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UKRAINIAN FISCAL EQUALIZATION: DOES IT NEED AN IMPROVEMENT?

The article states that existing economic and social differences between territories in Ukraine call for use of fiscal equalization instruments. The study shows that implementation of formula-based fiscal equalization has led to a virtually full equalization of differentials in subnational total public revenues and expenditures on the regional level. Findings presented give reasons for reviewing a current fiscal equalization procedure with regard to incorporating into equalization grant allocation formula fiscal incentives for subnational governments.

Keywords: fiscal equalization, intergovernmental transfers, public finance.

1. INTRODUCTION

Fiscal equalization plays an important role in granting adequate levels of public services at the subnational level. In this capacity it serves as an instrument for endowing local democracy institutes (bodies of self-government) with fiscal resources which cannot be obtained under the current allocation of other revenue sources (taxes and user charges). That is why horizontal fiscal equalization has not only a theoretical, but also a huge practical meaning, which is reflected in political documents and is practiced on the grounds of both efficiency and fairness.

The scale and intensity of fiscal equalization is preconditioned by peculiarities of the country's intergovernmental fiscal relations, assignment of governmental functions and revenues within its system. Thus, it also depends on a variety of institutional, political, and economic factors which shape the specific public administration sector. Ukraine as a transition country which gained independence after the disintegration of the Soviet Union in 1991 has inherited some issues from the soviet past that have an impact on its public finance in general, and the equalization system in particular, until implementation of the Budget Code in 2001. But even after that the remnants of a socialist past, when there was no place for subnational fiscal autonomy and sound fiscal management, were still at play. As a result, fiscal discipline on all governmental levels has not been fully implemented. Despite several reforming attempts, the "soft budget constraint" still remains a feature of public finance here.

One of the milestones in reforming intergovernmental finance in Ukraine has been the introduction of a brand-new fiscal equalization procedure. Since 2001, when the Budget Code was adopted, a formula-based approach to allocation of equalization transfers was introduced. It came to replace the obsolete approach based on a mixture of individually set tax-sharing rates for each subnational government (further referred to here as SNG) and discretionary general grants. Nevertheless, practical implementation of the new approach has shown problem issues which have been aggravated with time.

Fiscal equalization is a theoretically controversial and politically vulnerable issue and is one of the most important components of the fiscal federalism theory. The roots of the fiscal equalization theory began evolving in the 19th century within the German public finance school. No wonder that an American economist of German origin, Richard Musgrave, authored one of the most comprehensive writings on fiscal equalization to date [13]. In his publication he analyzed basic approaches to fiscal equalization, where territorial units are considered as subjects of equalization (we could refer to this type of equalization as "territorial"). Despite the fact that he limited himself by considering relations within a federal nation and by pure redistribution, his theoretical findings concerning fiscal outcomes of different equalization schemes are still very important from both a theoretical and a practical point of view.

An alternative approach to fiscal equalization was put forward by another American economist, James Buchanan

[1950]. This approach shifts subjects of fiscal equalization from territorial units to individuals; that seems to be well-motivated from the theoretical point of view: namely, separate individuals, not groups, are the real economic actors as they bear preferences for both private and public goods. This approach could be called "individualistic" (according to P. Mieszkowski and R. Musgrave [11] the two approaches mentioned here are referred to as "fiscal capacity equalization" and "horizontal equity equalization").

Of these two approaches it was the first one (the "territorial") that prevailed, because the other one has significant problems of practical implementation. Despite some pessimism stemming from theoretical inconsistencies [14, 207], territorial fiscal equalization is widely accepted as an instrument for granting equality and efficiency across territorial units.

A special case for fiscal equalization is created by the transitional context. Former socialist countries did perform fiscal equalization before transition, but it was built on opposite grounds in comparison to the market-economy nations, i.e. on ignoring efficiency issues. One of the first studies of intergovernmental finance in transition countries [2] pointed out at extensive use of deviation-based tax sharing, national government (further referred to here as NG) discretion concerning formation of an equalization fund, a prevalent non-conditionality of transfers, and significant differences in respective policies between countries of Central and Eastern Europe and those of the former Soviet Union. The latter ones (and this should be stressed) still remain backward in public finance reforming in general, and in fiscal equalization in particular. So, in Ukraine, a modern formula-based equalization approach was introduced only in 2001, after ten years of national independence.

