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Equalisation among the states in Germany: The Junction Between Solidarity and Subsidiarity

Jan Werner
(Cologne Business School)

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Equalisation among the states in Germany: The Junction between Solidarity and Subsidiarity

by

Jan Werner[1]

Abstract: Germany's fiscal federalism has undergone a process of perpetual reform. On the one hand, some tax revenues such as the national corporate income tax generated a lower volume of fiscal resources because of changes in the system, or fluctuated extremely like the local trade tax due to economic effects. On the other hand, the judgement by the Constitutional Court has necessitated a renewal of Germany's equalisation system. Besides illustrating the tax sharing system between the three tiers of government, the main part of this paper deals with the equalisation among the 16 federal states. Moreover, in June 2017 a new system of intergovernmental fiscal relations was stipulated. It is to be implemented from 2020 onwards, and it will change the federal structure of Germany considerably. The legislative package alone comprises 13 constitutional amendments, which the Bundestag and Bundesrat must each adopt by a two-thirds majority. In addition, there are a number of other legislative changes that redefine the cooperation between the central government and the federal states on financial matters. Based on these descriptions of Germany, suggestions are made as to how Spain can avoid pitfalls in the area of fiscal federalism and what lessons they can learn from negative experiences in Germany. Overall Germany has a sound fiscal federalism with minor political mildew.

JEL Classification: H7; H2; H1

Keyword: Fiscal Federalism, Germany, Grants, Fiscal Autonomy, Germany,

[1] Jan Werner, Lead Economist at the Institute of Local Public Finance, Friedrich-Ebert-Straße 79, 63225 Langen, Germany and Professor of Economics at the Cologne Business School, Hardefuststraße 1, 50677 Köln, Germany; email: jan.werner@ilpf.de The findings, interpretations, and conclusions expressed in this paper are entirely those of the author. They do not necessarily represent the view of the ILPF GmbH and CBS GmbH.

1. Introduction

The decentralisation of expenditure and public functions is only "one side of the coin" of fiscal federalism. Just as well it has to be settled how this delegation is financed and how independent the subnational and local authorities are in their provision of public goods and services. A reasonable intergovernmental finance system has to consider the following principles[2]:

(1) Revenue autonomy, subsidiarity and connectivity (*local accountability*)
(2) Transparency of the tax system and direct impact of the tax burden (*benefit tax link*)
(3) Reference to local circumstances and neutrality of the taxes with regards to the private sector
(4) Tax bases, which are not affected by economic fluctuation and are also viable
(5) Simplicity of tax system

At first glance, these five principles seem to be trying to "square the circle" and even at second glance, it has to be admitted that no federal or unitary country in the world has implemented a public finance system that fulfils these five principles completely. Various countries have chosen different ways to reach these goals and thus the conception of how to finance subnational and local services differs significantly. The respective advantage and disadvantages of each method can best be assessed in a general comparison.

The Anglo-Saxon countries like Canada, the USA and the United Kingdom provide their local authorities with a very extensive system of property taxation. A local property tax has the advantage that a direct link between benefit and cost of the public goods can be established. This direct link between the preference of the citizens in local public goods and the policy makers, who have to provide the local public goods, cannot be created by grants or transfers. Besides a local property tax, a group of European countries – namely Switzerland, Belgium, Croatia and the Scandinavian countries – give significant tax autonomy to their local authorities and therefore a local surcharge on the personal income tax is common.

Furthermore, a third possibility to finance local authorities has been chosen by Austria, Bolivia, Germany, Luxemburg, Pakistan and Poland, which developed a local tax system with its own revenues as well as tax-sharing. The pros of a tax-sharing system are stable revenues, because the taxes are not as strongly affected by economic

[2] For detailed description see for example Spahn, 1995 as well as Werner, 2008a

fluctuations, and a common tax for all tiers of government, which strengthens the solidarity between the different tiers of government ("we are all sitting in the same boat"). The cons of tax-sharing are the lack of revenue autonomy and for this reason a lower level of local accountability and less transparency than in the Anglo-Saxon model with a intensive property tax, or in the Scandinavian model with a local piggy-back tax on the national personal income tax. Nevertheless, vertical grants are also needed in the Anglo-Saxon model and the Scandinavian model and the German model. Grants and transfers avoid external effects and spillovers; for example a local jurisdiction benefits from services of other local authorities without participating in the cost. This situation often exists in the relationship between a metropolitan city and its suburbs. A reasonable solution of this problem is the FOCJ (*functional, overlapping, and competing jurisdiction*) concept (see Frey / Eichenberger, 1995). Moreover, the school communities of the Swiss canton of Zurich and the North American special districts are the only successful examples of the FOCJ concept.

However, it is important to know German history to understand the German equalisation system among the states. During the Middle Ages and early modern period, Germany was made up of a huge number of small, independent and self-confident states. 300 German states existed during the so-called Holy Roman Empire of the German Nation in the 17th century. For this reason Germany has a long tradition of federalism and is not a centralised state like France or Great Britain, for example. Under the occupation by Napoleon's army, this sectionalism was reduced by creating bigger kingdoms and duchies in Germany, but the Germans did not accept this "imported territorial reorganisation" by the French Napoleon. The second German Empire, which existed from 1871 until 1918, excluded the German-speaking Austria, and thus represented the so-called "Lesser German solution", still consisting of 26 states, with four kingdoms, six grand duchies, five duchies, seven principalities, three free Hanseatic cities and the imperial territory of Alsace-Lorraine. However, the kingdom of Prussia contained about two thirds of Germany's population and territory, and its dominance was also established constitutionally. After World War I, the Weimar constitution aspired to establish the accountability of government to an elected parliament, but failed to render the latter politically viable. A highly fragmented party system, which represented a rickety society at a time of major social and political upheavals, and the national parliament eventually fell prey to the ploys and threats of the Nazis, which ended the short-lived democracy between the two wars. Hitler's ascendance to power had proceeded via Berlin and through Prussian institutions, with the other states of the federation being impotent or unwilling to counterbalance his usurpation of power. This is why the Allies abolished the state of Prussia immediately after World War II, thereby eliminating one important asymmetry and source of political instability.

The newly created zones, later *länder* or states, did not necessarily respect historic boundaries and, after the Nazi experience, regional balance and symmetry became guiding principles for the reconstruction of postwar Germany, at least in the former West Germany. However, a concession to German history was the creation of so-called city states, Hamburg and Bremen and after unification Berlin, which introduced a minor asymmetric element into intergovernmental fiscal relations that has more recently attracted the attention of the Constitutional Court. But as a general rule, as the devastation of World War II had left all regions equally poor and deprived of economic resources, balanced regional development and uniform living conditions became attractive features for policymaking and institution building. These principles were not only incorporated in the new federal constitution, but they became so entrenched in people's minds and penetrated all domains of collective decision-making that they would survive even the quandary of unification in 1990. Indeed, German unification, with the formerly socialist East Germany representing roughly 20 per cent of the population, but only less than 6 per cent of total value added, was, and still is, a major challenge for the political system and the economy.

Moreover, history explains why modern German states exert their sovereignty only conjointly at the national level, through the Bundesrat, the upper house, which consists of representatives of state governments, not elected officials like in the US Senate. No individual state is accorded privileges in the Bundesrat other than its vote, which is exerted *en bloc* and weighted roughly by population. The result of the majority vote is binding for all, and the policy outcome is uniform across the nation. In particular, the tax law is identical, even for state and municipal taxes (though municipalities are accorded some discretion in setting tax rates for municipal taxes), and the states are denied any form of own taxation. Tax revenue is typically shared and apportioned among layers of government according to the constitution for income taxes or law for the value added tax (VAT), and is disbursed horizontally among regional entities according to formulas with strong equalisation components.

