127]	
Green Party	-0.407** [0.178]	
Left Party	-0.011 [0.201]	
Other parties	-0.183 [0.274]	
Right parties		0.284** [0.119]
<i>State characteristics^b</i>		
GDP per capita	0.032 [0.021]	0.032 [0.021]
Population	-0.016 [0.017]	-0.020 [0.017]
Total debt to GDP	0.007 [0.010]	0.009 [0.010]
3 year average of deficit to GDP	-0.484*** [0.154]	-0.542*** [0.152]
Fiscal equalization transfers	-0.253*** [0.075]	-0.248*** [0.077]
Former Eastern Germany	-0.405* [0.236]	-0.388 [0.240]
City state	-0.669 [0.480]	-0.741 [0.467]
<i>Regression diagnostics</i>		
Observations	630	611
Pseudo-R ²	0.107	0.102
p-value joint significance of all variables	0.000	0.000
p-value joint significance of education and information variables as well as other individual characteristics	0.114	0.027
p-value joint significance of party-dummies	0.013	n.a.
p-value joint significance of state-controls	0.000	0.000

Notes: This table displays regression coefficients, ***/**/* denote significance at the 10%/5%/1% level; standard errors in brackets are clustered at the state level; ^a base category is the liberal democratic party "FDP"; ^b State characteristics are 2010 data for survey waves 1 and 2, which both took place in 2011, and 2011 data for survey wave 3, which took place in 2012.

6 Conclusion

The public finance literature has contributed a lot to our understanding of the incentive and welfare effects of federal institutions. By contrast, insights into the determinants of reform preferences and reform resistance of political decision makers are rare. This study contributes to this white spot in the context of the federal reform debate in Germany.

Our results are preliminary and further refinements and robustness checks are needed. The refinements will have to deal, *inter alia*, with the potential asymmetric effect the government-opposition dimension.

In spite of these limitations, first insights emerge. Reform preferences with respect to tax autonomy and changes to the inter-state fiscal equalization scheme are partially related to party ideology. As expected, the parties to the right are more inclined to accept lower equalization and increasing tax autonomy than the left parties.

With respect to state variables, GDP per capita is positively correlated with support for tax autonomy. What is striking, however, is the highly significant impact of the public deficit level both on tax autonomy and equalization preferences. This hints to the role of special circumstances and handicaps rooted in the states' budgets which may be a substantial obstacle to accepting more autonomy. If this result is confirmed in further testing this would point to the potential of a political bargain for the new fiscal equalization system from the year 2020 onwards: A solution to the problem of high public deficits (and legacy debt) could pave the way towards the acceptance of more state revenue autonomy in the future.

Appendix

Table A 1: Variable description

<i>Education</i>		
College entrance qualification	Dummy	Secondary qualification for college entrance
Tertiary degree	Dummy	Degree from university or polytechnic
Economics/Business degree	Dummy	Tertiary education in business or economics
Law degree	Dummy	Tertiary education in law
<i>Information</i>		
Member of budget committee	Dummy	Deals with state government budget
Member of legal committee	Dummy	Deals with state's legal issues
Number of years in parliament	Discrete	Calculated as 2011/2012 minus year of parliament entry (interruptions taken into account)
Member of government coalition at state level	Dummy	Member of one of the ruling parties
<i>Other individual characteristics</i>		
Female	Dummy	Member of parliament is female
Age in years	Discrete	Calculated as 2011/2012 minus year of birth
Preference for lower taxes and fees	Continuous	Calculated as the percentage of a hypothesized additional state budget that is allocated to lowering taxes and fees (between 0 and 100%)
<i>Party affiliation</i>		
FDP	Dummy	Member of Free Democratic Party (base category)
CDU/CSU	Dummy	Member of Christian Democratic or Christian Social Party
SPD	Dummy	Member of Social Democratic Party
Green Party	Dummy	Member of Green Party
Left Party	Dummy	Member of Left Party
Other parties	Dummy	Member of other party
Right parties	Dummy	Member of right wing party (CDU/CSU, FDP; No value for the "other parties")
<i>State characteristics</i>		
GDP per capita	Continuous	Gross domestic product per capita, in thousand Euros, <i>source:</i> German Statistical Office
Absolute deviation of state GDP per capita from federal GDP per capita	Continuous	Absolute deviation of state GDP per capita from federal GDP per capita <i>source:</i> German Statistical Office
Population	Continuous	Population in millions <i>source:</i> German Statistical Office
Total debt to GDP	Continuous	Total debt divided by gross domestic product, in %, <i>source:</i> German Statistical Office
3 year average of deficit to GDP	Continuous	3 year average of deficit to GDP <i>source:</i> German Statistical Office
Fiscal equalization transfers	Continuous	Total net inter-state fiscal equalization transfer payments divided by GDP, in %, <i>sources:</i> Federal Ministry of Finance, German Statistical Office
Former Eastern Germany	Dummy	State is a former Eastern German state
City state	Dummy	Berlin, Bremen, and Hamburg