Since that time, a number of both international and domestic scholars have analyzed the Ukrainian fiscal equalization policy, although it should be recognized that it was done within a broad context of fiscal decentralization and public fiscal management, without paying close attention to details of the equalization procedure and its outcomes. One of the most comprehensive studies was undertaken by J. Martinez-Vasquez and W. Thirsk [10]. The authors concluded positive developments in intergovernmental finance in Ukraine since the adoption of the Budget Code, but also pointed out some issues related to fiscal equalization that still require special treatment. To them belong lack of incentives in revenue collection and inefficient expenditure management, suboptimal size of territorial units at subdistrict level, lack of autonomous local revenues. In order to remedy some deficiencies in fiscal equalization, they suggest rejecting the derivation principle in shared revenue allocation, introducing an additional local personal income tax (further referred to as PIT) rate for enhancing local fiscal autonomy. As concerns the equalization approach itself, a sound solution they offer would be two-stage equalization transfer calculation (stage one – definition of need determinants, stage two – relative fiscal need index calculation) and involvement of independent statistical bodies (not those of MoF) for collecting and submitting statistical data.

A deep insight into Ukrainian equalization issues is found in studies produced by I. Lunina [7; 8] who tried to analyze the evolution of the country's public finance and respective changes in the transfer system. She highlighted the presence of certain systematic problems in Ukraine's intergovernmental finance which make fiscal equalization less effective. Specially worth mentioning is her emphasis on lacking local fiscal autonomy and absence of legally fixed explicit vertical assignment of public functions.

The most comprehensive endeavors in analyzing the equalization system, its problems and prospects are found in publications by O. Shyshko [18] and S. Slukhai [19]. Shyshko stressed several issues in the current Ukrainian equalization formula, i.e. flaws in the fiscal capacity coefficient definition, inclusion into the equalization coefficient formula of (i) non-adjusted historical revenue collections and (ii) measures of revenue-generation plan execution. He suggests setting values of equalization coefficients for separate groups of territorial units (which looks appropriate), but doesn't take it to the point of refusing to use actual revenues in the equalization formula. Basing on fiscal panel data, S. Slukhai concluded that fiscal equalization in Ukraine had stressed equality rather than efficiency issues, and that basically there had been no observable correlation between regional revenues and regional revenue collection efforts. Also, the incentive component in the formula represented in the equalization coefficient had not functioned because of asymmetry in its application (applied only to donors).

The most recent studies of Ukrainian fiscal equalization issues published to date belong to Moldovan [12] and Volokhova [21].

Despite of the efforts described above, there are still some issues in Ukrainian fiscal equalization policy that needs to be addressed. To them belong justification of the prevailing fiscal equalization approach from the efficiency point of view; assessment of the soaring practice of *ad hoc* grant application in order to fill in gaps in equalization outcomes.

This study intends to critically assess the current Ukrainian approach to fiscal equalization basing on use of official statistical data on aggregate regional budgets (published annually by the Ukrainian Ministry of Finance, further referred to here as MoF) and outline some recommendations in this field aiming to make fiscal equalization more sustainable.

2. UKRAINIAN INTERGOVERNMENTAL FINANCE AND FISCAL EQUALIZATION

After gaining independence in 1991, Ukraine, being a unitary state, naturally tended to practice a centralistic

model of fiscal federalism [20] or "administrative fiscal federalism" [16]; this fact does have an impact on the shape of its intergovernmental system in general, and the transfer system in particular. When analyzing the current legal base and actual practice of intergovernmental finance in Ukraine, one will find a kind of duality: on the one hand, some state functions are handed down through the Law on Local Self-Government to bodies of local self-governance of different levels, which corresponds to predictions of fiscal federalism literature. However, on the other hand, actual implementation of these functions is mostly vested onto the NG's bodies – district and region state administrations, which are appointed and accountable to the President of Ukraine (a minor exclusion is cities of national and regional importance). This means that actually bodies of self-government in Ukraine enjoy a very limited scale of own competence combined with low autonomy for its realization.

Actually, even after the enactment of the Budget Code in 2001, to date subnational governments (further referred to here as SNGs) remain deprived of the ability to manage their finance and assets. In many cases they formally bear responsibility for certain public functions (such as general secondary education or primary health care), but have no possibility to manage the basic factors affecting their expenditures, such as salaries and wages; they also have no right to hire and fire managers of subordinated public institutions, or to set standards of service delivery etc. They even cannot hold accounts in the financial institutions of their choice – only in the State Treasury.

