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Fiscal Equalisation among the states in Germany

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Fiscal Equalisation among the states in Germany

by

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Abstract: Germany's fiscal federalism has undergone a process of perpetual reform. On the one hand, some tax sources that have existed up to now – the corporate income tax is a good example in this context – will shortly be phased out because of changes in the system. On the other hand the judgement by the Constitutional Court has required a renewal of Germany's equalisation system. Besides an illustration of tax sharing between the three tiers of government, the main part of this paper deals with the equalisation among the 16 federal states. In the framework of the reforming process of the “Solidarity Pact II”, the distribution of tax revenues, vertical grants and fiscal equalisation among the federal states were newly arranged.

JEL Classification: H7; H2; H1

Keyword: Fiscal Federalism, Grants, Fiscal Autonomy, Germany

1. Introduction

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*)² plus a number of regional administrative bodies in Germany.

Within the local authorities in Germany, a further distinction is made between the regional planning associations (*regionale Planungsverbände*)³, the 323 rural districts (*Landkreise*), the 116 incorporated cities (*kreisfreie Städte*) and the 13,897 municipalities, which form part of the rural districts. The towns and municipalities, which after numerous territorial reforms in the respective federal states between 1970 and 1977 have become quite compact⁴ 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 revenues⁵ 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 2006

	Central Government	Federal States	Communities	Revenues in 2006
Consumption tax ⁶	100 %			€ 72.938 billion
Inheritance tax		100 %		€ 3.763 billion
Property tax			100 %	€ 10.398 billion
Personal income tax	42.5 %	42.5 %	15 %	€ 152.082 billion
Value added tax	51.4 %	46.4 %	2.2 %	€ 146.688 billion
Corporate income tax	50 %	50 %		€ 22.808 billion
Interest rebate	44 %	44 %	12 %	€ 7.633 billion
Trade tax ⁷	14.8%	7.7%	77.5 %	€ 38.369 billion

Source: Author.

The political accountability for the expenditure is not 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 tiers⁸ 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 building of school facilities			X	
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 political 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: Werner, 2006, page 119.

The German fiscal equalisation among the federal states (*Länderfinanzausgleich*) is based on article 107 of the German constitution (*Grundgesetz*) and consists of several levels. The interstate equalisation system was first utilised in 1950 as a kind of compensation for “special burden” like for example of harbour maintenance. In 1955 these transfers received the constitutional basis by the creation of the said article 107. On the hand, article 107 determines that a portion of the VAT, owned by the states,

have to use to support economically weak states as well as richer states have to distribute poorer states directly. On the other hand, the exact amount of these two instruments is not written down in article 107. In fact the constitutional article 107 only points out that the central government has to develop an equalisation law and this law needs in both house of parliaments – the national parliament (*Bundestag*) as well as in the joint representation of state governments in the upper chamber (*Bundesrat*) – a majority. Therefore the states can influence by their behaviour in the *Bundesrat* the design of the equalisation systems directly.

Furthermore in Germany exists an intergovernmental forum to strengthen the political dialog between of all three tiers of government. The Financial Planning Council (*Finanzplanungsrat*) consists of the Federal Minister of Finance as chairman, all 16 State Minister of Finance and additionally 4 representatives of the local authorities, which were selected by the *Bundesrat*. Moreover one representative of the German Federal bank (*Bundesbank*) takes part of the meetings of the Financial Planning Council as a constant adviser. The Financial Planning Council meets twice a year and try to arrange a common budget policy of central government, states and local authorities as well as the observance of debt criteria of the Maastricht treatment about the common currency.

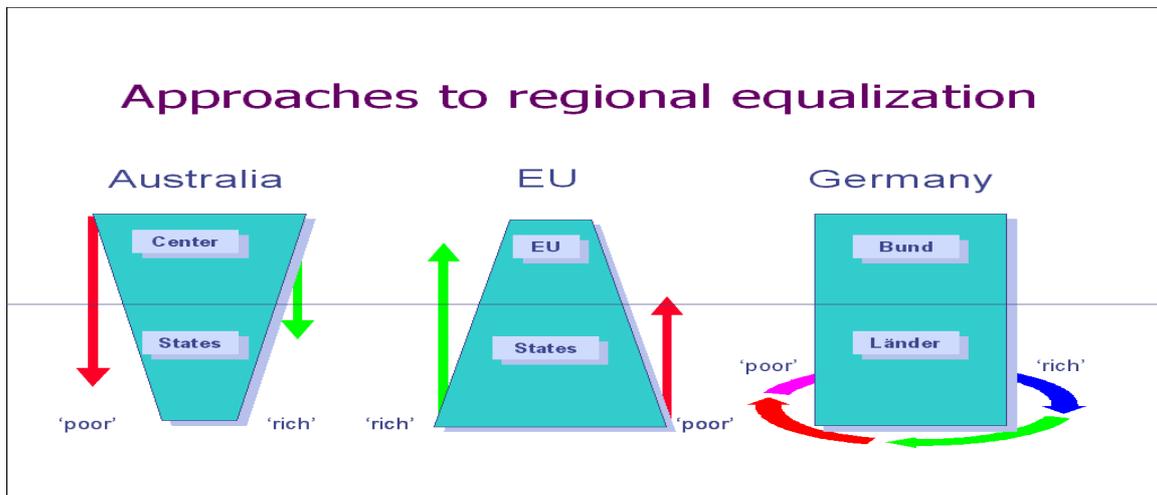
However, the Financial Planning Council does not dispose about executive power or instrument to punish the three different authorities and for that reason their critics called this institution a “toothless paper tiger”. But some of these critics do not realize that the task and the emplacement of the Financial Planning Council is knowingly not similar to the Australian Commonwealth Grants Commission (CGC) or the Indian Finance Commission. Rather the mainly business of the German Financial Planning Council is to originate a forum for the political decision maker to solve the financial problems in the framework, which is described by Spahn and Franz as “Consensus Democracy and Interjurisdictional Fiscal Solidarity in Germany“ (Spahn / Franz, 2002, page 122).

