FINANCING LOCAL GOVERNMENT REFORM

I. PURPOSE

This Paper discusses options for the future development of fiscal decentralisation and its regulation by the Budget and Tax Codes. In particular it looks at the financial implications of the reforms in the local government system proposed by a package of five laws currently under consideration by Government.

The draft law on territorial administrative reform has captured public attention because of its proposal for widespread amalgamation of the basic level ATUs. However that draft Law is only one of five which make up a consistent and interconnected package of proposed changes in the system of decentralization. Other major changes include

- redesignation of major competences such as secondary education, social welfare, health care and culture as "own" rather than delegated responsibilities of local government and reassignment of large rayon competences in these fields to the hromada level.

- abolition of local state administration at the rayon level

- election by oblast and rayon councils of their heads and extension of their control over their executives.

This Paper looks at the financial implications of these proposals but also at changes which may be desirable as a result of experience in executing the Budget Code in its current form. It divides possible reforms into four topic areas:

> - territorial structure
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> - competences
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> - revenues
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> - equalization

II. TERRITORIAL STRUCTURE

The dominant feature of the draft law on Territorial Administrative Reform is the proposed amalgamation of existing small town and village local government units into a far smaller number of hromada with a minimum population of 5,000 (3,500 in areas of exceptionally low population density). There are other proposals for reducing the number of rayons and creating new city regions, but they have less impact on the overall financial system. The proposed process of   amalgamation is critical to the package as a whole because without it the enhanced powers

proposed for the community level and the implied shift of financial resources would not be viable.

Amalgamation would undoubtedly increase the capacity of the community level to provide public services, enabling reassignment of responsibilities from the rayon (and reducing the current dependence of villages on the rayon for executing their present nominal responsibilities). To that extent it would bring the management of local public services "closer to the people".

That may not be the way village people see the reform. They may see amalgamation as increasing the distance between themselves and local government, both physically and politically. They may fear domination by the largest and most central settlement, although some features of the draft law like ward systems of election and a continued role for village headmen do seek to alleviate this.

The circumstances in which major amalgamations were effected in both eastern and western Europe twenty or thirty years ago have changed dramatically. The proposed legal framework (which reflects Ukraine's obligations as a signatory of the European Charter of Local Self Government) requires substantial public consultation. It is matter of speculation whether this will occasion major political resistance and whether Verkhovna Rada will implement the changes regardless of it.

This Paper has to consider what happens to local government finance if the process of amalgamation goes ahead. But in view of the uncertainties over this, it also has to ask what happens to the assignment and financing of local public services.if it doesn't. There are two possibilities. The first is a non-uniform approach. Current rayon responsibilities proposed for reassignment to hromada could be assigned to hromada over a certain population (e.g. 5,000 or 10,000); elsewhere they would stay with the rayon.

This option has two advantages. It would enhance the competences of rayon towns. It would also provide an incentive for villages to amalgamate voluntarily to get more responsibility and its funding It would, however, have two major disadvantages. It would give rayon towns control over services like schools and hospitals upon which villages depend without a voice in their management. And non-uniform structures and competences. are much more difficult to finance fairly and adequately.

The second option is to take into account the fact that the proposed changes in rayon administration give the rayon council the full powers and character of an autonomous local self government. As such its current responsibilities for both own and, especially, delegated competences deserve to be retained and even in some cases (discussed below) enhanced. However such option might justify further changes in the proposed law on rayon self government to emphasise its accountability to the whole rayon population. The ward election system and the direct election of rayon heads (already proposed for the hromada) would help this objective.

The latter option allows continuation of the current situation in which rayons in practice undertake competences assigned to village level governments when villages are unable to do so.

The rest of this Paper will examine issues in the context of two scenarios:

- full implementation of the proposed territorial administrative reform with amalgamation of villages into hromada of a fixed minimum size

- no amalgamation process, but conversion of rayon administrations into full self governments retaining existing competences.

III. COMPETENCES

The proposed legislation makes two big differences to the major competences in education, health care, social care and culture, currently delegated by the Budget Code to the various tiers of local self government. It converts their status to "own" competences, and it reassigns major components from rayon to hromada level. What are the options for them under the two territorial scenarios just described?

At the same time we have to consider major issues concerning these competences which have been in public debate quite apart from territorial administrative reform. We do not believe that competences should be assigned simply to maximize decentralization, without regard to the best way of providing individual services.

