THE FINANCIAL EQUALIZATION SYSTEM IN GERMANY AND UKRAINE

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Based on the experience of European countries, practical recommendations on improving the level of financial capacity of regions in Ukraine have been developed. In the article the comparative analysis of the financial equalization system in Germany and Ukraine has been conducted, different approaches to equalization on the basis of the actual redistribution have been determined, the efficiency and transparency of the use of budgetary resources in these countries have been analyzed. The research result is the substantiation of the necessity for decentralization of tax revenues in Ukraine to reduce the volume of transfers from the State Budget to the regions. Prospects for further research in this direction are developing a reform strategy for Germany and Ukraine in order to improve the socio-economic relations between the center and regions and to make the redistribution of budgetary resources more efficient. Improving the system of financial equalization involves the use of optimization techniques taking into account the inter-regional economic and geographic ties.

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Introduction. Fiscal equalization systems throughout the world are applied to increase the opportunities of low-income regions within a country to finance expenditures and to ensure an equal access to basic public services to all citizens regardless their place of residence. Due to different historical developments and due to political, social and economic changes over time such systems differ quite strongly across countries and are typically in a constant state of flux. Therefore it is useful to compare different systems in terms of their complexity, transparency and efficiency in order to draw lessons for future economic reforms.

In this paper we compare the equalization systems of Germany and Ukraine since both countries solve the problem of a balanced regional development quite differently. We compare the redistributive impact of both systems in the year 2012 and try to develop recommendations for fiscal reforms.

Systems of administrative division. In every country the local budget serves as the basis of the regional socio-eco-

nomic development. The funds provided by those budgets are used to solve regional problems and to fund the central instruments of regional policy. In the European countries the key direction of regional policy is to ensure the faster development of economically weak areas and to support areas of priority development. Depending on the political structure of the states, different methods are used to allocate national tax revenues to local and regional budgets. The two countries compared in the following may be considered as two polar cases of federal and unitary states. Consequently, the budget systems of the two countries have quite distinct characteristics which are discussed in Figure 1.

The Federal Republic of Germany is a Federation comprising of 16 states, the so-called Länder. The Länder represent an independent level of government endowed with its own rights and obligations. According to the constitutional rules of public finance, the municipalities are deemed to be part of the Länder.
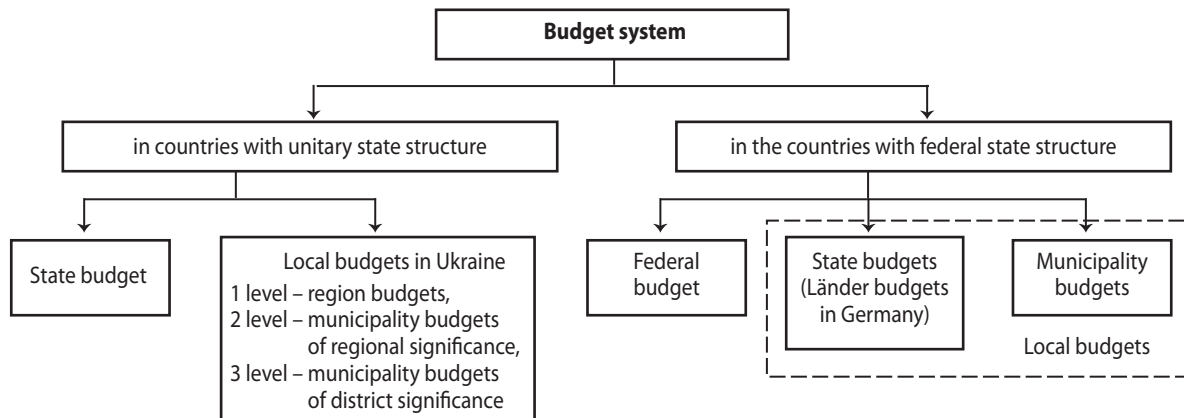
Fig. 1. Budget system in the countries with different state structure [1; 7]

Ukraine on the other hand is an unitary state, where the territory structure includes 27 regions. The central government deligates some rights and obligations to the regional authorities. In practice this determines the distribution of revenues and expenditures between state and regional budgets. Table 1 compares the population and administrative divisions of Ukraine and Germany.