2. Fiscal equalisation among Germany's federal states⁹

Fiscal equalisation can take place both vertically and horizontally. Fiscal equalisation among Germany's federal states (*Länderfinanzausgleich, LFA*) is largely characterised by horizontal allocations of funds between the federal states. There is also a vertical allocation of additional funds by the central government.

Figure 1 illustrates the different approaches to interregional fiscal equalization. Australia has a strong, vertical fiscal imbalance in favour of the central government. It corrects this imbalance by using asymmetric vertical grants (based on the goods and services tax) with an implicit equalizing effect (see Spahn and Shah 1995). The same is true for the European Union, but the direction of resource flows is upwards,¹⁰ not downwards as in Australia. Germany uses a share of the VAT to establish vertical fiscal balance between the federal government and the states. From this position it organizes the horizontal redistribution of resources among states to achieve regional equalization.

Figure 1: Examples of fiscal equalisation among regional administrative bodies



Source: Spahn / Werner, 2007, page 97

2.1 Make-up of Germany's fiscal equalisation up to 2005

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

- the distribution of corporation tax and personal income tax
- the distribution of value added tax
- fiscal equalisation among the federal states (narrow definition)
- 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.

The principle of tax collection where generated runs counter to the law of tax segmentation (*Zerlegungsgesetz*) and the sharing of income and corporation tax. This is meant to prevent a company with several outlets in different federal states from paying its taxes exclusively in the federal state where its head office is based, while the remaining federal states are not able to take advantage of any tax revenues.

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 3 shows that this “clearing effect”¹¹ has a enormous impact for the city states of Hamburg and Bremen as well as for the state of Hesse in the fiscal year of 2003:

Table 3: Effect of place of residence at the wage tax for 16 states at the fiscal year of 2003

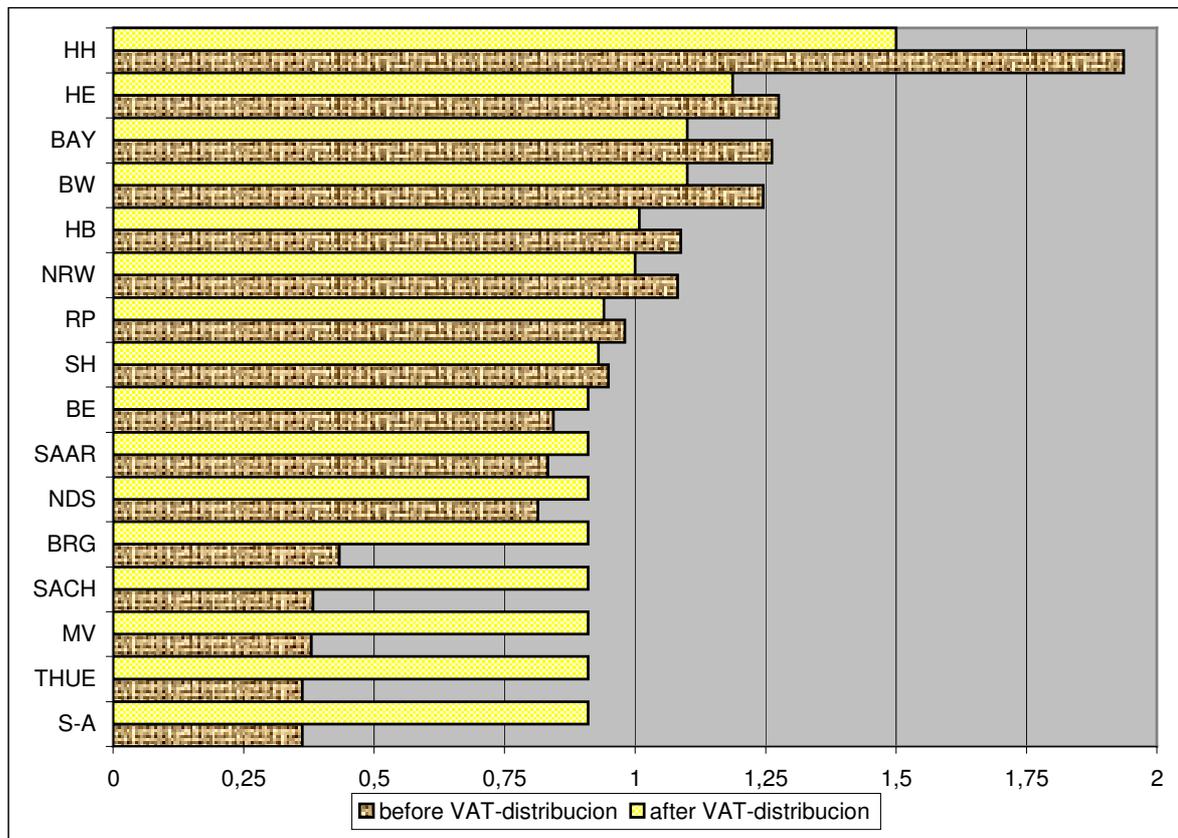
	Population	Balance at the wage tax due to the law of segmentation	
	in Mio	Amount in € Mio.	Portion of the wage tax
States with a negative balance at the wage tax segmentation	--	--	--
North Rhine-Westphalia	18,073	- 1,973	-4.3 %
Baden-Wuerttemberg	10,680	-1,199	-4.7 %
Hesse	6,089	-1,505	-8.6 %
(Hanseatic city) Hamburg	1,732	-2,446	-34.5 %
(Hanseatic city) Bremen	0,663	-0,352	-22.3 %
States with a positive balance at the wage tax segmentation	--	--	--
Bavaria	12,397	57	0.2 %
Lower Saxony	7,989	1,811	14.8 %
Rhineland-Palatinate	4,056	1,448	23.5 %
Schleswig-Holstein	2,817	1,093	28.8%
Saarland	1,063	32	1.8 %
Berlin	3,391	147	2.5 %