Under such extensive delegation of expenditures from the top to the bottom, theory would foresee a problem of principal-agent. Financial theory and practice suggest that it will result in artificially inflating expenditures and engaging into bargain games with authorities of the upper level. This means low incentives for effective expenditure management.

Within this context, it is worth discussing trends in public expenditure assignment in Ukraine, which is conventionally understood as an index of decentralization [1; 3]. Figure 1 demonstrates that a trend to increasing the relative size of public administration sector in GDP generally dominates, being supported by a very slight increase in the relative role of the subnational sector within it. The problem with this index is that GDP expenditure share does not really reflect the real extent of fiscal decentralization: in Ukraine, most public expenditures at the subnational level are administered by the state authorities, not by SNGs.

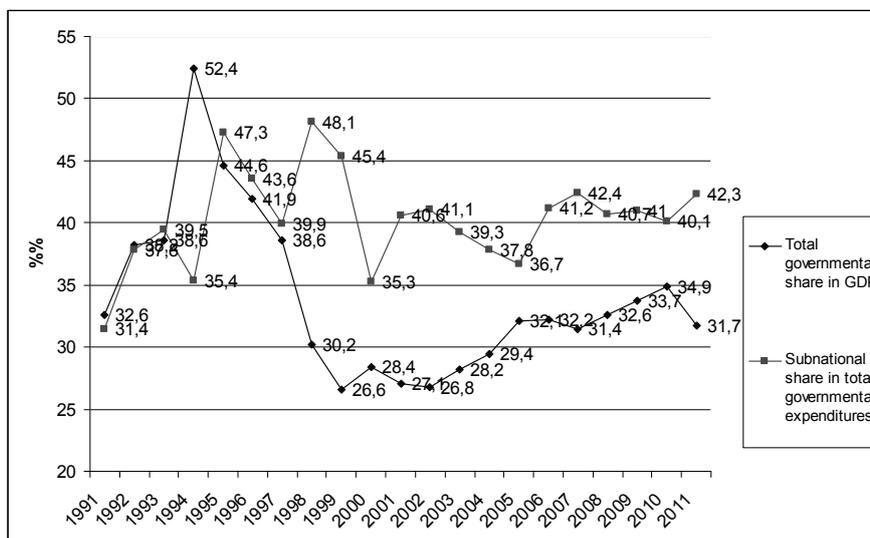


Fig. 1. Total government share in Ukrainian GDP and subnational share in total government expenditures, % (own calculations based on MoF data)

Source: composed by authors' calculations

As concerns public revenues, the trends here are just the opposite. The data demonstrates that SNGs' role in redistribution of GDP has constantly diminished through the years. Starting with about 46% at the moment of gaining independence (1991), the total subnational share in public revenues (transfers excluded) has actually halved – it had dropped to about 23% by 2012. The NG has gained a much bigger role in subsidizing SNGs and making them more dependent on its decisions concerning the fiscal support granted.

While observing two opposing trends (a growing subnational share in expenditures and a diminishing one in revenues) one could draw the conclusion that this will result in a soaring vertical imbalance, which has to be covered by use

of vertical intergovernmental transfers. Respectively, the composition of subnational revenues has also changed. Since 2000, PIT has become the biggest by its share in revenues ceded tax; in 2001 its share (transfers excluded) was 45%, in 2012 about 61%.

An important component of intergovernmental finance in Ukraine is direct fiscal transfers. As the data in Table 1 demonstrates, the intergovernmental transfer system in Ukraine displays the following trends: (a) growing dependence of SNGs on fiscal transfers, (b) gradual substitution of NG's discretionary transfers (mutual settlements and budgetary loans) for formula transfers (grants) and (c) substitution of general transfers ("grants") for earmarked ones ("subventions").