Although Germany's political landscape has varied considerably in recent years, with new entrants to parliament such as the Green Party in the 1980s, the former Communist Party since reunification, and the extreme national conservative "Alternative for Germany" more recently, the political system and its institutions rely heavily on achieving consensus according to the preferences of the median voter. He or she will ultimately determine the pace of politics at the national level, with the states and municipalities being compelled to implement and administer such policies within a common national framework.

A host of intergovernmental transfers aimed at fostering national homogeneity and uniformity of living conditions, combined with the states' inability to use their own tax instruments, exacerbate the almost complete lack of policy discretion at lower tiers of government and the emptiness of the agenda of state parliaments. This interregional solidarity is pushed to the point where the average command of public resources per capita is now higher in the needier states than in some of the richest states in the west. It is this outcome that spurred a constitutional challenge by three more affluent states in southern Germany in 2001: Baden-Wuerttemberg, Bavaria and Hesse. The issue of solidarity versus subsidiarity was raised officially at this point for the first time, although it had been discussed in academic circles for a while.

2. The financing of the federal states in Germany

Germany is a federal state with a three-level administrative structure. In addition to the federal government, whose ministries are based both in Germany's capital, Berlin, and in Germany's former capital, Bonn, there are 16 federal states (*Bundesländer*)[3] and 11,094 municipalities.

Within the local administrative bodies in Germany, a further distinction is made between the regional planning associations[4], the 293 rural districts (*Landkreise*), the 107 incorporated cities (*kreisfreie Städte*) and the municipalities, which form part of the rural districts. The towns and municipalities, which after numerous territorial reforms in

[3] Three of the 16 federal states are city-states (Berlin, Bremen and Hamburg). These three federal states do not separate their municipal budgets from their respective federal budgets and thus only have a federal budget. Similar budget structures can be found in Austria for the municipality of Vienna and the federal state of Vienna and as well as in United States of America with its capital Washington.

[4] The metropolitan regions of Stuttgart, Hanover and Frankfurt are called regional planning associations. A quite similar administration unit also exists in Aachen and Saarbrucken,which consists of former incorporated city and some surrounding municipalities which were combined in a rural district.

the respective federal states between 1970 and 1977 have become very compact[5] by now in terms of their inhabitant structures, are the smallest local units in Germany.
In Germany, tax revenues are distributed among the individual regional administrative bodies both according to own assigned revenues and revenues sharing. This, for example, means that the tax receipts from the real property tax are available to the municipalities in full, while they also receive a fixed percentage of the tax receipts from the value added tax (VAT) and the personal income tax (PIT). The distribution of the most important tax revenues is shown in Table 1:

Table 1: Tax revenues assignments between the central government, the federal states and the municipalities in 2017

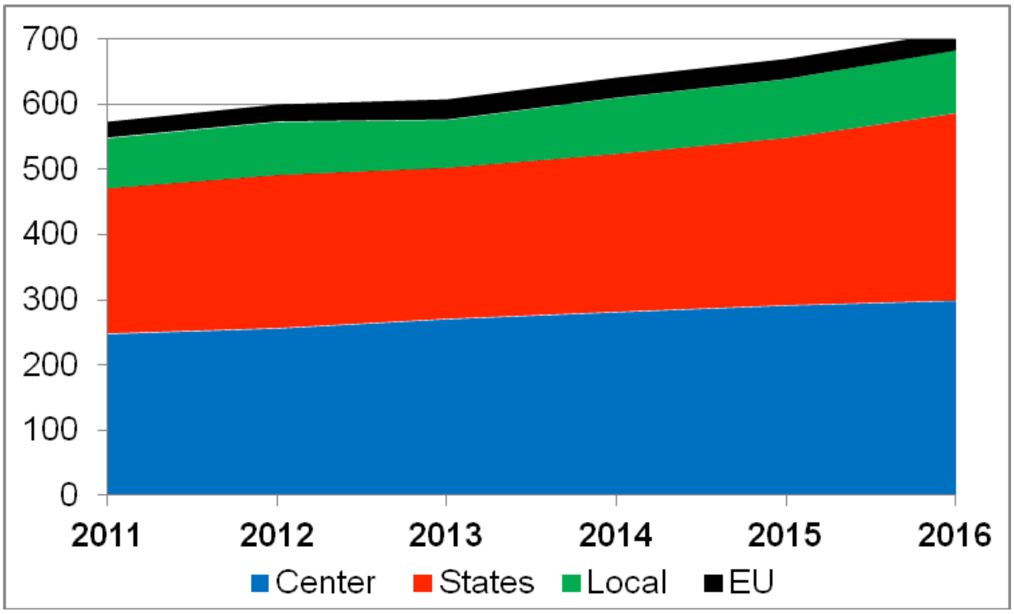
	Central Government	Federal States	Local units	Revenues
Consumption tax[6]	100 %			€ 92 billion
Surtax on the personal income tax and corporate income tax[7]	100 %			€ 18 billion
Inheritance tax		100 %		€ 6 billion
Property tax			100 %	€ 14 billion
Personal income tax	42.5 %	42.5 %	15 %	€ 275 billion
Value added tax	51.0 %	46.4 %	2.6 %	€ 226 billion
Corporate income tax	50 %	50 %		€ 29 billion
Interest rebate	44 %	44 %	12 %	€ 7 billion
Trade tax[8]	3.7 %	12.7 %	83.6 %	€ 52 billion

Source: Author.

Figure 1 below presents the distribution of all taxes and customs among the central government, the 16 federal states, the local units and the European Union.

[5] Yet, Germany is far from creating a realigned municipal structure, which Denmark did when it reformed its territories in 1970 and in 2007.
[6] Tax on mineral oil, electricity, tobacco, spirits, coffee, vehicles and sparkling wine.
[7] The surtax on the personal income tax and corporate income tax was introduced to finance the cost of the German reunification. In 1991 the surtax on the payroll tax, the income tax as well as the corporate income tax was 7.5 %. In 1993 and 1994 the tax rate was 0 %, from the 1995 to 1997 the central government demanded a tax rate of 7.5 % and since 1998 the tax rate is 5.5 %.
[8] The respective quota has been modified a couple of times. For example, in the fiscal year 2001 the central government received 14.8 %, the federal states 7.7 % and the local units 77.5 % of the local trade tax. The determination of this quota has generated an emotional political discussion, because the trade tax is the most important local tax and on the other hand both the central government and the federal states can fix the quota without any right of refusal by the local units.

Figure 1: Distribution of tax and customs in € billion of the central government, the federal states , local units and the European Union from 2011 and until 2016



Source: Author.

The political accountability for the expenditure is not always clearly defined in Germany. For example the level and criteria of the social welfare are fixed by the central government, but the disbursement of the grants and the examination of the respective social neediness is the responsibility of the local authorities. Moreover, the central government delegates a huge number of administrative duties – mainly in the area of social security - to the federal states and the local authorities and bears the expenses of these delegations. Table 2 shows the distribution of the accountability for some areas of expenditure between of different tiers[9] of government.

Table 2: Distribution of the accountability for some areas of expenditure

	Central Government	Federal States	Rural Districts	Municipalities
Foreign policy	X			
Currency policy	X			
Defence policy	X			
Social welfare	X			
Roads, railways and inland water transportation	X	X	X	X
Education		X		
Police		X		
Construction Supervision			X	
Maintenance and new			X	

[9] Cities combine the accountabilities of a rural district and a municipality in one administration unit.

building of school facilities				
Public transportation			X	
Maintenance and new building of public hospitals			X	
Kindergarten				X
Fire department				X
Theatres and museums				X
Parks and sports facilities				X
Waste management				(X)
Electricity supply				(X)
Water supply				(X)

(X) = The majority of the municipalities arranged special purpose associations for this task. The purpose associations are owned and politically controlled by the municipalities. A minority of municipalities have sold their special purpose associations to private companies, but they have concluded long-term arrangements with the private companies.
Source: own illustration.