As one can see, Germany is much more densly populated. As a consequence, although the population in Germany is almost the double of the Ukrainian population, the number of administrative units especially at the lowest level is much smaller. Before we discuss the allocation of tax revenues to the different administrative levels in both countries, Table 2 com-

pares the structure of the tax revenues in the consolidated budgets.

Overall, Germany collects about 23 percent of GDP as taxes while the respective Ukrainian budget revenues are significantly higher at about 32 percent. Since the main taxes of both countries are similar types, we can compare the revenues from such taxes as - personal income tax, corporate tax, value added tax, trade tax and exise tax. Table 2 shows the respctive amounts and shares in GDP in the year 2012. In Germany the share of direct taxes is higher than in Ukraine where the bulk of tax revenues is from VAT and exise taxes. The corporate tax is much more important in budget system of Ukraine while the trade tax generates even higher revenues than the corporate

Table 1

Administrative division of Ukraine and Germany in 2012

Country	Population (in mio.)	Land (in 1000 sq. km)	Number of administrative units		
			1-st level	2-nd level	3-d level
Germany	82,2	357,0	13 states, 3 city-states	426 districts	16121 municipalities
Ukraine	46,4	603,7	24 regions, AR Crimea, 2 cities with special status	669 districts and cities of regional importance	40 066 towns, villages and city districts

Source: [4], [8]

Structure of tax revenues in 2012

	Germany		Ukraine	
	in bill. EURO	in %	in bill. UAH	in %
GDP	2643,00	100,0	1411,20	100,0
Personal income tax	194,6	7,4	68,1	4,8
Corporate tax	37,0	1,4	56,3	4,0
VAT	195,0	7,4	138,8	9,8
Trade tax	44,6	1,7	4,8	0,3
Exise tax	55,0	2,1	38,7	8,7
Total	602,4	22,8	446,8	31,6

Source: [2; 8]

tax in Germany. The latter reflects differences in the business structure in both countries.

Table 3 describes how the total tax revenues are distributed between the different administrative levels in both countries.

In Germany more than half of tax revenues remain at the federal level while the remaining revenues are split between the state budgets and the municipalities at 35 and 13 percent, respectively. Before transfers the Ukrainian state budget receives about 78 percent and this fraction decreases to roughly 50 percent after transfers.

Consequently, both in Germany and in Ukraine the central and local budgets receive almost the same revenues (as a whole). However, since in Germany states and municipalities are fiscally independent, the main task of the equalization system is to distribute revenues among the states and municipalities. This redistribution has to be done in a way so that the provision of financial support for weak states still keeps the stimulus for economically strong states.

On the other hand the Ukrainian regions have much less autonomy in collecting and distributing fiscal incomes. Before receiving transfers local budgets have only about 23 percent of

Revenue allocation to administrative levels

Germany		Federal budget	State budgets	Municipality budgets
	in % of total revenues	51,3	35,4	13,3
	in bill. EURO	309,0	213,3	80,1
Ukraine		State budget	Local budgets	
before transfers	in % of total revenues	77,7	22,3	
	in bill. UAH	346,0	100,8	
after transfers	in % of total revenues	49,7	50,3	
	in bill. UAH	221,6	225,2	

Source: [2; 8]

total budget revenues of the country. After fiscal equalization this fraction increases to about 50 percent as in Germany. Consequently, in Ukraine about half of local budget revenues are transfers received from the central government.

This situation is quite typical: High developed countries assign a stronger financial autonomy to state governments and municipalities, so that the transfer share in their local budgets is small. Transition countries, on the other hand, assign lower fiscal autonomy to local authorities and transfer funds from the central to the local budgets. Consequently, transfers constitute up to 50 percent of local revenues. Therefore, Germany and Ukraine may serve as examples for completely different approaches for fiscal equalization.