Table 1. Relative value and composition of fiscal transfer fund, %%

Year	Transfer share in SNG total revenues	Out of total transfer mass:			
		Mutual settlements	Grants	Intergovernmental loans	Subventions
1991	14,4	34,8	55,9	9,2	-
1995	4,9	51,7	40,3	8,0	-
2000	22,9	0,2	96,5	1,9	2,4
2005	43,5	-	61,8	-	38,2
2010	48,8	-	56,8	-	43,1
2011	52,3	-	50,7	-	49,3
2012	55,2	-	48,7	-	51,3

Source: Own calculations based on MoF data

The growing SNG dependence on transfers signalizes a soaring vertical imbalance and diminishing local fiscal autonomy. An elimination of discretionary transfers could be judged as a positive development, since it has made transfer allocation more objective and predictable. Increasing relative importance of earmarked transfers could be hardly judged positively, because earmarking puts additional restrictions on SNGs' fiscal policy and may distort their spending priorities.

The growing extent of NG intervention into subnational finance is objectively motivated by the substantial economic differentiation among the regions, and could be measured by *per capita* GRP, calculated in Ukraine since 1995. GRP is the most suitable tool for measuring inter-

regional differentials, as it is more strongly related to regional economic capacity than *per capita* revenues, which include net transfers [17]. Table 2 shows the growing economic inequality among the regions. In 1995, the GRP maximum/minimum ratio was 2.7 to 1, but in the middle of the first decade of the 2000s it exceeded 6 to 1, and has remained this high. As a result, differences in social development across the regions became more visible, too, triggering inter-regional and international migration of production factors. In addition, it generated significant differences in fiscal endowment of SNGs which required more intensive equalization measures from the NG side.

Table 2. Regional differentiation of *per capita* GRP in Ukraine (in market prices, UAH)

Year	Average value	Variation coefficient	Minimum	Maximum	Maximum to minimum
1995	970	0,232	507	1368	2,7 / 1
2000	2788	0,340	1411	5965	4,2 / 1
2005	9373	0,486	4603	28780	6,25 / 1
2010	23600	0,486	10939	70424	6,44 / 1

Source: own calculations based on MoF data

It is a challenge to assess fiscal equalization intensity in the country. One approach could be to deliberate about total transfer share in total SNG revenues (see Table 2 above). But this share tells us nothing about reaching the goal of equalization, only hinting that "we likely observe a high scale of equalization". In order to assess how intensive fiscal equalization is, we need to have some additional measures applied. Here, we offer a specific measure, a relative change in *per capita* revenue variation coefficients (CV) calculated at two stages of equalization: the first one, performed with indirect transfers (passive equalization) and called "intermediate", and the second one, performed with direct transfers (active equalization) after the intermediate stage, and called "final". An advantage of such a measure is that it could allow us to catch dynamics in fiscal equalization policy. So we have two coefficients:

$$C_1 = \frac{CV(TL) - CV(TL + TS)}{CV(TL)} \text{ and}$$

$$C_2 = \frac{CV(TL + TS) - CV(TL + TS + TD)}{CV(TL)}$$

where *TL* stands for regional proceeds from local taxes, *TS* – shared taxes, *TD* – total direct transfers, all in *per capita* terms. C_1 presents a relative change in regional revenue variation with regard to shared (ceded) revenues; C_2 presents a relative change in revenue variation occurring after application of active equalization measures (direct transfers).

Having as a base of comparison a variation of *per capita* local taxes, we could proceed to final equalization results by sequentially evaluating intermediate and final outcomes and, thus, observing whether policy measures at each stage make a contribution to revenue equalization, and in what manner. A positive value of measures C_1 and C_2 means that a decrease in revenue distribution inequality occurs; a negative value of both signalizes an opposite

development, i. e. growing inequality. Table 3 presents the results of respective calculations. It shows that before adoption of the Budget Code, measures of passive equalization (ceded taxes and shared revenues) dominated, but the scale of interregional differentials at passive and active equalization stages measured by CV remained quite sizeable. It should be mentioned that CVs for the time period before the Budget Code adoption at the intermediate equalization stage were higher, than at the final stage. This

result could be interpreted as followed: absence of formula-based grant allocation contributed to subjectivity in grant allocation that resulted in diminishing final equalization effect. After the enactment of the Budget Code and the shift to a system of ceded revenues (instead of shared revenues with varying sharing rates), interregional inequality at the first stage exploded (the value of C_1 became negative), but with time it began to diminish, reaching the value of $-0,19$ in 2011.