Education

The draft legislation proposes to assign responsibility for preschool and general secondary education to the hromada. If amalgamation results in hromada containing over 5,000 population this poses no obvious difficulty and is line with practice in many European states.

Scattered rural populations need flexible provision for the 6-15 age group including some small village based schools for the younger children, still too small to travel far. Amalgamation must not discourage such variety and adaptation.

There is also a question of efficiency. Funding of education is very stretched, but schools complain of lack of freedom to make efficiency savings and also to tailor their curriculum to local needs and demands. Many neighbouring countries fund individual schools on a per-pupil basis (with allowance for unavoidable differences in costs) while leaving school directors and management boards considerable discretion on the allocation of the funds.

If hromada are not amalgamated, the alternative of strengthening the role of the rayon would require no change in assignment of competences, but the arguments for devolving more power to school management would remain. In any scenario hromada should remain responsible for pre-school education.

Health Care

The draft legislation proposes assigning primary health care responsibilities to the hromada while retaining hospitals and other secondary services at oblast and rayon level.

This would run counter to a recent Verkhovna Rada resolution in favour of unifying responsibility for primary and secondary health care. This would imply retaining responsibility at the rayon level or even reassigning the rayon competences to the oblast.

There are at least two strong arguments for this. The first is the practical difficulty already experienced in relations between rayons and oblast cities, that hospitals typically serve patients from outside the jurisdiction of the local government which manages and funds them. The second is the strong professional opposition to separating the management and funding of

primary and other health care. Developments in medical technology are continually raising new alternatives for treating particular medical conditions in either primary or secondary facilities. This demands flexibility and innovation which becomes much more difficult if choices are dictated by administrative and financial arrangements rather than technical possibility and clinical judgment. The implication of this Verkhovna Rada resolution is that even if amalgamated hromada are created, health care competences should be managed by the rayon local government.

However there is the additional question whether these competences should be reassigned from rayons and oblast cities to the oblast. This could be justified by the facts that medical services in oblast cities often serve the surrounding rayon, and that the specialized services provided by oblast level institutions are often hard to disentangle from general hospital care. In addition oblast medical departments tend to have more experienced health care managers than those available to the rayon.

However, oblast managements would have to show a wider concern for services throughout the region if they were to take over competences already discharged at the level of oblast cities and rayons and might, for example, need some branch organization at rayon capitals. Oblast cities might well resist loss of responsibility for city hospitals.

Creation of more city-oblasts may add a further complication in divorcing the management of health care facilities from their catchment areas.

Social Services

The proposed legislation divides responsibility for social services between oblast, rayon and hromada levels. A recent study of public expenditure on social services criticizes fragmentation for creating a bias in favour of caring for handicapped people in residential homes rather than their own homes. This generally costs more and may not be appropriate for those who are not acutlely handicapped and who would prefer to stay in their own familiar environment if modest nursing and domestic care could be provided.

The implication, as in the case of health care, is that social services should be unified. The rayon is of the right size to provide and manage most services, but it should have the flexibility to delegate management of the territorial centres to the larger hromada in order to preserve a role for local knowledge and community spirit.

Culture

The Verkhovna Rada also resolved that competences in the field of culture should be unified.

This would be contrary to general international practice where all levels of government normally have rights to manage and finance cultural services. There are advantages, for example, in managing library services at rayon level, where a flexible mix of stationary and mobile libraries can be managed and larger stocks of books, web site access etc can be accumulated. Village halls, by contrast, should surely benefit from management at community level, whatever size the population.

A distinction needs to be made between the provision of cultural services and the preservation of cultural heritage. There have also been arguments that responsibility for major cultural heritage is beyond the capacity of city budgets and should pass to national government. There should be

some inventory of national heritage which identifies those historical assets like castles for which the State should either take or, at least, share responsibility. This might involve an earmarked subvention or some other form of partnership. However, the burdens of restoration basically involve capital investment and in so far as the State Budget has sufficient funds these can be made available to cities through capital grants. Moreover city administration is in a better position to mobilize the private sector participation which plays an important part in restoration in most other countries. The legal obstacles to private and voluntary sector participation in managing and funding cultural facilities clearly need review.