Next we look into the detail of the equalization process.

The stages of fiscal equalization. The German equalization system distinguishes four stages of tax distribution which are described in detail in the following:

- Primary tax allocation between federal level and states;
- Primary tax allocation among states;
- Fiscal equalization among states;
- Vertical fiscal equalization with federal grants.

Similarly, the Ukrainian equalization system can be also split into four stages:

1. Primary tax allocation between state and regional budgets;
2. Primary tax allocation among regions;
3. Transfers of so-called «rich administrative units» to state budgets;
4a. State budget equalization grant to the all regional budgets;
4b. State budget special grants to regional budgets for specific purposes.

First stage: The primary vertical tax allocation. The first stage in any fiscal equalization system is the initial vertical allo-

cation of tax revenues. While some revenues are assigned completely to specific budgets, both Germany and Ukraine split up the main tax revenues between the different budgets. Tables 4 and 5 compare the joint tax systems of both countries with respect to the primary tax allocation.

Income taxes are distributed in Germany by about 40–45 percent to the federal budget and by about 55 – 60 percent to local budgets. In Ukraine personal income taxes are al-

most totally fixed at local budgets. The state budget receives only 50 percent of personal income tax from Kiev city which is about 10 percent of total state tax revenues. The corporate tax in Germany's budget system is distributed equally between federal and states levels. In Ukraine revenues from the regular corporate tax belong to state budget. Local budgets receive only corporate tax of municipal enterprises which amounts in 2012 to less than 2 percent of total corporate tax revenues.

Table 4

Primary allocation of tax revenues in Germany

Taxes	Federal budget	State budgets	Municipality budgets
Personal income tax	42,5 % (44% from deposit incomes)	42,5 % (44% from deposit incomes)	15 % (12% from deposit incomes)
Corporate tax	50 %	50 %	–
VAT (in 2012)	53,27 %	44,53 % (75% - equally to all states, 25% - to weak states)	2.2 %
Trade tax	–	–	100 %
Excise taxes	100 %	–	–

Source: [3]

As the corporate tax, VAT in Germany is distributed almost equaly between federal and states levels. Since the VAT is used to balance the fiscal effects of policy reforms, the VAT shares change regularly in the primary vertical allocation of tax revenues. In 2012 states and municipalities receive about 47 percent of all VAT. In Ukraine VAT revenues are allocated only to the state budget. Finally, the trade tax and the ecxise tax are distributed in both countries on the same basis: reveunes from the trade tax are allocated to the local budgets, while revenues from the excise tax are assigned to the federal budget in Germany and to the state budget in the Ukraine.

Second stage: Primary horizontal tax distribution. At the second stage in Germany the tax revenue belonging to the Länder as a whole is distributed among the individual states. Apart from the VAT, the principle of local reveue is applied which means that the state budgets receive the revenue which is collected by the revenue authorities on their territory. Consequently, every state receives the income taxes of its inhabitants and corporation taxes depending on the place of business plants. VAT revenues in Germany are not fully distributed according to the principle of local revenue. About one quarter of the Länder share of VAT revenues is allocated to economi-

Table 5

Primary allocation of tax revenues in the Ukraine

	State budget	Region budgets	Municipality budgets
Personal income tax	50 % of PIT from Kiev city	25 % (50 % to Kiev City)	75 % – in Cities of regional significance; 25 % – in towns and villages and 50 % to it's districts
Corporate tax	100 % of all other enterprises	–	100% from municipal enterprises
VAT	100 %	–	–
Trade tax	–	–	100 %
Excise tax	100 %	(100 % Crimea)	–

Source: [1]

cally weak states, whose receipts from tax revenues per capita are lower than the per capita average of all states. The exact amount of the VAT allocation to such weak states depends on the relative per capita tax revenue of a specific state. A linear-progressive topping-up schedule is used to calculate the exact amount of the extra VAT allocation. The remaining VAT rev-

enues of the states, are then distributed in proportion to the relative number of inhabitants.