On 23 May 1949, the West German constitution was published. The central government stipulated that all federal state taxes were to be uniformly regulated, and from the second financial year, the central government participated in the tax-sharing of personal income tax and corporate income tax, and thus created in effect the "small" tax-sharing system. The tax administration was divided so that each tier of government managed its own tax, and eventually, financial equalisation among the states was first organized horizontally in 1950. In a financial reform in 1955, the previously provisional regulation of the distribution of tax revenues in the constitution was replaced by a permanent distribution. The law of 1955 stipulated that in future, the central government should be entitled to one third of personal income tax and corporate income tax. In return, the federal state financial equalisation system provided a means of allocating temporary financial allocations in order to absorb the additional burden faced by federal states.

With the Great Municipal Finance Reform in 1969, the "big" tax-sharing system of income and corporate income tax as well as VAT was created. The federal state share of the VAT tax is - as conceived in 1948/49 - distributed on the basis of population. The more intensive state equalisation system was preceded by a VAT equalisation scheme for particularly weak federal states, and was followed by supplementary grants awarded by the central government, which would however have been possible even before the

1969 reform. Table 3 below summarizes the "pure or direct" horizontal transfers between the ten[10] western states from 1950 until 1994.

Table 3: Pure, horizontal transfers between the ten federal states except Berlin in millions of € from 1950 to 1994 (a positive value means that the state received funds and a negative value shows that the respective state lost money). The key to the abbreviations for the German federal states is to be found in the appendix.

	NRW	BAY	BW	NDS	HE	RP	SH	SAAR	HH	HB
1950	-64	+17	-33	+41	-14	+17	+53	0	-16	-0.3
1951	-42	+6	-16	+13	-9	+14	+52	0	-18	0
1952	-69	+7	-23	+28	0	+16	+59	0	-20	0
1953	-74	+13	-39	+30	0	+9	+71	0	-11	0
1954	-77	+20	-40	+37	0	+9	+69	0	-17	-0.4
1955	-138	+52	-59	+65	-4	+46	+112	0	-67	-6
1956	-169	+56	-71	+92	0	+61	+131	0	-81	-18
1957	-181	+71	-89	+106	-23	+88	+139	0	-101	-9
1958	-248	+112	-61	+136	-36	+114	+124	0	-135	-5
1959	-255	+119	-76	+131	-28	+143	+130	0	-162	-0.7
1960	-264	+94	-55	+132	-34	+131	+109	0	-113	0
1961	-384	+112	-97	+228	-79	+170	+156	+65	-170	0
1962	-369	+117	-140	+251	-98	+177	+181	+73	-192	0
1963	-268	+99	-154	+203	-116	+181	+171	+82	-199	0
1964	-251	+118	-183	+220	-159	+166	+182	+90	-183	0
1965	-275	+96	-187	+260	-184	+165	+178	+106	-165	+6
1966	-207	+71	-222	+256	-209	+179	+195	+112	-180	+4
1967	-216	+62	-238	+346	-215	+171	+189	+118	-216	-2
1968	-190	+51	-220	+313	-223	+185	+200	+131	-246	-1
1969	-248	+119	-316	+454	-319	+250	+265	+154	-353	-6
1970	-162	+75	-160	+208	-148	+116	+101	+73	-150	+45
1971	-188	+101	-194	+230	-100	+122	+106	+73	-176	+25
1972	-175	+91	-302	+312	-158	+143	+126	+79	-158	+37
1973	-174	+85	-301	+347	-185	+126	+141	+94	-169	+36
1974	-292	+177	-259	+379	-164	+152	+139	+99	-259	+28
	NRW	BAY	BW	NDS	HE	RP	SH	SAAR	HH	HB

[10] Without the divided city of Berlin, which received special grants from the central government,

1975	-221	+188	-337	+366	-105	+150	+122	+91	-278	+23
1976	-257	+169	-367	+392	-98	+174	+137	+99	-276	+26
1977	-182	+204	-540	+475	-132	+146	+164	+107	-316	+73
1978	-62	+152	-555	+452	-240	+181	+181	+110	-298	+79
1979	0	+167	-580	+512	-264	+148	+205	+116	-425	+120
1980	-39	+205	-769	+385	-152	+126	+165	+146	-160	+91
1981	0	+137	-837	+514	-182	+154	+216	+133	-218	+82
1982	0	+83	-914	+577	-143	+142	+218	+134	-220	+122
1983	0	+68	-730	+360	-169	+130	+248	+155	-197	+133
1984	0	+21	-747	+427	-293	+145	+268	+170	-150	+159
1985	+46	+14	-738	+422	-370	+191	+288	+183	-207	+170
1986	0	+24	-891	+436	-400	+193	+314	+195	-101	+227
1987	+84	0	-977	+570	-627	+244	+306	+172	-29	+257
1988	+14	0	-981	+806	-736	+159	+304	+170	0	+262
1989	-50	-33	-722	+855	-984	+155	+295	+168	-6	+322
1990	-32	-18	-1263	+985	-739	+250	+307	+187	-4	+327
1991	-4	-2	-1281	+898	-681	+301	+308	+194	-33	+300
1992	-1	+27	-770	+661	-942	+338	+206	+218	0	+261
1993	+15	-6	-517	+510	-1093	+397	+95	+215	+58	+325
1994	+79	-342	-209	+490	-934	+335	+36	+221	+30	+290

Source: BMF, 2012

After the reunification, the newly formed federal states in the eastern part were included in the equalisation system in 1995 for the first time. The federal states have no tax autonomy[11] and their most important revenues are the shared portion from the VAT and the PIT. For this reason, the equalisation system among the states (*Länderfinanzausgleich*) has a huge financial effect to the federal states.

Germany's fiscal equalisation among the federal states is based on article 107 of the German constitution and consists of several levels. Generally, the horizontal fiscal equalisation among the federal states can be classified as

(1) the distribution of corporation tax and personal income tax

(2) the distribution of value added tax

(3) fiscal equalisation among the federal states (narrow definition)

[11] The federal states can only vary the tax rate of the conveyance duty.

(4) and the allocation of additional funds by the central government

Generally, the fiscal authorities in the respective federal states are entitled to receive, in full, the tax revenues from the state own taxes and a share of both the income tax and the value added tax, according to the principle that taxes are collected in the place where they were generated.

When apportioning the corporation tax, the principle of the business location of the trade tax applies, while the apportioning of the personal income tax between the federal states is based on the principle of the taxpayer's place of residence.