Table 3. Intensity of horizontal revenue equalization through use of indirect and direct transfers

Year	Local taxes and duties, CV(TL)	Revenues including indirect transfers, CV(TL+TS)	Intermediate equalization, C_1	Revenues including direct transfers, CV(TL+TS+TD)	Final equalization, C_2
1993 ^a	0,93	0,32	0,66	0,37	-0,16
1995	1,22	0,28	0,77	0,22	0,21
2000	0,42	0,80	0,90	0,53	0,34
2001	0,44	0,84	-0,91	0,56	0,33
2006	0,49	0,66	-0,35	0,25	0,62
2011	0,31	0,37	-0,19	0,09	0,76

^a 1993 was a first year for which a whole set of data was available.

Source: Own calculations based of MoF data.

This counter-equalization effect at the intermediate stage could be attributed to using an origin principle for tax proceeds allocation. So locations which have bigger revenue base (like national capital Kyiv City or regional administrative centers), end up being better-off in comparison to those that have a lower one (or even absent like in many Ukrainian rural locations where PIT is being collected from incomes of those working for the local authorities). Increase in revenue inequality as a result of passive equalization called for much more extensive amounts of grants than before. The data presented in Table 3 demonstrates that effective intensity of equalization at the final stage before 2001 was much lower than in the period after Budget Code enactment. After 2001, the intensity of final equalization increased significantly: C_2 reached a value of 0,76 in 2011, however, CV for the final stage became almost zero in the same year.

So, after more than 10 years since the new equalization procedure has been introduced, it ended up with *de facto* full alignment of fiscal differences among the regions. And this fact could be important with respect to efficiency, because such an intensive equalization would lead to disincentives in using local fiscal capacity, as R. Musgrave [1961] predicted, and as is recognized by Ukrainian students [6]. This disincentive effect could be traced by lowering engagement into raising revenues and its respective negative influence on budget expenditures. We assume that diminishing differentiation in regional *per capita* reve-

nues (transfers excluded) and expenditures would signal a similar effect of the equalization policy. Applying the Herfindahl-Hirshman Index (HHI), usually used for measuring concentration in the industry, to evaluation of interregional inequalities in the public sector [9] demonstrates that such an effect is really present in Ukrainian intergovernmental finance. According to our calculations, HHI value for combined regional total revenues (fiscal transfers excluded) was 1028 in 2001 and 623 in 2011; respective values for total expenditures were 548 and 475. So we may conclude that the current equalization approach has induced some negative allocative effects, which are more significant as concerns revenue collection.

This conclusion could be backed up by the fact of actual full equalization of regional *per capita* total expenditures measured with CVs (Table 4). This could not be a surprise, as according to legislation, subnational budgets must be executed without deficit, and SNGs are strictly limited in their ability to borrow money in financial markets. But, as the data above shows, subnational expenditures on functions delegated by the state (on social needs, education and healthcare) are equalized much more heavily than those dedicated to own ones (housing and amenities, economy). The total result – almost full expenditure equalization – could be attributed to the fact that own expenditures comprise rather a small fraction of total SNG expenditures, about 15% in 2012.

Table 4. Variation coefficients for subnational *per capita* expenditures

Year	Total	On social needs	On education	On healthcare	On housing and amenities	On economy
1992	0,20	0,12	0,13	0,15	...	2,13
1996	0,16	0,17	0,15	0,16	0,68	0,52
2001	0,30	0,17	0,14	0,19	0,86	0,81
2006	0,25	0,10	0,10	0,13	0,82	0,86
2011	0,09	0,07	0,09	0,14	0,59	0,65

Source: Own calculations based on MoF data

The growing intensity of fiscal equalization became possible thanks to massive state involvement into formation of subnational revenues. There occurred a sharp decrease in the number of donating territorial units of all subnational levels (e.g. in 2012, only one region out of 27, Kyiv City, made contributions to the state budget), and in the amount of contributions to the equalization fund: it was UAH 7584 mil in 2009 and only UAH 1114 mil in 2012. Actually, Ukraine has moved to a model of equalization

performed exclusively through NG appropriations with no horizontal redistribution.