Similar as in Germany, Ukrainian regions also receive the revenues collected by their regional tax authorities. However, at this stage there is no imbeded equalization system such as the supplementary VAT proportion in Germany.

After the primary horizontal tax distribution the difference in per capita tax revenues among federal states amounts to 35 percent. This means that tax revenues per capita are 35 percent higher in the richest state compared to the poorest one. This is a substantial gap and the following equalization stages are designed to minimize it. In 2012 the so-called rich states or state-donors are Bavaria, Baden-Wuerttemberg, Hesse and the city of Hamburg. These four states play the major role in the following horizontal stage of the equalization process. Note that three of four state-donors belongs to south of Germany.

We can also identify the regions of Ukraine which have in the year of 2012 higher budget revenues per capita before transfers than average: Crimea, Dnipropetrovsk, Donetsk, Zaporozhe, Kiev, Poltava, Kharkov regions, Kiev and the city of Sevastopol. Note that these nine regions are mostly in the southeastern part of Ukraine. The diference between regions in budget revenues per capita before transfers is 4,0. This is a huge gap much higher than in Germany. It indicates that some regions are in an economic crisis and totaly depend on governmental dotations.

Third stage: Fiscal equalization among states and transfers. In the third stage the fiscal equalization system of Germany redistributes tax revenues horizontaly between rich and weak states to equalize the budget revenues per capita. The starting point is to determine the financial capacity per inhabitant of the various Länder. The financial power (or capacity) of the states includes not only tax revenues of state budgets but also a fraction of the receipts of its municipalities.

Given the financial power is compared with the so-called financial requirement in order to compute an indicator for equalization of each state. In principle it is assumed that the financial requirement per inhabitant is the same in all the Länder. However, the city-states as well as some sparsely populated states have a higher financial requirement. Therefore, their populations are notionally increased for the purpose of the financial equalisation.

The indicator for equalization (i.e. the financial power relative to financial requirement) determines the relevant amount of money that the state either has to pay or has to receive. Horizontal equalization at this stage means that the rich states pay transfers to fiscally weak states. Again, a linear-progressive schedule is applied to determine the exact size of these payments between states. After transfers the ranking of the states is the same as before.

The fiscal equalization system of the Ukraine does not include such transfers among regions. Instead transfers are paid from «rich administrative units» (i.e. regions) to the state budget in order to accumulate the fund for interbudget transfers. Figure 2 shows the current legal procedure for the computation of these transfers. In order to determine the regional transfer volume of the administrative-territorial unit *i*, the difference between the amount of basic (compulsory) budget expenditures V_i and the amount of the basic budget revenues (revenue basket) D_i is calculated. If this difference is negative it means that this region is a budget-donor and this money should be transferred to the state budget. If the difference is positive it means that this region is a budget-recipient and this money will be received from state budget as a transfer (equalization grants). The so-called «coefficient of equalization» α_i is calculated for budget-donors only and indicates the percentage of «extra» money that such regions can retain as a benefit for arranging a high business activity.