Saxony	4,334	708	18.7 %
Saxony-Anhalt	2,536	563	28.3 %
Thuringia	2,383	512	25.2 %
Brandenburg	2,576	738	31.6%
Mecklenburg-Western Pomerania	1,738	365	26.6%
total	82,518	7,474	4,6 %

Source: Kitterer / Heilmann; 2005, page 18

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 2 serves to better illustrate the instrument of VAT redistribution and its effect in the fiscal year 2004:¹²

Figure 2: Effect that the redistribution of the remaining percentage of VAT had in 2004:



Source: own calculations

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.

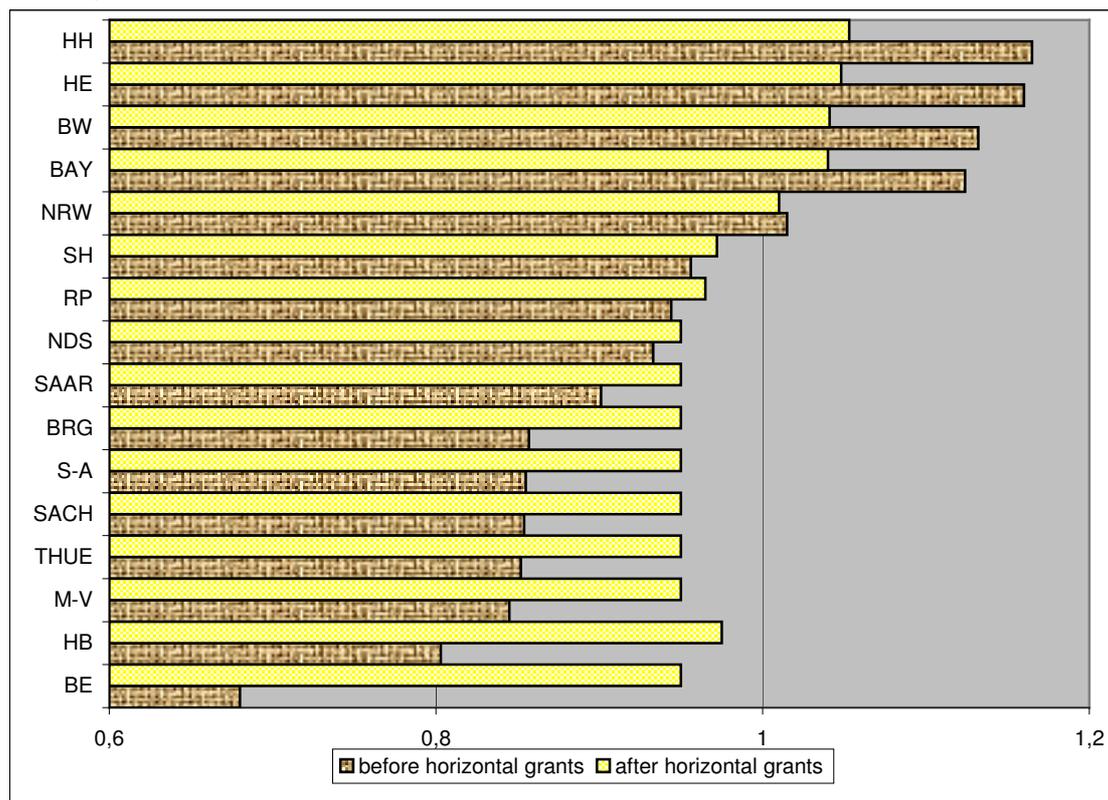
Under the narrow definition of the fiscal equalisation system among the federal states, there are direct horizontal transfer payments between the federal states. The legal basis of these transfer payments is section 4 of the fiscal equalisation law (*Finanzausgleichsgesetz*).