The law of segmentation and the principle of the taxpayer's place of residence has the following impact for the companies and the local tax offices. The companies and firms have to pay the wage tax of their employees to their local tax office. The local tax office has to transfer the wage tax of the employee, if the employee lives in another state. This situation is quite usual in Germany, because a huge number of employees commute from the suburbs to city centre – especially at the city states of Hamburg and Bremen – or drive a long distance to their place of work; e.g. from the eastern state of Thuringia to the western state of Hesse. The following table 4 shows that this "clearing effect"[12] has a enormous impact for the city states of Hamburg and Bremen as well as for the state of North Rhine-Westphalia in the fiscal year of 2016:

Table 4: Effect of place of residence at the wage tax for 16 states at the fiscal year of 2016

	Population	Balance at the wage tax due to the law of segmentation	
	in Mio	Amount in € Mio.	Portion of the wage tax
States with a negative balance at the wage tax segmentation	--	--	--
North Rhine-Westphalia	17.8	- 4,121	7.9 %
Baden-Wuerttemberg	10.8	-2,462	6.7 %
Hesse	6.1	-1,178	5.5 %
(Hanseatic city) Hamburg	1.7	-3,146	33.5 %
(Hanseatic city) Bremen	0.6	-0,557	26.9 %
Bavaria	12.8	-1,147	2.6 %
Berlin	3.5	-0,370	4.0 %
States with a positive balance at the wage tax segmentation	--	--	--
Lower Saxony	7.9	2,667	16.0 %
Rhineland-Palatinate	4.0	2,032	24.8 %

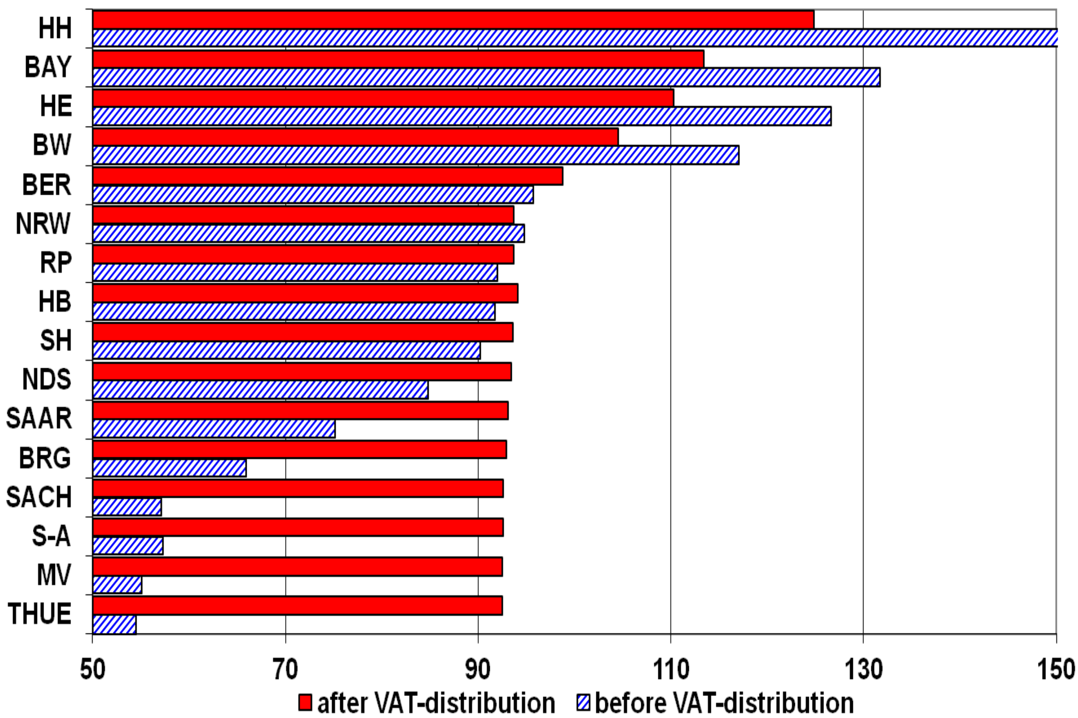
[12] There is a distribution key for lowering administration costs in Germany, which is recalculated every three years.

Schleswig-Holstein	2.8	1,536	28.5 %
Saarland	0.9	0,217	10.7 %
Saxony	4.0	1,691	29.8 %
Saxony-Anhalt	2.2	1,098	40.0 %
Thuringia	2.1	1,083	38.7 %
Brandenburg	2.4	1,832	51.8 %
Mecklenburg-Western Pomerania	1.6	0,827	45.6 %
total	82.175	12.986	5.8 %

Source: own calculation based on various data from the Statistisches Bundesamt

This principle of apportioning the taxes is also applied when determining the percentage that the federal states receive of the value added tax. Article 107, section 1, clause 4 of Germany's constitution stipulates that at least 75% of the generated VAT to which the federal states are entitled has to be distributed among the federal states according to the number of their inhabitants. The remaining 25% is distributed as an additional percentage to the financially weak states. Particularly because of Germany's reunification and the resulting incorporation of the new federal states into the Federal Republic of Germany, this financial redistribution has gained enormous significance. Figure 1 serves to better illustrate the instrument of VAT redistribution and its effect in the fiscal year 2016:[13]

Figure 2: Effect that the redistribution of the remaining percentage of VAT had in 2016:



Source: own calculations

[13] Each of the 16 Federal States has an abbreviation, which is explained in the appendix. .

It is clearly recognisable that already by redistributing the VAT, the new and financially weaker German states have come very close to reaching the average level of financial strength of the federal states.

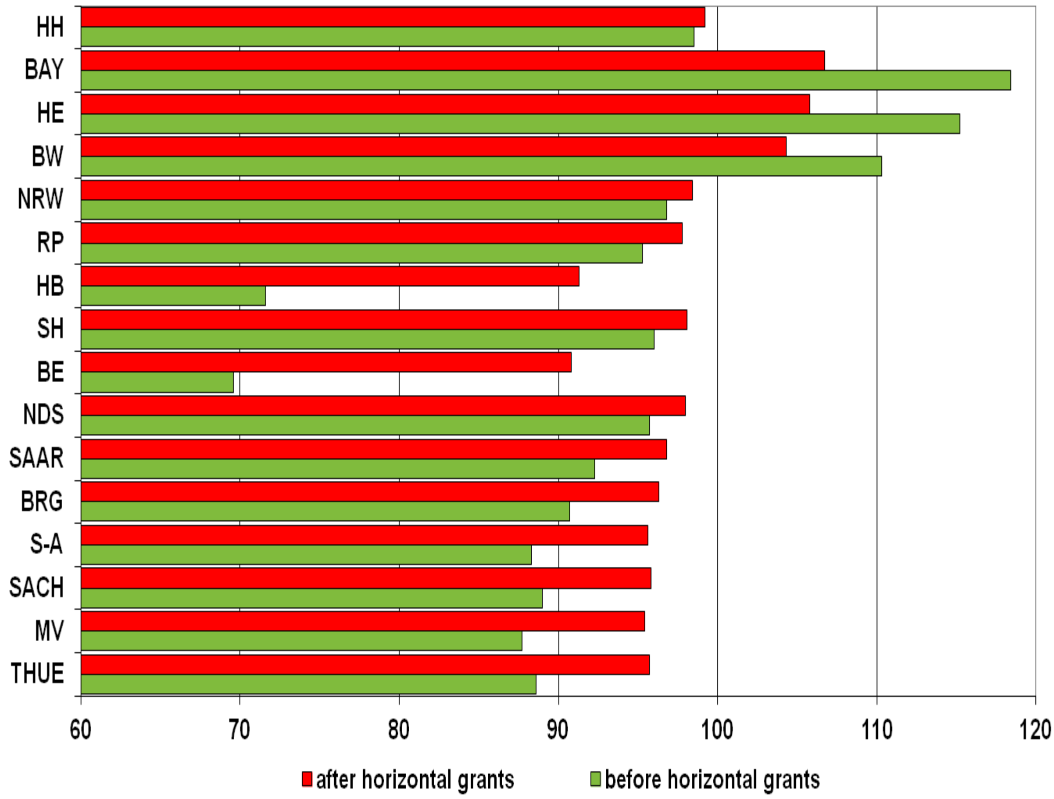
Under the narrow definition of the fiscal equalisation system among the federal states, there are direct horizontal transfer payments between the federal states. The legal basis of these transfer payments is section 4 of the fiscal equalisation law (*Finanzausgleichsgesetz)*.