3. NEWEST DEVELOPMENTS IN HORIZONTAL FISCAL EQUALIZATION

Since 2001, the main instrument of the equalization policy in Ukraine has been the equalization grant (further referred to here as EG). The Budget Code stipulates that EGs are allocated in order to financially support fulfillment of delegated functions in case proceeds from ceded taxes

are not sufficient to fund respective expenditures. By nature, the EG is a general transfer allocated according to a formula. Beneficiaries of the EG fund are regional and district authorities, along with governments of the cities of national and regional significance. District state administrations are responsible for performing equalization for subdistrict units (cities of district significance, settlements and villages); it is being done in line with guidance provided by the Budget Code according to specific law. In general, EGs are allocated among respective territorial units through the formula $T_i = \alpha_i(V_i - D_i)$ where D_i is the forecasted amount of revenues assigned for funding delegated functions, calculated with regard to tax capacity coefficient; V_i stands for calculated amount of expenditures for fulfillment of delegated functions; α_i stands for equalization coefficient. Expenditures are calculated as a sum of corrected (by a bundle of coefficients for each delegated function) standards of budgetary coverage. The formula was modified several times (2002, 2003); however, it has remained quite stable in its major components since 2005.

In general, introduction of the formula-based fiscal equalization procedure was a progressive step forward [10], although it did not remove all the issues diminishing the efficacy of the transfer policy in its redistribution aspect. The most important issue to be mentioned is defining the to-be-allocated transfer fund basing on aggregation of differentials between calculated expenditure needs and revenues for funding the delegated functions. The problem is that expenditure needs are calculated with regard to specific "standards of budgetary endowment" set by MoF and adjusted by additional coefficients. This means that subna-

tional expenditure needs are based on fiscal capacity of the state, but not objective criteria.

As we found out before [19], formula-based equalization in Ukraine has not neutralized all the issues preventing the fair and unbiased distribution of fiscal funds within the public sector. To these belong among others: the unconditional nature of grant funds, which is prone to bargaining and political corruption at subnational level; very moderate changes in the net of local public facilities; space for unfair and subjective treatment at the district level, where authorities have some discretion in allocating transfer funds to subdistrict units.

Since the current equalization approach was introduced, it has demonstrated both weaknesses and strengths. One of these weaknesses was that it could not reach sufficient levels of expenditure equalization (rapid changes in regional fiscal needs were not being sufficiently matched by EGs). This situation called for additional instruments, which were provided by the Budget Code as so-called "additional grants". This additional fiscal equalization instrument was activated in the mid-2000s and began to play an important role in the recent years. The state began to allocate additional "grants for securing fiscal solvency of SNGs" at the basic level (districts, cities and villages), "grants for cancellation of salary arrears in budgetary institutions", "grants for compensation of energy tariff increase", etc. The amount of these additional grants began rapidly booming since 2011, as shown in Table 5. The basic reason behind this is lack of local fiscal autonomy, whereby SNGs do not have sufficiently elastic revenue sources at their disposal in order to accommodate their finances to the conditions of the changing fiscal situation.

Table 5. Equalization grants and additional grants in Ukraine 2008-2013, UAH million

Year	EGs	Additional grants approved ^a	Actual amount of additional grants		Actual additional grants to approved, %%	Ratio of actual total additional grants to EGs, %%
			Total allocated ^b	Paid out in the last month of the budget year ^b		
2008	28810	756	1629	196	215	5,7
2009	33356	703	2702	1047	384	8,1
2010	43740	711	582	412	82	1,3
2011	43630	956	4483	2239	469	10,3
2012	51650	1289	8976	4305	696	17,4
2013	55695	1312	5525	2702	421	9,9

^a As stated in the respective annual Budget Law (firstly approved, without further amendments).

^b According to data of the State Treasury.

The data in Table 5 also draws attention to a drastic difference between approved and actually paid out additional grant amounts. It could be explained by the right of the Cabinet of Ministers to reallocate money within a specific budget program without changes in the budget law (it means without approval of the Parliament) granted by item 23.6 of the Budget Code; the Cabinet also has a right to change transfer allocations among separate territorial units within a budget year. The problem with these grants is that there are no explicit objective criteria according to which they could be allocated. That is why they have turned into a perfect instrument for manipulation from the NG side, embracing both fiscal and political reasons. The data above shows that additional grants, firstly, fluctuate greatly in amount from year to year; secondly, they generally demonstrate a trend to absolute and relative increase; thirdly, their actual amount usually greatly (by several times) deviates from the approved one in the annual Budget Law; fourthly, they are mostly paid out in the last month of the budget year. It should be added that in addition to their discretionary nature, these transfers also include a huge disincentive component: those SNGs which get into bigger current fiscal problems could receive more, since these grants compen-

sate for mandated increase of salaries in budgetary institutions and other expenses. So, the more arrears a territorial unit has, the more non-conditional fiscal assistance it could receive. As there is no explicit formula for allocation of additional grants either on the national or subnational level, regional state administrations decide how to allocate money and how much each of the subregional units will receive, thus giving a floor for bargaining and political corruption.