IV. REVENUE

There are two basic problems over revenue. The first and most obvious is *adequacy*. If competences are reassigned appropriate shares of taxes will have to be reassigned as well. Judgments whether funding is "enough" are inevitably relative and subjective, but there seems widespread consensus that health care and education are seriously underfunded. The Budget Code leaves 'own' competences dependent upon basket 2 revenues, so that they reflect fully the enormous disparities in local revenue bases.

The second issue is *accountability*. Local governments currently have little responsibility for setting the rates of the taxes on which they rely, whether assigned (basket 1) or "own" (basket 2). They can always blame the State for the inadequacy of their services, even if it is their own incompetence which is really at fault.

Personal Income Tax

The assignment of Personal Income tax (PIT) yields to local budgets by the Budget Code is a major advantage to fiscal decentralization in Ukraine. This is the only source of tax whose yields can be clearly located territorially and can be sufficient to cover a large proportion of the costs of the major services carried on local budgets

There are two drawbacks, however. One is the assignment of the tax to the local budget where the employer is registered. This distorts the revenue base of Kiev and other major cities and necessitates a high degree of horizontal redistribution, with resulting tensions. In most countries where PIT revenues are shared by local government, assignment is to the territorial unit in which the payer lives. This is not a difficult process. In sending tax deductions to the State Tax Administration (STA), employers have to include an individual code number for the territory in which each payer lives. The STA then transmits the payments to the various territorial units using computer software which has been developed for this purpose. Application of this process in Ukraine would greatly increase the fairness of PIT sharing.

Assigning PIT by residence would also reduce levels of disparity in revenue collections and thereby the extent of horizontal redistribution. This would lessen the resentment of donor cities and the resulting disincentive to revenue collection.

The second drawback is that local governments spend the yields of PIT without accountability for the rates imposed on their citizens. Assigning PIT by residence would also make it possible over time to amend the Tax Code to give local government units power to vary the rates of PIT payable by their citizens within legally prescribed `limits. Such power of surcharge would apply to the percentage share of PIT assigned to the particular level of local government, not to a taxpayers' total liability. This is practised in states such as Denmark, Sweden, Finland and

Croatia, and substantially enhances both the accountability and the budgetary discretion of local government.

It must be emphasized that the first reform – the assignment of PIT to places of residence – is the first priority. Introducing rate setting powers would be a second and later stage, dependent in any case on the completion of the first stage.

These changes are desirable whether or not territorial reform takes place. However, any substantial shift of competence from the rayon to the hromada would need to be accompanied by some revision of the percentages shares of PIT between levels of government.

Property Tax

Territorial administrative reform can be expected to increase pressure to improve the funding of those competencies dependent on "own" (basket 2 revenues). Can this base also be increased?

An obvious possibility, much discussed in Ukraine already, would be to introduce the type of tax on buildings common to neighbouring countries. This is not based on the complex appraisal of market or rental value, as practised in some Western European and North American countries, but instead rests far more simply on the square meterage of buildings. A single rate per square metre would be adjusted by coefficients for use (residential/commercial/industrial etc) and location (based on a rough comparison of relative property values between towns and neighbourhoods within them).

There is a widespread belief that a local property tax based on square meterage cannot be a source of significant resources for local governments. However, the Polish example proves it is not true. In spite of the "per square meter" character of the property tax in Poland, it raises around 1% of GDP or about 15% of total communal revenues annually. The Law could define only maximum (or maximum and minimum) rates of tax, while local councils would make their own decisions regarding the rate that would apply within this range. International experience suggests that restrictions would be necessary to prevent local governments imposing this tax more harshly on business payers than on individual households; it is also very questionable whether exemptions should be decided at local rather than national level.(Annex 1 presents the case in greater detail).

Can households or businesses afford an extra tax burden? This is ultimately a political judgment. If property tax is a basket 2 revenue, each local government council could be left to make that judgment itself, balancing the demand for improved services with the public ability to pay more. The decision would have no implications for the State Budget.

Whether the tax should fall on owners or occupants is a matter of administrative convenience, depending on ease of identification.

State Budget Allocations

Apart from introducing property tax and the possibility for local councils to surcharge PIT, these suggestions do not increase the overall funding of local public services.

One possibility under current discussion is the introduction of compulsory health insurance. We are unable to comment on the desirability of this, but from the experience of some other

6

countries the extra burden on payers might be partially compensated by cuts in PIT which in Ukraine would reduce local government revenue. .