Typically, donor regions in Ukraine are cities with special status or regional importance. In 2012 the main budget-donors were Dnipropetrovsk, Donetsk, Zaporozhe, Kiev and the Odessa region. However, the transfer amounts are fairly low. After these transfers the difference between regions moved only from 4,0 to 3,74. Not surprisingly, these regional transfers do not change the ranking of the regions. Note that in contrast to Germany the Ukrainian fiscal equalization takes place after the most significant taxes such as income taxes and VAT are already collected. In addition, transfers first flow from rich regions to the state budget in order to be received again by poorer regions. Thus, huge financial counter flows are built up between the state and local budgets that even tend to increase over the years while in Germany direct payments among states equalize the state revenues.
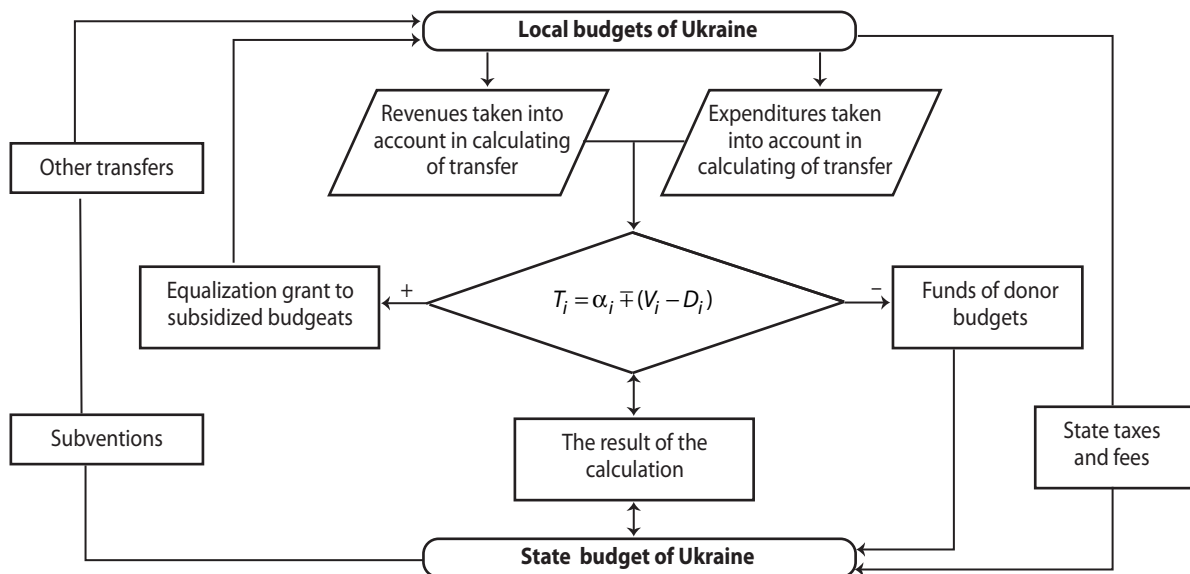

Fig. 2. Transfer computation in Ukraine [6, р. 116]

Forth stage: Vertical equalization with federal grants. The final stage of fiscal equalization in Germany further reduces differences in the financial resources of states by transfers from the federal level to the states. Those states which lower than average fiscal resources receive fill-up grants from federal budget in order to bring them closer to the average level. More specifically, those states with a financial capacity per inhabitant is less than 99.5 % of average financial capacity per inhabitant receive proportional fill-up grants which keep their ranking still unchanged. Not surprisingly donor states from the previous stage do not receive fill-up grants from the federal level. Finally, supplementary federal grants for special needs serve to compensate individual poor Länder for special burdens they have to bear. For example, the five eastern states of the former GDR and Berlin receive supplementary federal grants in order to finance specific unification projects and to compensate the still disproportionately weak financial capacity of their municipalities. The funds will gradually be phased out by 2019. In addition, there are special funds for budgetary crises (Bremen and Saarland), as well as for specific regional problems.

The final stage in the Ukranian equalization system consists of quite similar equalization grants (dotations) from the state budget to the regional budgets. The amount of dotation depends on the level of the expenditures of the budgets and is calculated as shown in Figure 2. The compulsory expenditure, like education, health protection, social security, housing and communal services, culture, sport, should be totally covered by own revenues of budgets and by dotations from government. The amount of donations is roughly 50 percent of all transfers. After this stage the difference between regions has moved from 3,74 to 1,57 and the ranking of regions has significantly changed. For example, the Kharkiv region was the 9th richest region before providing dotations while it moved to the last position when donations are included. The Donetsk region moved from the 6th to 22nd position while the Zaporozhe region felt from the 8th to the 19th. Conversely, regions such

as Cherkasy, Kirovograd and Volyn changed the ranking from 12th to 7rd, from 15th to 8th and 24th to 10th, respectively. Finally, in Ukraine subsidies play a similar role as supplementary federal grants. They are allocated in order to fund the capital expenditures of the budgets. In case of economically strong regions subventions finance the development of regional and municipalities infrustucture. In case of economically weak regions, the subsidies cover the lack of funding of other expenditures, except compulsory expenditure, like transportation, building, connection etc. In 2012 the subsidies are paid to all regions and the biggest amounts are received by the most developed regions. Consequently, the difference between regions in budget revenues per capita after transfers increases again to 1,71.