Another instrument that could have a counter-equalizing effect and be a source of additional distortions in subnational fiscal policy is state investments. These investments are allocated in two ways: (a) through direct appropriations of NG bodies (ministries and agencies) and (b) through investment money allocated to regional authorities, which then decide how to use it. In the latter case, we actually have *quasi-transfers*, because these investments are allocated by regional authorities without any NG's influence.

Despite the lacking systematic data on these two additional fiscal instruments, indirect evidence makes us suggest that their implications may fully distort outcomes of the official equalization policy, thus making the overall results of horizontal fiscal fund allocation fully inadequate and unfair. Independent experts reported a complete

reversal of fiscal flows among regions observed since 2010, when a political turn in Ukraine occurred. Before 2010, the less-developed regions generally benefited, but, since 2011, the transfers have been redirected in favor of the economically highly-developed ones (especially the East). In the first half of 2013, top beneficiaries of all kinds of NG net payments (all types of transfers, targeted state support plus direct state investments) included those regions which conventionally were considered as the most important donors, such as Kyiv City, Donetsk and Luhansk regions.

4. CONCLUSION AND POLICY PROPOSALS

Our analysis has shown that Ukraine has shaped its equalization policy by implementing basic provisions of the Budget Code postulating improved assignment of revenues and expenditures among governmental levels, and introducing a formula allocation of equalization grants. Thanks to these reforming attempts, quite a significant intensity of revenue and expenditure equalization has been achieved. However, this study has shown that there is a space for further policy improvements, since equality currently prevails over efficiency, and need factors are not incorporated adequately enough into the equalization procedure. The opportunity cost of intensive revenue equalization includes significantly increased transfer dependence of SNGs and, as theory predicts, diminishing incentives for regional and local authorities in making efforts towards generating sufficient revenue flows and better expenditure management. Despite the increased objectivity in fiscal equalization, there are still components of the transfer mechanism that somehow undermine equalization goals – *ad hoc* additional grants and state investment entitlements for the regions; even though the study did not provide strong evidence to support a hypothesis of interference of political factors with the equalization process.

As concerns the grant allocation formula, it should be significantly simplified in both revenue capacity and fiscal need measurement, which will make it impossible to support ineffective budget management at the subnational level. This step, along with application of the equalization coefficient to beneficiaries, will contribute to incorporating incentive elements into the grant allocation formula. There is no question that the role of *ad hoc* additional grants should be minimized, if not fully eliminated.

Among other issues worthy of consideration is the equalization grant fund formation principle. The current approach, where the state bears the full equalization burden, looks unconvincing; our vision is that this fund could consist of two parts: a fixed one (NG budget appropriations that might be set e.g. in proportion to total governmental proceeds) and a variable one representing redistribution among the governments of subnational levels. Such an approach would make the equalization process more elastic to economic development and, on the other hand, would place harder subnational budget constraints, thus simultaneously diminishing space for political bargaining among authorities and politicians of different territorial levels. Another issue that could make the Ukrainian transfer system

more incentive-oriented could be developing conditional matching grants, which are today underrepresented as policy instruments.

It looks as if the Ukrainian equalization approach will soon be modified in order to satisfy the demands of territories for self-reliant fiscal management. There are many challenging options to be considered, which, when realized, would contribute to a more fair and efficient resource allocation within the sector of public administration.

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ФІНАНСОВЕ ВИРІВНЮВАННЯ В УКРАЇНІ: ЧИ ПОТРІБНЕ УДОСКОНАЛЕННЯ?

У статті показано, що існуючі в Україні економічна та соціальні відмінності між територіями вимагають застосування інструментів фінансового вирівнювання. Дослідження показує, що застосування формульного підходу до фінансового вирівнювання призвело до практично повного вирівнювання відмінностей у сукупних доходах та видатках на субнаціональному рівні. Представлені у статті результати надають підстави для перегляду поточної процедури фінансового вирівнювання у напрямі включення до формули розподілу трансфертів вирівнювання фінансових стимулів для місцевих урядів.

Ключові слова: фінансове вирівнювання, міжбюджетні трансферти, державні фінанси.