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 50% of the municipal taxes. The federal states of Bremen, Hamburg, Lower Saxony and Mecklenburg-West Pomerania are allowed to reduce their financial strength indicator on account of seaport charges, but the coastal state of Schleswig-Holstein is exempted from this regulation. All in all, this reduction due to port charges amounts to a yearly total of around €150 million

Under the fiscal equalisation system, the financial requirements of each state are determined on the basis of an equalisation indicator. This equalisation indicator 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 50 % 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 „adjusted“ is discussed very controversial in Germany (see Baretti et al., page 16-18 and Hickel, 2001, page 4). Besides, there are additional allowances of 6% when calculating the financial requirements for densely populated regions for the non city-states (Andel, 1998, page 524).

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 to at least 95% of nation-wide financial strength. 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 2004:

Figure 3: Effect of the horizontal fiscal equalisation as a percent of mean financial strength among Germany's federal states in 2004:



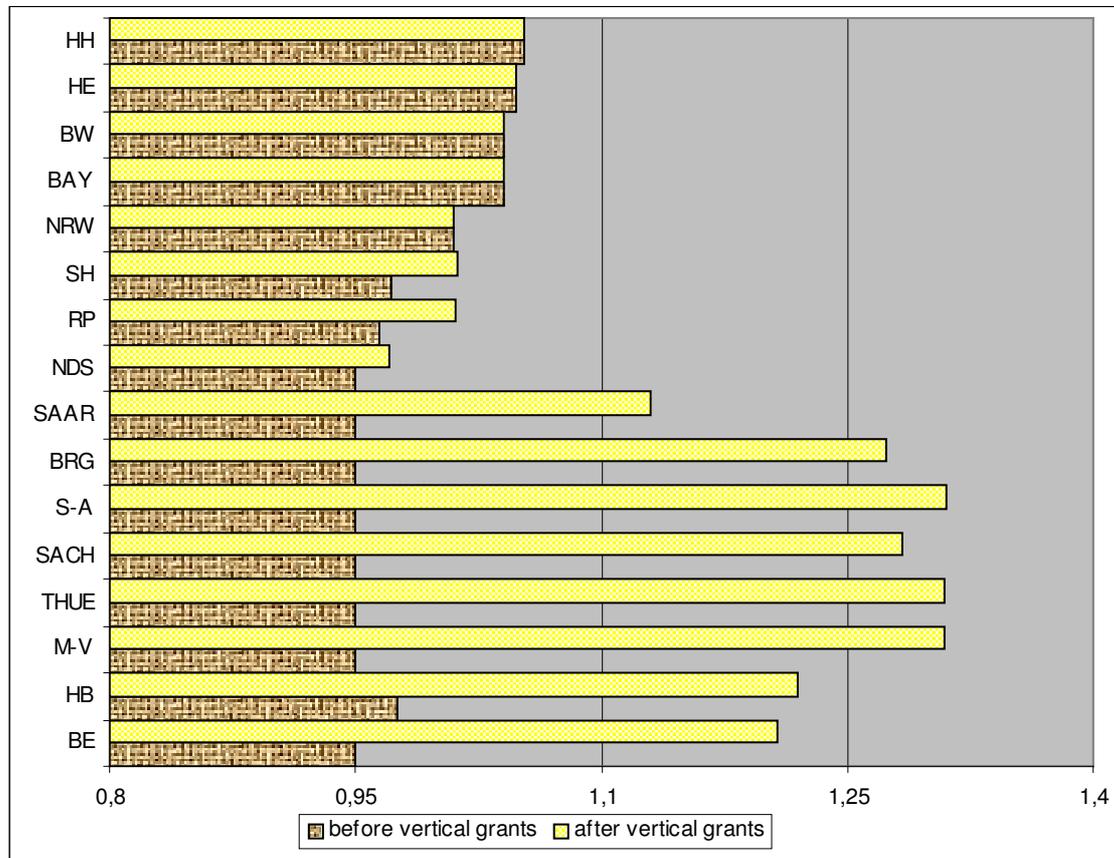
Source: own calculations

On account of the additional funds allocated by the central government, there are vertical grants from the federal government to the federal states. In 2001, the equalisation volume of the central government's additional funds amounted to about €12.6 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.¹³ The deficit-coverage funds enable the financially weak "recipient states" to reach 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. In addition, there are special allocations of funds for budgetary crises (Bremen and Saarland), for the abolition of special charges relating to Germany's division (Berlin and all new federal states) as well as for the integration of the new federal states into the fiscal equalisation

system (Bremen, Saarland, Rhineland-Palatinate, Lower Saxony and Schleswig-Holstein). 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 calculation