Fiscal equalization – A quantitative comparison. After describing the stages of fiscal equalization we can compare the financial consequences at every stage for the year 2012. Table 6 shows three of the four stages of equalization in Germany. There are four state-donors (Bavaria, Baden-Wuerttemberg, Hesse, city of Hamburg) that transfer funds at the second and third stage to the weaker states and do not receive any grants from the federal budget. The four states North Rhine-Westphalia, Rhineland-Palatinate, Schleswig-Holstein, city of Bremen transfer part of their VAT revenues to the weaker states but they are transfer recipients at the third and fourth levels. The remaining eight states are recipients at all stages.

The right part of Table 6 shows the changes in relative fiscal capacity. After the second stage the poorest countries are the eastern states at roughly 93 percent of average fiscal capacity per capita. The richest state is the city of Hamburg at 125,7 percent of average fiscal capacity. After the third stage the poorest state is now the city of Berlin and the richest state is Bavaria at 105 percent of average fiscal capacity. Finally, after the fourth stage the richest states are now in the eastern part due to supplementary federal grants due to unification cost. Note however, that these transfers are eliminated completely by 2019.

Table 6

Quantitative results for Germany in 2012

	Federal states	Second stage (VAT)	Third stage (Horizontal equalization)	Fourth stage (Fill-up grants)	Fourth stage (Sp. grants)	Second stage (VAT)	Third stage (Horizontal equalization)	Fourth stage (Fill-up grants)	Fourth stage (Sp. Grants)
		Budgetary flows (mill. EURO)				The ratio of current financial capacity to relevant (normative) financial capacity (%)			
1	2	3	4	5	6	7	8	9	10
1	North Rhine-Westphalia (NRW)	-2433,7	435,2	159,5	0,0	95,2	99,1	99,4	99,4
2	Bavaria (BAY)	-1728,2	-3796,8	0,0	0,0	110,0	105,2	105,2	105,2
3	Baden-Wuerttemberg (BW)	-1466,8	-2765,2	0.0	0,0	107,9	104,7	104,7	104,7
4	Lower Saxony (NDS)	125,5	177,7	58,7	0,0	94,1	99,2	99,4	99,4
5	Hesse (HE)	-832,7	-1304,3	0,0	0,0	105,3	104,2	104,2	104,2
6	Saxony (SACH)	2363,9	960,8	394,4	2145,4	93,0	95,6	98,6	114,9
7	Rhineland-Palatinate (RP)	-498,2	256,4	139,3	46,0	94,5	98,1	99,2	99,5
8	Saxony-Anhalt (S-A)	1275,8	549,6	224,6	1327,8	93,1	95,6	98,6	116,6

1	2	3	4	5	6	7	8	9	10
9	Schleswig-Holstein (SH)	-54,4	134,4	70,9	53,20	94,2	98,5	99,3	99,9
10	Thuringia (THUE)	1244,4	541,9	219,7	1219,5	93,0	95,5	98,6	115,9
11	Brandenburg (BRG)	1003,1	543,3	227,4	1230,4	93,4	95,8	98,7	114,1
12	Mecklenburg-Western Pomerania (MV)	914,1	452,8	178,2	917,3	93,0	95,1	98,5	116,0
13	Saarland (SAAR)	163,0	93,8	49,4	63,4	93,8	97,5	99,1	101,0
14	Berlin City (BE)	181,4	3224,7	1018,3	1424,4	94,1	90,6	97,5	107,1
15	Hamburg City (HH)	-241,6	-24,9	0.0	0,0	125,7	100,4	100,4	100,4
16	Bremen City (HB)	-15,8	520,7	170,2	60,3	94,2	91,8	97,8	99,9
	Total	0,0	0,0	2910,6	8487,7				

Source: Own calculations according to [8]

Table 7 shows the respective numbers for Ukraine in year 2012. As can be seen in the fifth column there are nine regions with higher budget revenues per capita than average before transfers. The poorest region is Transcarpathian where the fiscal capacity per capita is only 49,7 percent of average while the richest region is the city of Kiev where fiscal capacity per capita is almost double as high as average. The transfers to the state budget are fairly small at the third stage so that they hardly change anything. Transfers at the fourth stage however significantly reduce the regional fiscal inequality.