Otherwise the main possibility for increasing the funding of local public services lies in increasing the share of local government spending in the consolidated budget, resulting in a higher volume of equalization transfers.. That would require a judgment on relative State Budget priorities which is beyond the scope of this Paper.

V. EQUALISATION: Simplifying the Formula

The need for change

The proposed territorial administrative reform would extend the reach of the current equalisation formula from 686 local budgets to perhaps as many as four or five thousand hromada.

Such an enlargement of the scope of the formula presents a number of challenges. First, the current formula will need to be structurally modified to reflect any changes in the expenditure responsibilities of the rayon and the newly formed administrative-territorial units. Secondly, if local governments are going to be granted some discretion in choosing the tax rates that apply to their revenue base, the revenue side of the formula will need to be adjusted to take into account "potential" revenues (related to a standard tax rate) rather than "actual"yields. Otherwise, local governments will have a perverse incentive to keep their rates low and rely more heavily on transfers to finance their budgets. In Poland this problem has been addressed by basing transfer calculations on the revenues a local government would receive if it applied maximum tax rates to its base.

However, even if the enlarged hromada are not created and rayons and oblast cities retain their current responsibilities, reforms in the equalization system are still needed. The expenditure side of the current formula requires much needed simplification and adjustment to make it more transparent and effective in its operation. In addition, recent changes in the forecasting methodology on the revenue side of the formula have warped its operation.

Coverage

The Budget Code restricts equalisation to local government expenditures on competences delegated by the State, but includes the most expensive local public services in this category, including education, healthcare, social welfare and culture. The draft local government legislation designates these as "own" competences. What are the consequences for the equalization system? If this were to be adopted?

Ideally the equalisation system should cover all local public services. However, this could prove extremely expensive to the State Budget and there are strong arguments for restricting equalization to those services currently covered until there has been further substantial growth in the economy and in public finance as a whole. There are constitutional guarantees of equal standards in respect of education, health care and social welfare as well as public expectations.

If the draft local government legislation is adopted, the lists of delegated and own competences in Articles 88 to 91 of the Budget Code would have to be amended. To preserve the present sectoral coverage of the equalization system, it would be necessary to amend Articles 94 and 97-99 of the Code to include education, health care etc in the local competences covered by definitions of budget sufficiency standards and equalising transfers.

Methods

The Budget Code currently equalizes local budgetary resources by a combination of State Budget subventions (mainly for social benefits and investment expenditures) and horizontal redistribution between local government units topped up by a further State Budget contribution.

There are international precedents for such combination (Swedish practice, for example) but countries where the balance between the components differs substantially. In Poland, for example, some part of PIT accrues to the State Budget but general subventions *(zahalna dotacja)* are paid to local government units, principally in support of education costs. This alternative form of redistribution could be beneficial if territorial reform results in a non-uniform assignment of competences to the three levels of local government, making a general spending needs formula difficult to apply in respect of some competences. It would also reduce the impact of current problems experienced in calculating revenue capacity.

Expenditure Needs

The expenditure side of the current formula suffers from two major defects. It has become buried in a blizzard of equations that seriously detract from the ability to understand how it works. By becoming so opaque and complicated, the formula has also invited every local government to pressure central government into including special characteristics that might work in its favor. In particular, it has encouraged local governments to label institutions as serving purposes having high formula coefficients whether or not they are a local expenditure priority.

The first defect noted above arises from the fact that the current formula measures expenditure needs in an absolute sense for every oblast, city and rayon. Formulas, both on their revenue and expenditure sides, are all about deviations from the national average value of revenue and expenditure. On the expenditure side expenditure needs should be measured in a relative sense, in other words in relation to the average national expenditure need for a particular function.

Exactly how expenditure needs could be expressed in relative terms is detailed in Annex 2.

Revenue Capacity

The revenue side of the current formula has also recently fallen into a state of dysfunction. Measurements of fiscal capacity based on three years performance proved difficult to apply to cities which had suffered severe industrial collapse in the economic circumstances of the late 1990s, and were then totally undermined by the 2004 PIT reform of tax rates and brackets.

In response to these inadequacies the Ministry of Finance has radically revised its revenue forecasting methodology. In preparing the 2006 State Budget the Ministry forecast local government revenues by extrapolating from the observed revenue trend in 2005 and adding growth and inflation factors to the result.