So as to determine the financial strength of every single federal state, one has to calculate the financial strength indicator in the fiscal equalisation system. This figure is composed of a state-specific total sum of state taxes as well as 64% of the municipal taxes.

The financial requirements of each state are determined is calculated by multiplying the number of inhabitants of that state by the average nation-wide per-capita figure of the state and municipal tax revenues. While state tax revenues are considered completely, the municipal taxes are only taken into account at 64 % percent of this collection. Moreover the inhabitant numbers of the city-states of Hamburg, Bremen and Berlin have been "readjusted", i.e. their inhabitant numbers have been multiplied by the factor 1.35. This „adjustment“ is very controversial in Germany (see Baretti et al., page 16-18 and Hickel, 2001, page 4). Besides, there are some smaller additional allowances of 5 % for Mecklenburg-Western Pomerania, of 3 % for Brandenburg and of 2 % for Lower Saxony to consider the effect to a densely populated federal state.

If the financial requirements of a federal state are higher than its financial strength, this state will receive equalisation funds from the financially stronger states, whose financial strength is higher than their requirements. By means of these equalisation funds, the "recipient states" among Germany's federal states are able to increase their financial strength, but at the same time, the financial strength of the "donor states" must not fall below 100% of the average nation-wide financial strength. Figure 3 outlines the effect of the horizontal fiscal equalisation among Germany's federal states in 2016:

Figure 3: Effect of the horizontal fiscal equalisation as a percent of mean financial strength among Germany's federal states in 2016:

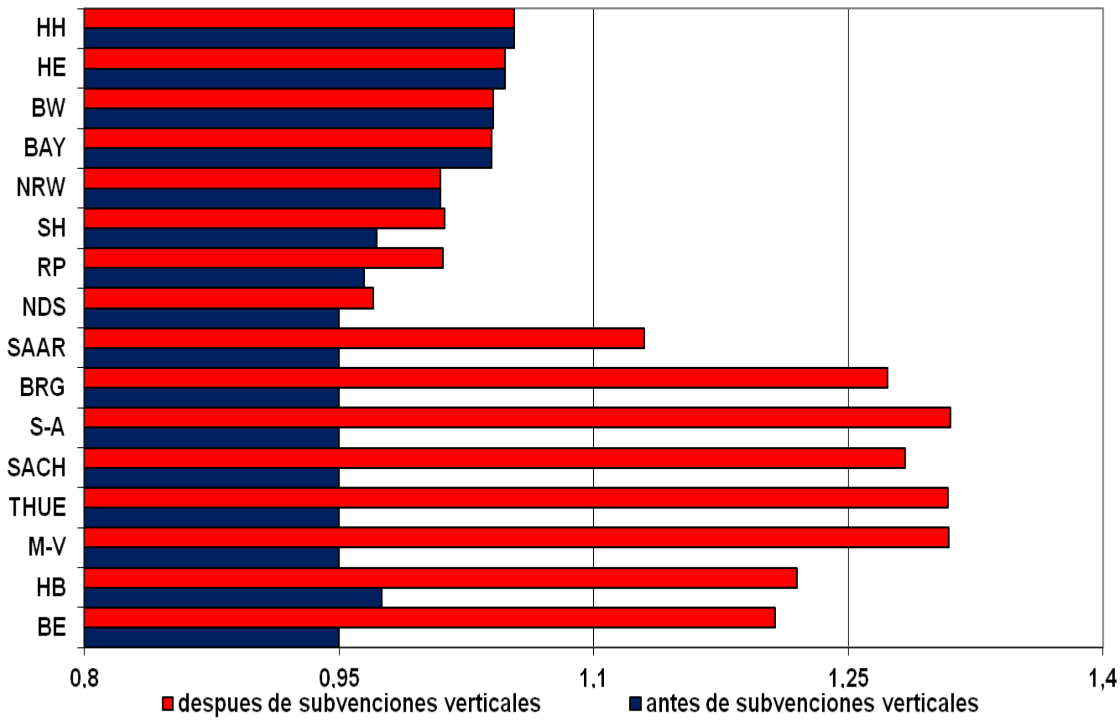


Source: own calculations

On account of the additional funds allocated by the central government, there are vertical grants from the federal government to the federal states. In 2004, the equalisation volume of the central government's additional funds amounted to about € 15.6 billion in total. Regarding the central government's allocation of additional funds, a distinction can be made between the allocation of deficit-coverage funds and special requirement funds.[14]

The deficit-coverage funds enable the financially weak "recipient states" to reach nearly 99.5% of the average financial strength of the federal states. The allocation of special requirement funds means that for particular reasons, some federal states receive additional funds from the federal budget. Thus, for example around € 0.75 billion a year flows to all those federal states with less than four million inhabitants in order to compensate for the disproportionately high political and administrative costs. The Hanseatic city of Hamburg does not benefit from this regulation. Figure 4 illustrates the effect of the vertical grants in 2004:

Figure 4: Effect of the vertical allocation of funds on the federal states in 2004



Source: own calculations

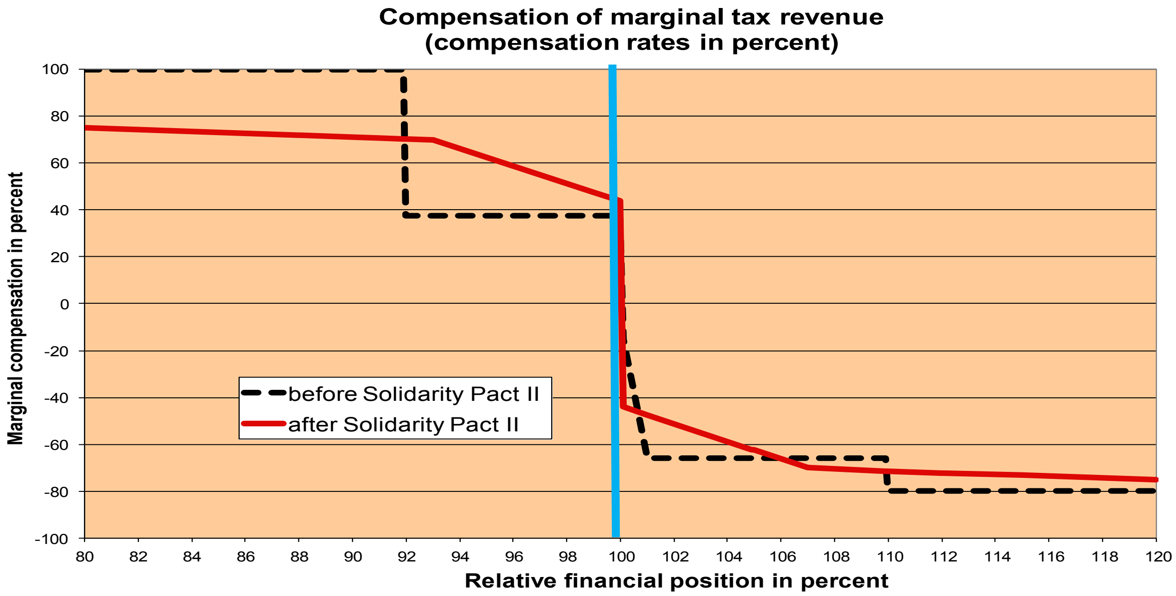
The fiscal equalisation system in its current form is a highly contentious issue. The federal states of Baden-Württemberg, Bavaria and Hesse have filed successful lawsuits at Germany's Constitutional Court in Karlsruhe. On 23rd June 2001, the federal states and the central government agreed on a reform of the fiscal equalisation system, which will come into force from 2005 onwards and will last until 2019.