Table 7

Quantitative resultrs for Ukraine in 2012

	Regions of Ukraine	Second stage (before transfers)	Third stage (Transfers to state budget)	Fourth stage (Equalization grants)	Fourth stage (Subsidy)	Second stage (before transfers)	Third stage (Transfers to state budget)	Fourth stage (Equalization grants)	Fourth stage (Subsidy)
		Budgetary flows (mio. UAH)				The ratio of current financial capacity to average revenues per capita (%)			
1	2	3	4	5	6	7	8	9	10
	Ukraine	100813,8	-1342,7	60628,2	63831,5	100,0	100,0	100,0	100,0
1	Crimea	5601	-15,8	2070,3	2507,1	129,0	130,3	111,0	105,3
2	Vinnitsa	2616,9	-12,5	2965,0	1978,2	72,6	73,2	97,3	94,2
3	Volyn	1401	-0,9	2259,4	1705,8	61,0	61,7	100,3	105,1
4	Dnipropetrovsk	9775,8	-110,6	2365,3	4768,8	133,4	133,7	103,4	103,2
5	Donetsk	11587	-331,3	3097,1	7731,5	119,4	117,5	93,1	102,4
6	Zhytomyr	2055,4	-3,3	2405,0	1708,5	73,1	74,0	99,9	98,8
7	Transcarpathian	1369,8	-12,4	2682,8	1588,3	49,5	49,7	91,9	91,5
8	Zaporozhe	4277,2	-230,5	1955,0	2061,1	108,2	103,7	95,6	91,8
9	Ivano-Frankivsk	1926,9	-7,6	2825,0	1993,7	63,1	63,7	97,8	99,3
10	Kiev region	4311,6	-154,6	2201,0	2248,2	113,3	110,7	105,2	101,8
11	Kirovograd	1769,6	-22	1783,0	1319,6	80,1	80,2	100,7	98,9
12	Lugansk	4602	-16,4	2551,0	2768,2	91,9	92,8	89,7	89,1
13	Lvov	4287,2	-51,1	3804,5	3046,1	76,3	76,4	90,1	88,8
14	Mykolaiv	2276,3	-53,5	1794,0	1419,4	87,5	86,6	97,3	94,1
15	Odessa	4959,8	-131,3	3066,0	2942,1	93,8	92,5	94,0	92,3
16	Poltava	3994,6	-65,2	1589,0	1714,2	122,7	122,3	106,7	100,0
17	Rivne	1740,4	-46,6	2332,0	1804,3	68,1	67,2	99,2	102,7
18	Sumy	2175,1	-6,5	1701,0	1320,9	85,7	86,6	96,0	92,1
19	Ternopol	1265	-3,7	2255,0	1276,5	53,0	53,6	92,8	90,4

1	2	3	4	5	6	7	8	9	10
20	Kharkov	6175,6	-7,6	2470,0	3505,6	101,8	103,1	89,7	90,1
21	Kherson	1646,7	-0,7	1985,0	1211,9	68,9	69,8	95,7	91,2
22	Khmelnitsky	2023,6	-27,5	2598,0	1652,9	69,5	69,5	99,3	96,6
23	Cherkasy	2468	-3	2080,0	1520,0	87,7	88,7	101,7	97,0
24	Chernivtsi	1164,4	-1,2	1859,0	1166,0	58,1	58,8	95,0	94,1
25	Chernihiv	1765,5	-0,3	2058,0	1223,5	73,7	74,7	100,5	94,9
26	Kiev City	12389,8	-24	1614,4	7123,9	198,0	200,3	140,7	151,9
27	Sevastopol City	1187,5	-2,6	262,4	525,1	140,5	142,1	107,8	105,0