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. For this reason, a reform of the fiscal equalisation system had to take place before the end of 2002, as otherwise the way it is currently practised would have been unconstitutional from 2003 onwards and thus it would have lacked legal legitimacy. 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. The basic points of Germany's "Solidarity Pact II" are outlined in the next section.

2.2 Germany's "Solidarity Pact II" – Regulations governing the fiscal equalisation system until 2019

With Germany's Solidarity Pact II and the corresponding changes to the law, numerous interconnected elements of Germany's fiscal federalism have been reformed. All in all, the following areas have been affected by the changes to the law:

- The allocation of the respective VAT share to the federal states,
- Fiscal equalisation among the federal states (narrow definition),
- The allocation of additional funds by the central government and
- The "German Unity" fund

From 2005 onwards, when allocating each federal state a share of the VAT, the current system of a replenishment rate of 100% will be replaced by a relative replenishment system. By changing this rate, a higher VAT volume altogether will be distributed, and more financially weak states will reap the financial benefits of the remaining share of the VAT.

In the horizontal fiscal equalisation among the federal states, some parameters of the assessment basis will be newly defined. As a result, from 2005 onwards the coastal states of Hamburg, Mecklenburg-West Pomerania, Bremen and Lower Saxony will no longer be able to claim port charges as a factor in reducing their tax strength. At the same time, the central government will allocate vertical grants of around €35 million per year in financial compensation to the affected states.

The readjustment of inhabitants in the three city-states of Hamburg, Bremen and Berlin by a factor of 1.35 will persist; however, from 2005 onwards, thinly populated states¹⁴ will also be taken into account when assessing municipal taxes. At the same time, the current municipal assessment of inhabitants, which was graded according to the size of the municipality and the density of its inhabitants, will be scrapped.

When assessing the real tax strength of the municipalities in the individual states, which until 2005 will be determined on the basis of uniform assessment rates regarding the trade tax and the real property tax, these fictitious assessment rates will no longer be applied under Germany's "Solidarity Pact II".

Another aspect to consider in the horizontal equalisation is the increase from 50% to 64% when taking into account the revenues from the municipality tax. This step allows for a stronger consideration of the financial strength of the municipalities and hence takes more into account the fact that in financially strong states, there are usually also

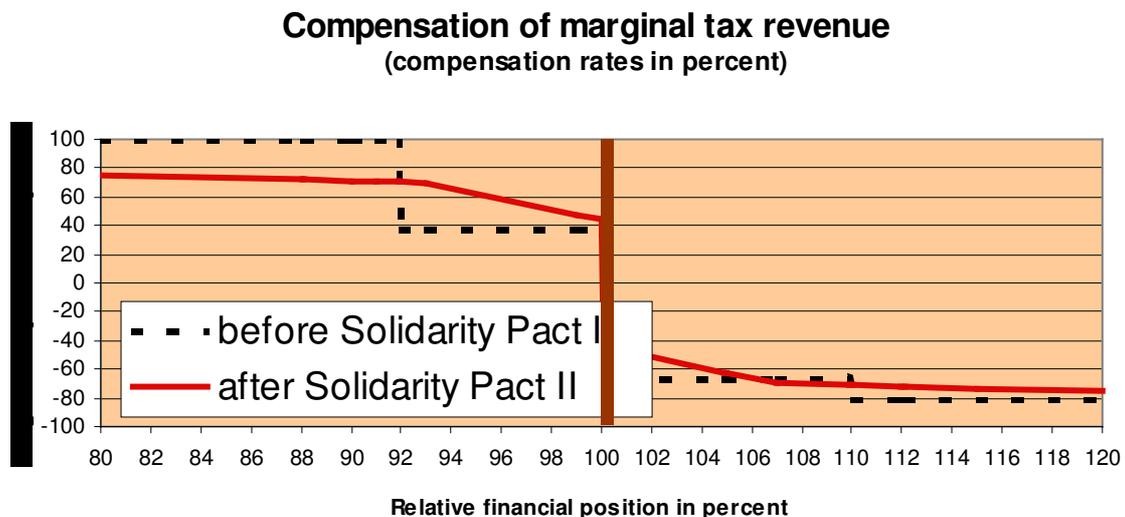
financially strong municipalities. From a financial viewpoint, it would be right to take into account 100% of the municipal taxes (see SVR, 2001, page 5), however, a reduction of 36% as an exemption has been stipulated in the law on measures (*Maßstäbengesetz*).