A so-called premium model was introduced from 2005 onwards, which is meant to provide positive incentives both to the donor states and the recipient states under the fiscal equalisation system. By disregarding a flat percentage of 12% of above-average tax receipts and below-average tax shortfalls, the respective federal states are to be rewarded for positive developments regarding their tax revenues.

The rates governing the horizontal equalisation figures among the federal states have also been modified, and from 2005 onwards, there will be a change from the graduated tariff to a steady and linear tariff with considerably lower siphoning-off rates as far as the donor states are concerned. Consequently, the donor states no longer have to expect a siphoning-off rate of up to 80%, but only a rate of 75% at the most. The following figure 5 deals with the marginal rates of compensation before the framework of Solidarity Pact II (red- continuous line) and from 2005 onwards (black-dashed line).

[14] A detailed description of the vertical funds and their criteria is located in the appendix.

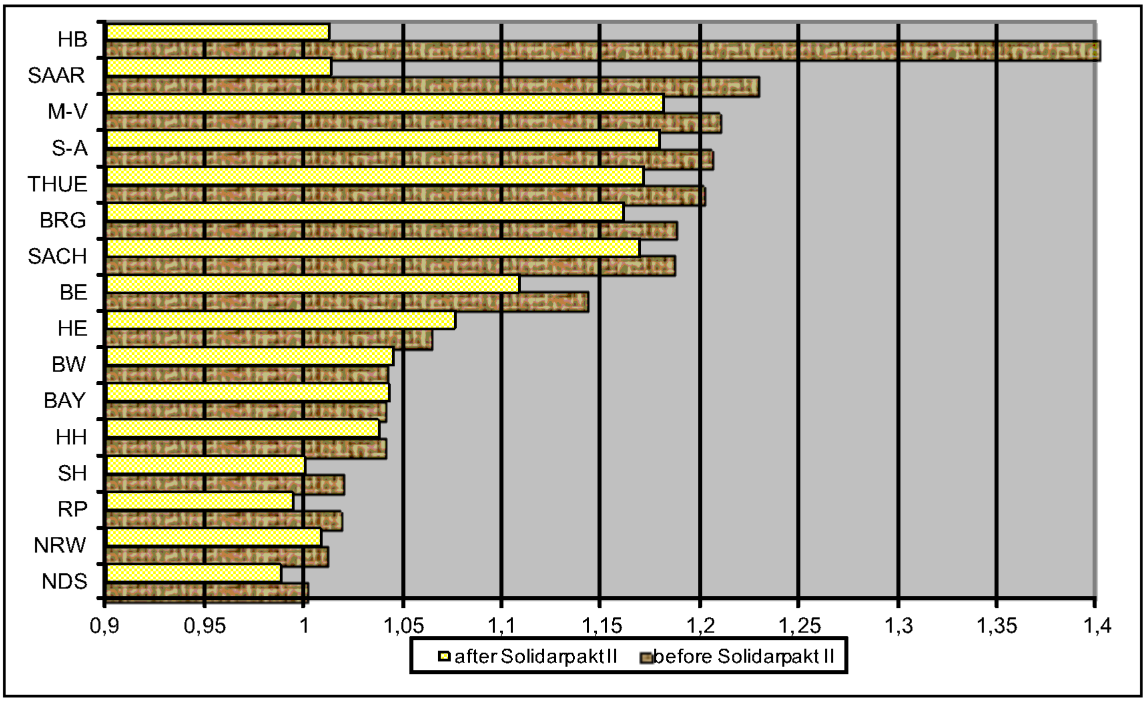
Figure 5: Marginal rates of compensation before and after the Solidarity Pact II



Source: Spahn / Werner, 2007, page 103

The following figure 6 illustrates both the impact of the horizontal as well as the vertical equalisation among the federal states up to 2005 (before the Solidarity Pact II) and from 2005 onwards (after the Solidarity Pact II) and is based on the tax receipts of 2001. It is easy to see that particularly the removal of the vertical allocation of funds for budgetary crises to Bremen and Saarland, and the first-time consideration of Saxony as a recipient of vertical funds towards the costs of its political administration have an enormous effect:

Figure 6: Effects of the Solidarity Pact II, based on the tax revenues of 2001



Source: Werner, 2003, page 92.

Nowadays, the vertical grants to the poorer states play a minor role in the equalisation system, because another feature of Solidarity Pact II is that the special vertical grants for the states' burden owing to the division of Germany were reduced from to €10.53 billion in 2005 to €2.10 billion in 2009. For this reason, the poorer states still have more funds per capita available than the economically rich states, although the gap has constantly been reduced. Table 5 presents the percentage above the national average of fiscal revenues per capita of the three donor states Baden-Wurttemberg, Bavaria and Hessen as well as the three receiving states Mecklenburg-Western Pomerania, Thuringia and Saxony for 2004 and 2016.

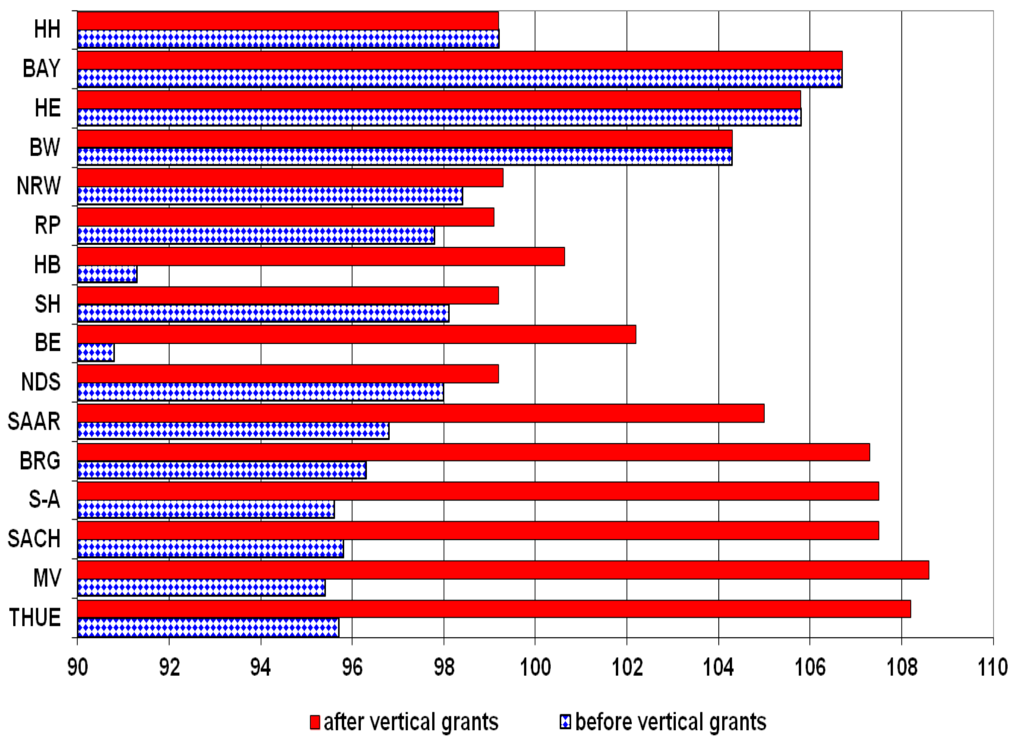
Table 5: Fiscal revenues per capita above the national average in Germany in 2004 and 2016

2004	Name of the federal state	2016
4 %	Baden-Wuerttemberg	4. 3 %
4.1 %	Bavaria	6.7%
4.8 %	Hesse	5.8 %
30.9 %	Mecklenburg-Western Pomerania	8. 6%
30.8 %	Thuringia	8.2 %
28.4 %	Saxony	7.5 %