Table A 2: Summary statistics for Variables

	Observations	Mean	Standard deviation	Min	Max
<i>Dependent variables (answer to survey question)</i>					
Tax autonomy question	636	0.113	3.041	-4	4
Fiscal equalization question	630	.765	2.136	-4	4
<i>Education</i>					
Tertiary degree	636	0.744	0.437	0	1
Economics/Business degree	636	0.176	0.381	0	1
<i>Information</i>					
Member of budget committee	636	0.206	0.404	0	1
Member of legal committee	636	0.142	0.349	0	1
Number of years in parliament	636	8.308	6.939	0	38
Member of government coalition at state level	636	0.538	0.499	0	1
Preference for lower taxes and fees	636	3.044	9.882	0	100
<i>Other individual characteristics</i>					
Female	636	0.242	0.429	0	1
Age in years	636	51.481	10.281	23	73
<i>Party affiliation</i>					
FDP	636	0.064	0.246	0	1
CDU/CSU	636	0.443	0.497	0	1
SPD	636	0.270	0.445	0	1
Green Party	636	0.118	0.323	0	1
Left Party	636	0.074	0.262	0	1
Other parties	636	0.030	0.170	0	1
Right parties	617	0.524	0.500	0	1
<i>State characteristics</i>					
GDP per capita	636	30.988	7.135	21.402	49.434
Absolute deviation of state GDP per capita from federal GDP per capita	636	5.680	4.279	0.104	18.901
Population	636	6.769	5.003	0.661	17.845
Total debt to GDP	636	27.496	15.405	6.920	73.628
3 year average of deficit to GDP	636	0.898	0.863	-0.397	3.604
Fiscal equalization transfers	636	-0.404	1.571	-3.511	3.604
Former Eastern Germany	636	0.228	0.420	0	1
City state	636	0.135	0.342	0	1

References

- Braun, D. (2007), How to Make German Fiscal Federalism Self-Enforcing: A Comparative Analysis, *Zeitschrift für Staats- und Europawissenschaften* 2, 235-262.
- Bucovetsky, S. and J.D. Wilson (1991), Tax Competition with Two Tax Instruments, *Regional Science and Urban Economics* 21 (3), 333-350.
- Deubel, I. (2007), Mehr Steuerautonomie Der Bundesländer? Sind Die Voraussetzungen Erfüllbar?, *Zeitschrift für Staats- und Europawissenschaften* 2, 218-234.
- Federal Ministry of Finance (2011). Federation/Länder Financial Relations on the Basis of Constitutional Financial Provisions. Fiscal and Economic Policy Department.
- Federal Ministry of Finance (2012a). The Federal Financial Equalisation System in Germany. Public Finance Department.
- Federal Ministry of Finance (2012b). Monthly Report of the Federal Ministry of Finance February 2012, Federal Ministry of Finance.
- Federal Statistical Office. (2012). Statistik Über Das Steueraufkommen, (20/11/2012).
- Fuest, C. (2008), Steuerwettbewerb Unter Den Bundesländern - Wären Die Finanzschwachen Länder Die Verlierer?, in: K. Konrad und B. Jochimsen (Hrsg.), *Föderalismuskommission Ii: Neuordnung Von Autonomie Und Verantwortung*. Peter Lang, Frankfurt et al., 119-133.
- Keen, M.J. and C. Kotsogiannis (2002), Does Federalism Lead to Excessively High Taxes?, *American Economic Review* 92 (1), 363-370.
- Krause-Junk, G. (2010), Steuerverwaltung an Den Bund!, *Wirtschaftsdienst - Zeitschrift für Wirtschaftspolitik* 5, 280.
- Little, R.J. and S. Vartivarian (2005), Does Weighting for Nonresponse Increase the Variance of Survey Means?, *Survey Methodology* 31 (2), 161-168.
- Rodden, J.A., G.S. Eskeland and J. Litvack (2003), *Fiscal Decentralization and the Challenge of Hard Budget Constraints*. MIT Press, Cambridge.
- Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2003), *Staatsfinanzen Konsolidieren - Steuersystem Reformieren*, Wiesbaden.
- Seitz, H. (1999). Subnational Government Bailouts in Germany. Center for European Integration Studies - Working Paper B20/1999. Bonn.
- Stehn, S.J. and A. Fedelino (2009). Fiscal Incentive Effects of the German Equalization System. IMF Working Paper 2009/124. I. M. F.-F. A. Department.
- Velasco, A. (1999), A Model of Endogenous Fiscal Deficits and Delayed Fiscal Reforms, in: J. M. Poterba und J. Von Hagen (Hrsg.), *Fiscal Institutions and Fiscal Performance*. Univ. of Chicago Press, Chicago [et al.], 37-57.
- Von Hagen, J. and R. Hepp (2001). Regional Risk-Sharing and Redistribution in the German Federation. CEPR Discussion Paper 2662. C. f. E. P. Research.
- Werner, J. (2006), Local Government Organization and Finance: Germany, in: A. Shah (Hrsg.), *Local Governance in Industrial Countries*. The International Bank for Reconstruction and Development / The World Bank, Washington D.C., 117-148.
- Zodrow, G.R. and P. Mieszkowski (1986), Pigou, Tiebout, Property Taxation, and the Underprovision of Local Public Goods, *Journal of Urban Economics* 19 (3), 356.