The increase from 50% to 64% constitutes the biggest change within the horizontal fiscal equalisation. Yet the preference given to federal states with financially strong municipalities, which was inherent in the previous system, has thus only been reduced, and not completely abolished.

A so-called premium model will be newly 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).

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



There are also a number of new regulations concerning the vertical allocation of additional funds from the central government. For example, the vertical allocation of additional funds from the central government of €770 million in total per year, which go towards the costs of political administration and are paid to the thinly populated states, will be lowered to €520 million annually from 2005 on. Besides, in addition to the nine federal states, which already receive this money, the federal state of Saxony will also receive these vertically allocated funds from 2005 onwards.

The vertical grants for budgetary crises, which the federal states of Bremen and Saarland receive, as well as the central government funds for the integration of the new federal states into the fiscal equalisation system, which the federal states of Bremen, Saarland, Rhineland-Palatinate, Lower Saxony and Schleswig-Holstein receive, will last be granted in 2004 and discontinued in 2005 onwards.

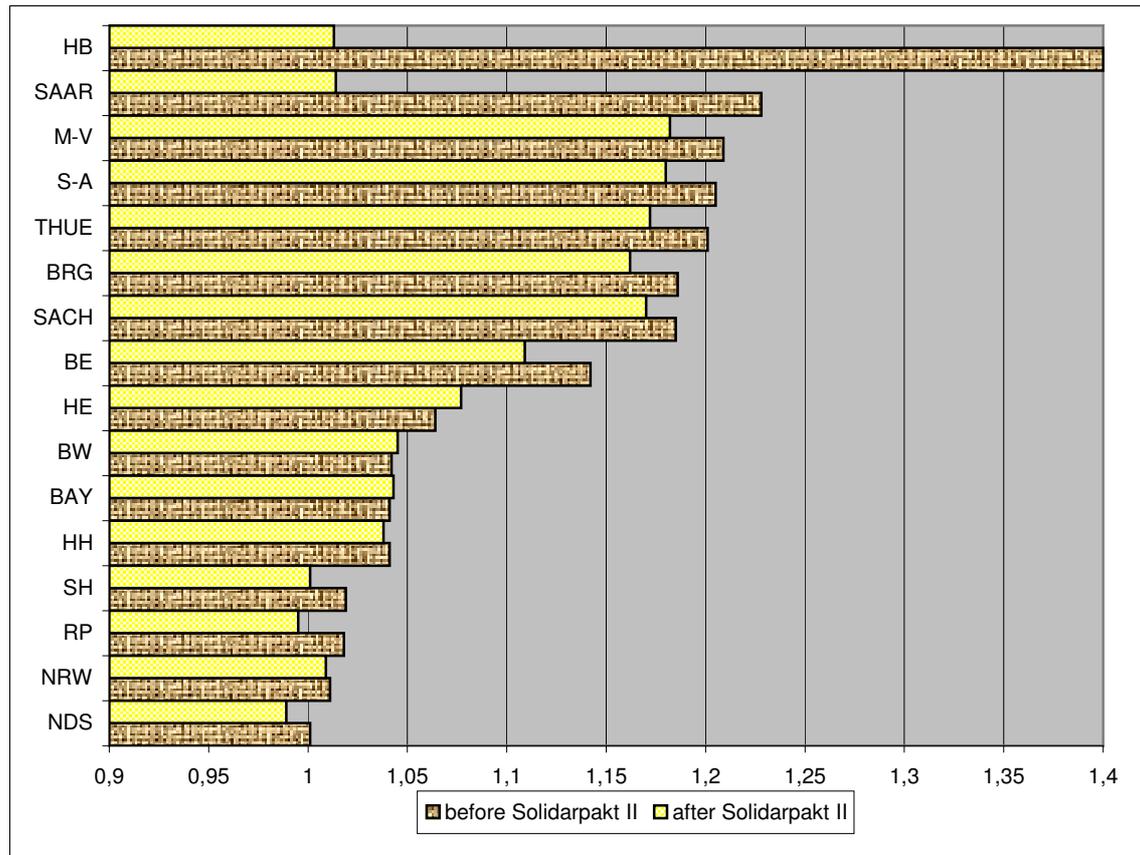
The allocation of central government funds for the burden placed on the states by the division of Germany, which the east German states receive, will be set at €10.5 billion in 2005 and will gradually be reduced over the period of the "Solidarity Pact II" to € 2 billion annually in 2019.¹⁵

The tariffs relating to the deficit-coverage funds allocated by the central government have also been reviewed and will provide positive incentives, due to their lower replenishment level combined with an increased number of federal states entitled to receive these funds.

In addition to the above-mentioned new regulations, Germany's central government will also take over all annual debt repayments of the "German Unity" fund, thus relieving the west German states of this burden.

All in all, the new regulations mentioned above constitute an additional financial burden on the central government, and for this reason the central government and the federal states have agreed on a yearly compensation of around €1.32 billion to be paid to the central government from the VAT tax revenues.

The following chart 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.