Source: Werner, 2008b

The following Figure 7 illustrates the effect of the vertical grants in 2016:

Figure7: Effect of the vertical allocation of funds on the federal states in 2016:



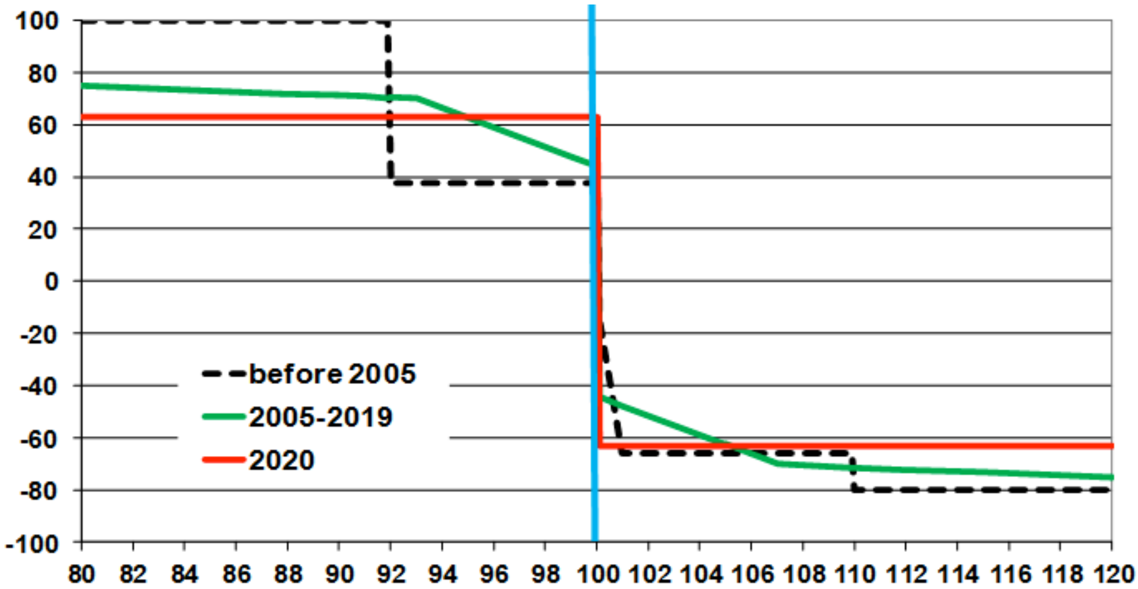
Source: Werner, 2018

In June 2017, the federal legislature adopted a new system of intergovernmental fiscal relations to take effect from 2020 onwards, which will change the federal structure of Germany considerably. The legislative package alone comprises 13 constitutional amendments, which the Bundestag and Bundesrat must each adopt by a two-thirds majority. In addition, there are a number of other legislative changes that redefine cooperation between the central government and the federal states on financial matters. The main features of the reform package of 2020 are:

- No more pure horizontal transfer between states
- However, the reform has also increased the fiscal volume of the VAT distribution, because the central government has decreased their tax-sharing of VAT and 16 federal states will receive a higher proportion of the VAT. The proportion of VAT given to the 16 federal states is mainly based on the population figure, but some money is also reserved just for the financially weak states. As in the past, financial strength will be determined similarly to the fiscal equalisation among the federal states (narrow definition or pure horizontal transfer), whereby the municipal financial power will be weighted more strongly (75% instead of 64%) and the revenues from natural resources / mining will be weighted less heavily (33% instead of 100%). The "population readjustment" for the three city states and the premium model are retained in the new system. The shipping rates or offsetting of the marginal tax revenues will in the future be more proportional than in the past progressive compensation rate (see Figure 8).
- The reform package aims to allocate more money to the federal states in future and to give the Bund more competences. From 2020 onwards, the federal states will be discharged with around € 9.7 billion annually. In return, the Bund is to be given more control and auditing rights - in tax administration or investment in schools, for example. Part of the overall package is also the founding of an infrastructure company for the construction, planning and operation of federal motorways.

The following Figure 8 presents the different marginal rates of compensation before 2005, from 2005 to 2019, and from 2020 in the German equalisation system.

Figure 8: Marginal rates of compensation before 2005, from 2005 to 2019 and from 2020



Source: Werner, 2018

3. Conclusion

The German fiscal federalism mainly equalises revenue disparities between the Länder. The advantages of an equalisation system, which is based on revenue equalisation, is that it is easier to administer and more transparent. However, revenue equalisation systems are generally unable to consider spillovers. For this reason, revenue equalisation should be used solely for regions or provinces, while a local equalisation system should be based on cost equalisation.[15]

The lesson that Spain can learn from the German experience is that a high equalisation volume can lead to an "equalisation overdose". Basically, in Germany neither the donor states nor the recipient states within the equalisation system have a high incentive to attract additional tax revenues. The German equalisation systems punish every extra tax administration effort of the states through extremely high siphoning-off rates. For this reason, some the states have decided to thin out their tax administration. As matter of course they do not confirm this behaviour officially and the state Finance Ministers usually react quite nervously to this "political minefield".[16] For this reason, a principle

[15] For a general description of a local equalisation system based on revenues and local needs see Werner, 2006.

[16] In the appendix there is a table which points out the different "Audit Probability" in German states for the years 1997 and 1999. The "Audit Probability" in this table is measured as the number of tax clerks per 1,000 taxpayers.

of solidarity without any competitive element within the equalisation system can provoke a situation in which the subnational entities in Spain have fewer incentives to mobilize resources.

However, if Spain wants to revise its intergovernmental system a formula-based system with a fixed sunset clause should be given preference over ad hoc decisions. In terms of accountability, unconditional block grants make more sense than earmarked grants. If, on the other hand, the central government of Spain wants to ensure national minimum standards of public goods, earmarked grants are preferable. The distinction between unconditional block grants and earmarked grants automatically becomes a political hot potato, because the national MoF or rather the central government loses power to the subnational entities if the equalisation system is formula-based and mainly unconditional.

Furthermore, matching grants to local and regional authorities can lead to the desired investment decision and at the same time give central government the ability to render subnational governments politically docile.

Both the standard opinion in public finance literature as well as the personal suggestion is that performance-oriented grants are an innovative instrument for a transfer system and may lead to result-based accountability in the subnational units.

The level of the marginal rates of compensation, the equalisation model and the institutional arrangements for intergovernmental fiscal transfers are always the subject of a fundamental political decision which could be a “hard row to hoe”, if we consider the lengthy political reform discussions in Germany and Switzerland, for example. The only way of avoiding this political “hot potato” is to delegate the whole equalisation measurement to an independent Council of Economic Experts such as the Australian Commonwealth Grant Commission. On the other hand, however, such “political outsourcing” always leads to a lack of democratic control and boosts the complexity of the system, because bureaucratic experts have to consider other principles than an elected representative.