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ФИНАНСОВОЕ ВЫРАВНИВАНИЕ В УКРАИНЕ: НЕОБХОДИМО ЛИ УСОВЕРШЕНСТВОВАНИЕ?

В статье показано, что существующие в Украине экономические и социальные отличия между территориями требуют использования инструментов финансового выравнивания. Исследование показывает, что использование формульного подхода к финансовому выравниванию привело к практически полному выравниванию отличий в совокупных доходах и расходах на субнациональном уровне. Представленные в статье результаты дают основания для пересмотра текущей процедуры финансового выравнивания в направлении включения в формулу распределения трансфертов выравнивания финансовых стимулов для местных правительств.

Ключевые слова: финансовое выравнивание, межбюджетные трансферты, государственные финансы.

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GLOBAL WARMING BETWEEN SCIENCE AND POLITICS

During the last three decades, the scientific theory of global warming has become a political ideology. Significant political components are found both in the premises and (especially) in the consequences. But witnessed also at least a decade of negationism: global warming research programs are questionable regarding methodology and the ethics of research. Face to all contestations, "Global warming theory" has already become "Global climate change theory". It is true that global warming ideology preparing a global governing over a strictly limited number of people?

Keywords. Global warming, Global Climate Change, Theory, Ideology, Politics, Policies.

Introduction

In the past three decades, the "global warming" scientific theory, amassing socio-political significations of the most diverse, appears to us as a solid political ideology, which proposes the thesis of a defensibly created company in order to prevent/combat the worst threat to the global society: Earth global warming in all its physical components, up to serious life impairment. Of course, skeptics contribute massively to the political structure of the global warming (under their siege, already renamed widely in "the theory of global climate change").

In this context, our research tries to answer several key questions: does the scientific theory of "global warming" contain errors of measurement and interpretation?; If so, are these intentional?; who uses the possible falsification of scientific data?; which are the global projects that favor this theory, and who are the beneficiaries of the social/political patterns that it proposes?

"Global climate change" in scientific research. Scientific book and research program

The number of scientific books that promote global warming thesis (in recent years, under the label of "global climate change") is impressive and huge in relation to those expressing reservations or flatly denies global warming. The phenomenon seems growing exponentially, being impossible to quantify. We can the most to infer an order of magnitude and a vague numerical ratio between supporters of global warming and the work of sceptics. Assuming this imperfect proceeding by analyzing a website among the most used [2], we can count 162 "popular books" on the subject of global warming – among which not more than ten express their reservation and denial. All are books in English that appeared after the year 2000 – but more than three-fourths were offered to the market after 2005.¹⁹

But the book – even scientific – is not intended primarily for researchers and other categories of experts on the issue of global climate. Of course, most beneficiaries are of

the informed public or information-hungry – teachers, students, journalists, non-governmental activists, officials of all levels, with the passion of various readings. Maybe a few tens of individuals to read a book with the wizard's eye, able to formulate specialized appraisals and to use further the scientific results in their own research.

Experts systematically exceed the scientific book, their mandatory reading being scientific research programs and projects of their own or of others. These projects are worked, appreciated and capitalized, running in a world far narrower numerically, and incomparably more valuable from the scientific point of view. Through research programmes and projects, science is advancing more than by book.

Here, however, a fracture occurs that is extremely dangerous both for science, for implementers of policies and for the general public. The last two categories do not have sufficient instruments to deal with error and falsehood sold in the project-based research. Then politicians formulate and implement policies incorrectly, and the public ungroundedly supports or opposes to these policies. Perhaps no other contemporary field of science is more exposed to (and used!) to this risk than that of "global climate change".

Speaking of research programmes, the relevance of the number is minimal. The "market" is dominated by a few intense publicity programmes, generously financed, which engages in multidisciplinary teams some of the most prestigious and most active researchers in climatology, biology, geology, economics etc. The results of these researches are automatically transferred to the mandatory reference for global policies, for opening new directions of research – but also the favorite target for sceptics.

The most important organizations of climate research are, invariably, advocated by the theory of global warming. They receive huge funding, as demonstrated by a balance sheet of the year 2010, corroborating revenues with media impact during 2012-2013 [24]:

¹⁹ Of course, this exercise is burdened by the lack of books in languages other than English, and does not consider quantitative factors such as number of pages, format, number of copies, number of copies sold – all combined could provide a clearer and more nuanced in our problem