3. Conclusion

The German equalisation system gains advantages as well as some negative impacts. On the hand, the equalisation system reduces the economic disparities between the states. Although the two parts of Germany were reunited more than a decade ago, there are still enormous inequalities between the west and east German states in many aspects of every day life. In addition to quite different unemployment rates – in west Germany, the unemployment rate was 10,4% in February 2005, while it was at 20,7 % in east Germany during the same month – there are also enormous differences as far as income and private wealth are concerned. While in 2003, every household in west Germany had average assets of € 149,000, east German households had, on average, assets of only € 60,000 In terms of income levels, the relation is similar. In 1998, the gross annual income of a salaried west German employee was € 28,747, while in the new federal states people only received a comparable gross income of € 21,950 annually (see Werner, 2006).

Additionally the equalisation systems can be compared with an insurance for the states to lower the risk of “external shocks”. Therefore the German equalisation system fulfils the goal of stability (see Spahn, 1998).

Moreover the equalisation system has also originated some “success story”. The former economically weak and agriculturally structured state of Bavaria¹⁶ is nowadays one important donor states in systems.

But on the other hand, the huge equalisation level produces some negative impacts, because the donor states as well as recipient states have no incentives to attract new tax sources or to siphon off the already available tax resources completely. The equalisation systems punish every extra tax administration effort of the states due to of extreme high siphon off rates. For this reason some the states have to decided to thin out their tax administration. As matter of course they do not confirm this behaviour officially and the states Finance Ministers react mostly quite nervous on this “political minefield”.¹⁷

Last but no least it is always a political choice how far an interregional solidarity in an equalisation system is developed. Surely the German equalisation system needs more competitive elements and the so-called premium model, which will be newly introduced from 2005 onwards is a first important step in the right direction. However, in this area, too, Germany's fiscal federalism needs to be further reformed. Particularly, the consideration of the municipal revenues at a level of 64% and the vertical grants for special requirements will need to be re-examined. To strengthen the political accountability of the states in relation to the their citizen and voters a solution could be to admit the states a surcharges to the personal income tax like in Switzerland or an independent tax rate setting towards the inheritance tax or the tax on the vehicles (*KFZ-Steuer*).

Moreover, the German local public finance suffers from a tremendous complexity and all things considered (for a survey of the local public finance and the reform proposal of “the three pillar model” see Werner 2003 and Werner, 2006 as well as Guihéry / Werner, 2005), and therefore the German fiscal federalism was, is and will be in an extreme state of flux.

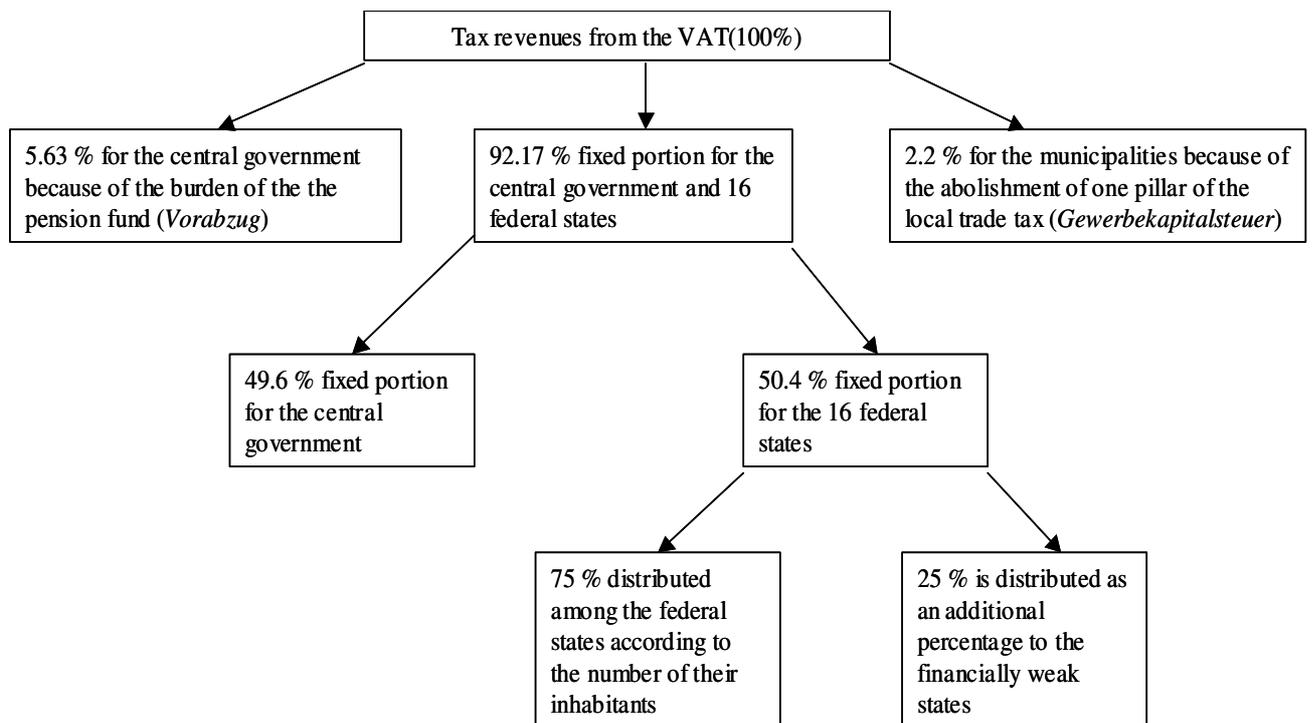
4. Appendix

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

Figure A1: The VAT-Distribution between the central government, the 16 states and the municipalities in the fiscal year of 2004