The reasons for fiscal equalisation are manifold and are influenced by political and economic views. Fiscal equalisation can be used to solve or ease fiscal conflicts between the different tiers of government. However, if the political stakeholders do not possess a common interest such as the continuance of a country and would prefer to see the secession of a region, even a well designed equalisation system would not able to prevent such a situation. The case of Bosnia and Herzegovina is quite unique (see

Werner, Guihery and Djukic, 2006), because on the one hand the respective ethnic groups in this country use the distribution of tax revenues to heat up national tension, and on the other hand the international community is working to avert a separation through external political pressure as well as an internal control institution named OHR.
In some countries like Spain, **SOME** fiscal conflicts are the result of an unfulfilled wish for independence by the regions and if one erroneous trend in the intergovernmental system is rectified, the political leaders of the Autonomous Communities bring up another painful subject, instead of considering their huge autonomy and the successful development of Spanish democracy over the last decades.[17]
Another dimension of fiscal conflicts is natural resources, and therefore Spahn's suggestion that "such conflicts are best avoided a priori through a clear tax and revenue assignments rules" (see Spahn, 2007, page 197) is more than reasonable.
An additional aspect of fiscal equalisation is the fact that fiscal equalisation can raise serous problems for central budget stability if the topic of the bail-out problem is underestimated. Besides the famous bail-out the United States for New York City in December 1975 or the debt behaviour of the Argentinean provinces during the currency board period (un peso = un dollar), there are various other examples where subnational bail-outs have a huge effect for the whole country, such as the regional health insurance system of the southern part of Italy or the two small federal states of Saarland and Bremen. Fortunately the Spanish debt level is not comparable to Greece or California, but a sound debt management is one of the most neglected components of public finance management in every country around the world.
Sometimes fiscal conflicts are brought to an end by external shocks as in Indonesia. Since the central government of Indonesia mandates funds to the regions destroyed by the tsunami, the wish for independence in the region of Aceh has decreased enormously. However, the question as to whether fiscal equalisation or fiscal conflicts came first cannot be clearly answered. Rather, every federal and unitary country has to design its own junction between solidarity and subsidiarity.
Another very typical problem of German fiscal federalism is the behaviour of the politicians at the national level, which could be described as "Counting the chickens before they are hatched". For example, the central government enacted the child support act (*Kinderförderungsgesetz-KiföG*) in 2008,a law that guarantees that, from August

[17] See Werner, 2009.

2013, all parents in Germany will be able to send their children to a kindergarten on their first birthday. However, the central government covers only one third of the forecasted cost of € 12 billion and the local units currently do not have sufficient revenues to build any new kindergartens. Since 2008 the central government has shifted the responsibility onto the local units and the local units were only able to offer only 420,00 additional kindergarten places of the 750,000 nursery places required. Another example of shifting the fiscal burden towards the future is the national bank rescue umbrella (SoFFin). The German SoFFin was established by the Financial Market Stabilization Act in October, 2008 and is managed by the Financial Market Stabilization Agency (FMSA). The future deficit after the dissolution of the fund is to be shared between the central government and the 16 federal states at a ratio of 65/35, while the maximum for the federal states is limited to € 7.7 billion. However, if we consider that € 400 billion was used for guarantees[18] and € 80 billion for recapitalisation and assumption of risk position (bad banks) this is another unknown burden for German fiscal federalism.

Moreover, in Germany the states are the major decision-makers for primary and secondary schools and every state has its own regulation concerning the maximum number of pupils per class as well as the educational content. Based on the results from the various Pisa reports from the OECD, we can observe a north-south slope in Germany. For example, in the 2006 Pisa report Bavaria, Saxony and Thuringia achieved a similar level to the top ranking countries Finland, Canada or Japan in the sector "scientific literacy". In contrast, the knowledge of pupils from Bremen or North Rhine-Westphalia was lower than the OECD average along with countries such as Turkey, Poland or the U.S.A. The PISA reports inevitably generated a lot of political discussion in Germany and even gave rise to the phrase "Pisa Shock".

An advantage of Germany's local public finance is the prevention of tax exporting. With the exception of the second home tax, every local tax has more or less a benefit-tax link to the respective local authority. But on the other hand, the benefit-tax link could be boosted enormously, if the fixed portion of the PIT was abolished and the municipalities received the right to impose a further tax surcharge on the personal income tax. The municipal right to impose a tax surcharge on the one hand increases the tax competition between the local administrative bodies, and at the same time makes the inhabitants

[18] The majority of guarantees were limited to three years and they are currently not used; see also Werner, 2016.

contribute directly towards the costs of the municipal infrastructure. For the inhabitants, in particular, this makes things much more transparent, as they no longer contribute towards the financing of communal facilities (kindergartens, club subsidies, municipal roads, public swimming pools, social and cultural facilities) in an indirect fashion via a fixed percentage of the income tax, but via the "noticeable" municipal tax rates.

As mentioned before, the political accountability for the expenditure is not always clearly defined in Germany. Moreover, Germany's local public finance suffers from a tremendous complexity. However, all things considered, German fiscal federalism is a sound fiscal federalism with minor political mildew.

4. Appendix

Table A1: Abbreviations of the German federal states

	German	English
S-A	Sachsen-Anhalt	Saxony-Anhalt
MV	Mecklenburg-Vorpommern	Mecklenburg-Western Pomerania
THUE	Thüringen	Thuringia
SACH	Sachsen	Saxony
BRG	Brandenburg	Brandenburg
SAAR	Saarland	Saarland
NDS	Niedersachsen	Lower Saxony
RP	Rheinland-Pfalz	Rhineland-Palatinate
SH	Schleswig-Holdstein	Schleswig-Holstein
NRW	Nordrhein-Westfalen	North Rhine-Westphalia
BW	Baden-Württemberg	Baden-Wuerttemberg
BAY	Bayern	Bavaria
HE	Hessen	Hesse
BE	Berlin	Berlin
HH	(Hansestadt) Hamburg	(Hanseatic city) Hamburg
HB	(Hansestadt) Bremen	(Hanseatic city) Bremen

Source: Author

Table A2: Types and criterions of the different vertical grants from central government towards the states in the fiscal year of 2011

Type	Criteria	Volume in € Mio.	recipient states
deficit-coverage funds (*Fehlbetragsbundes-ergänzungszuweisung*)	enable the financially weak "recipient states" to reach 77.5 % of the respective 99.5% of the average financial strength of the federal states	2.626	Saxony-Anhalt, Thuringia, Saxony, Brandenburg, Mecklenburg-Western Pomerania, Lower Saxony, Saarland, Rhineland-Palatinate, Schleswig-Holstein, Berlin, Bremen
special requirement funds for political administration costs (*Sonderbedarfszuweisungen für überdurchschnittliche Kosten der politischen Führung)*	States with less than 4 million inhabitants	517	Saxony-Anhalt, Thuringia, Brandenburg, Mecklenburg-Western Pomerania, Saarland, Rhineland-Palatinate, Schleswig-

			Holstein, Berlin, Bremen
special requirement funds for the burden by the division of Germany (*Sonderbedarfsbundesergänzungszuweisungen aufgrund teilungsbedingter Sonderlasten*)	All states, which were newly formed by the German reunification	8.027	Saxony-Anhalt, Thuringia, Saxony, Brandenburg, Mecklenburg-Western Pomerania, Berlin
special requirement funds for high unemployment (Sonderbedarfszuweisungen für strukturelle Arbeitslosigkeit)		1000	Saxony-Anhalt, Thuringia, Saxony, Brandenburg, Mecklenburg-Western Pomerania,
Total	---	12.170	---

Source: Author

Table A3: Audit Probability in German States for the years 1997 and 1999

	1997	1999
NRW	4.71255	4.4731515
BAY	3.85792	3.7885001
BW	4.39388	4.1519066
NDS	4.37292	4.4472924
HE	4.73701	4.6529072
SACH	4.89705	4.8849013
RP	4.81786	4.7529658
S-A	5.41163	5.2080417
SH	4.27887	4.2064463
THUE	5.0373	4.8945202
BRG	5.27095	4.8932231
M-V	5.71429	5.4771242
SAAR	4.8601	4.7840633
BE	8.27718	8.5805896
HH	7.09002	6.7643208
HB	7.31852	6.4148148

Source. Torgler / Werner, 2005, page 87.

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