Source: Own calculations according to[2; 5]

After subsidies from the state budget the poorest region is now Lvov with 88,8 percent of average fiscal capacity per capita while the richest region is still Kiev region with now 151 percent of average fiscal capacity. Moreover, the ranking before and after allocation of transfers has significantly changed. For an example, the Volyn and Rivne regions before transfers had a ratio of revenues to average revenues per capita below 100 percent (61 and 68,1, respectively) and after all stages of equalization they have above average ratios of 105,1 and 102,7 percent. These indexes are even higher than in the Dnipropetrovsk and Donetsk regions, which were region-leaders before equalization. Vice versa, the Zaporozhe and Kharkov regions had higher than average budget revenues per capita before transfers (108,2 and 101,8 percent, respectively). After all stages of equalization these regions have financial capacity ratios below average at 91,8 and 90,1percent. Finally, the current equalization system in Ukraine still keeps a significant difference between regions in financial capacity per capita after transfers. Per capita the city of Kiev has almost double the financial resources as the Lvov region.

Discussion. Our comparison of the approach and the quantitative impact of the fiscal equalization systems in Germany and Ukraine clearly highlights the differences as well as the advantages and disadvantages of both systems. While in Germany the federal system allocates already most of the genuine tax revenues to local budgets, the Ukrainian system first concentrates the tax revenues at the state level. Consequently, the volume of redistribution and transfers to local budgets is much higher in Ukraine than in Germany. Both countries spend about half of their total tax revenues through local budgets. However, in Germany vertical transfers from the ferderal level are less than 5 percent of theses revenues (see only fourth stage in Table 6) while in Ukraine such transfers more than double the funds available to local authorities. Consequently, fiscal equalization in Germany is mainly achieved through horizontal transfers between rich and poor states in terms of per capita tax revenue. Similar as in the Ukraine vertical transfers are also implemented in Germany for specific needs (i.e. unification cost) but they are fixed in their volume and phased out in the medium run (until 2019).

Despite the large vertical transfers from the state level to the regional budgets, the achieved fiscal equalization (in terms of tax revenue per capita) is fairly small compared to Germany. While in Germany the relative difference between the richest and the poorest state in terms of tax revenues per capita after fill-up grants is 1,37, this relative difference for Ukrainian regions after donations amounts to 1,57 (or to 1,45 and 1,71 after all transfers). Therefore, the German system achieves more equalization with less transfer volumen since the initial tax distribution is much more dezentralized.

Consequently, the main drawbacks of the Ukrainian equalization system are the excessive centralization of budget funds and the lack of a horizontal equalization mechanism. Applying the foreign experience to the Ukrainian system of fiscal equalization requires more genuine tax revenues to the local budgets. For example, if the regional budgets in Ukraine would receive half of VAT and corporate tax revenues like Germany's federal states, they would have roughly 120 bio. UAH more of own resources. Vertical transfers could then be reduced to about 4,4 bio. UAH which would be only 3,5 percent of total revenues.

The second major drawback of the Ukrainian fiscal equalization system are the unsystematic subsidy payments which may even change the ranking of specific regions dramatically. In our opinion, the budgetary adjustment should be designed to reduce inequality of social and economic development, but the relative ranking of the rich and poor regions should not change. For example, nine regions in Ukraine (Crimea, Dnipropetrovsk, Donetsk, Zaporozhe, Kiev, Poltava, Kharkov regions, Kiev and Sevastopol cities) receive subsidies although they have a higher than average index of local budget revenues per capita before fiscal equalization. Similarly, poor regions such as Volyn and Rivne should stay after all transfers below average financial capacity. Otherwise the economically strong regions are losing the motivation to increase their revenues.

Of course, such reforms are complicated and complex. In addition, since they imply a reduced power of the central government, they are also politically difficult to implement. However, given the problems and disadvantages of the current system, their benefits and long-run economic advantages are quite obvious.

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