Source: Author

Table A2: Types and criteria of the different vertical grants from central government towards the states in the fiscal year of 2004

Type	Criteria	Volume in € Mio.	recipient states
deficit-coverage funds (<i>Fehlbetragsbundesergänzung szuweisung</i>)	enable the financially weak "recipient states" to reach 99.5% of the average financial strength of the federal states	3.040	Saxony-Anhalt, Thuringia, Saxony, Brandenburg, Mecklenburg-Western Pomerania, Lower Saxony, Saarland, Rhineland-Palatinate, Schleswig-Holstein, Berlin, Bremen
special requirement funds for political administration costs (<i>Sonderbedarfszuweisungen für überdurchschnittliche Kosten der politischen Führung</i>)	States with less than 4 million inhabitants	790	Saxony-Anhalt, Thuringia, Brandenburg, Mecklenburg-Western Pomerania, Saarland, Rhineland-Palatinate, Schleswig-Holstein, Berlin, Bremen, <u>but not</u> Hamburg
special requirement funds for the burden by the division of Germany (<i>Sonderbedarfsbundesergänzu ngszuweisungen aufgrund teilungsbedingter Sonderlasten</i>)	All states, which were newly formed by the German reunification	10.530	Saxony-Anhalt, Thuringia, Saxony, Brandenburg, Mecklenburg-Western Pomerania, Berlin
special requirement funds for the integration of the new federal states into the fiscal equalisation system (<i>Übergangszuweisungen aufgrund der Integration der neuen Bundesländer in den Länderfinanzausgleich und den daraus resultierenden Belastungen für finanzschwache westdeutsche Flächenbundesländer</i>)	All western states, which received relatively lower transfers from the donor states due to the integration of the eastern states in the fiscal equalisation system	69	Lower Saxony, Saarland, Rhineland- Palatinate, Schleswig- Holstein, Bremen
special requirement funds for budget crisis	High ratio of the debt revenue ratio	614	Bremen, Saarland
Total	---	15.043	---

Source: Author

Table A3: Development of vertical grants for the states burden by the division of Germany until the fiscal year 2020:

Year	Amount
2005	€10.53 billion
2006	€10.48 billion
2007	€10.38 billion
2008	€10.23 billion
2009	€9.51 billion
2010	€8.74 billion
2011	€8.03 billion

2012	€7.26 billion
2013	€6.54 billion
2014	€5.78 billion
2015	€5.06 billion
2016	€4.29 billion
2017	€3.58 billion
2018	€2.81 billion
2019	€2.10 billion
2020	€0.00 billion

Source: Author

Table A4: 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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² 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.

³ The metropolitan regions of Stuttgart, Hanover and Frankfurt are called regional planning associations.

⁴ In France, there were altogether 36,679 municipalities in 1999, of which about 32,000 municipalities had fewer than 2,000 inhabitants. Yet, Germany is far from creating a realigned municipal structure, which Denmark did when it reformed its territories in 1970.

⁵ According to article 106 of Germany's constitution.

⁶ Tax on mineral oil, electricity, tobacco, spirits, coffee and sparkling wine.

⁷ The breakdown refers to the 2001 tax year. The municipal share of the "German Unity" fund as well as the municipal share of the reformed fiscal equalisation system were added to the central government.

⁸ Cities combine the accountabilities of a rural district and a municipality in one administration unit.

⁹ This chapter is based mainly on Werner, 2003 and Spahn / Werner, 2006.

¹⁰ A similar concept can be observed in Bosnia and Herzegovina; see Werner / Guihéry / Djukic, 2006.

¹¹ To lower the administration costs exist a distribution key for this process in Germany, which is recalculated every three years.

¹² Each of the 16 Federal States has an abbreviation, which is explained in the appendix. .

¹³ A detailed description of the vertical funds and their criteria is located in the appendix.

¹⁴ The federal state of Mecklenburg-West Pomerania is taken into account with the factor 1.05, the state of Brandenburg is given the factor 1.05 and Saxony-Anhalt is allowed to multiply its municipal tax requirements by 1.02.

¹⁵ A detailed apportionment is located in the appendix.

¹⁶ Furthermore it have to underline that in Bavaria always the same party – namely the CSU - rules since the end of the World War II.

¹⁷ In the appendix is a table located, 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.