 While this procedure may improve the accuracy of revenue forecasts it also has several negative consequences. It is first of all a direct violation of the Budget Code that requires the use of indexes of relative fiscal capacity. Secondly, by forcing the formula to track the actual revenue performance of local budgets it severely undermines local government incentives to raise revenues, something that the Budget Code fought hard to preserve; under this procedure, any local government that increases its revenues at a faster than average rate will see either its equalization transfer drop or its contribution to the State Budget rise.

For the 2007 Budget performance data will be available for two full fiscal years after the PIT reform plus six months of 2006. It should, there for, be possible to return to the more objective measurement of trends over time envisaged by the Budget Code.

The assignment of PIT shares to place of residence rather than the employer's registration suggested by this Paper would once again disrupt the calculation of fiscal capacity. This could, however, be implemented in two stages. In years one and two places of residence would be reported to the STA which would record the amounts transferable to each local government unit but continue to transfer the tax deductions to the place of registration. In year three the evidence from years one and two would be used to calculate revenue capacity for formula purposes and STA would actually transfer the deductions to the place of residence.

VI. CONCLUSION

We understand that local governments are anxious that administrative and fiscal reforms should reduce the problems they currently experience in balancing their budgets. Reducing their responsibilities would not contribute to the overall goals of decentralisation, and would not help them financially since under the Budget Code system they would incur commensurate losses in revenue. Increases in the allocation of resources to the local government sector within the overall system of public expenditure would be a solution, but this would involve increases in taxation or reductions in the cost of other sectors. We cannot say how either would fit in with national priorities.

Another obstacle to balancing local budgets is the existence of service delivery norms in sectoral legislation which imply levels of expenditure which are not covered by the expenditure norms used to determine inter-budget transfers under the Budget Code. We believe that the Budget Code formulation is correct in basing expenditure norms on a disaggregation of revenue forecasts, and believe that local governments should not be debarred from efficiency savings by other norms related to inputs rather than outputs.

This Paper recommends changes in local revenues and in the equalisation formula. These are worth consideration whether or not territorial administrative reforms takes place. It also deals with issues related to territorial structure and the assignment of competences; these are largely tied to the possibility of radical amalgamations of the community level of self government and must be guided by an assessment of its chances of implementation.

Annex 1

Taxation of Buildings – Options to Consider

Taxation of buildings has several advantages as a source of local government revenues; consequently it is the most frequent form of local taxation over the world:

- The tax base is relatively evenly distributed, so it may bring significant revenues to almost all local jurisdictions;
- The tax is well defined in geographical space – with a very few exceptions it is easy to define who is going to pay, and which local government will benefit from the tax yield. It is, for example, in sharp contrast with taxes on business activity, where companies registered in one place but having actual business activities in several others, create difficulty in defining which local budgets should benefit from their tax.
- Properties are immovable (limiting the negative consequences of tax competition between local governments)
- Available tax yields can cover a substantial proportion of local government spending needs, a least in respect of communal, physical services.

Ad valorem property tax is one of the best and most common forms. On the other hand introducing *ad valorem* property tax in a relatively young and undeveloped property market as in Ukraine raises a lot of difficulties:

- In spite of available simplifying methods and tools, introducing ad valorem tax on buildings will require a lot of time and will be relatively expensive since it requires proper data bases and valuation of each individual property.
- In countries with an immature private property market there are also technical difficulties in finding methods of valuation
- The experience of several Central and Eastern European countries shows that introducing such a tax is politically difficult.

Therefore, the imperfect (but more viable) form of per square meter tax is well worth consideration. One of the important advantages of such a solution is that it requires a much simpler data base tax, and can be introduced much faster and cheaper. Currently, sufficient data seems to exist in Ukrainian towns and can be found in the Bureaus of Technical Inventory (BTI). The situation in rural areas is a bit more complicated, but combining information available in BTI's and "economic books" available at every village council, should be a good starting point for assembling the appropriate data base quickly.

Two arguments are frequently raised against such a simplified form of property taxation:

- The tax yields are unfair, since owners (or users) of properties of very different value pay the same amount; such a tax does not reflect "ability to pay" principle";
- There is a wide-spread belief that a meterage base cannot be a source of significant resources for local governments (see also point 6.204 of the World Bank Report 'Improving Inter-Governmental Fiscal Relations in Ukraine')

The former of these negative consequences may be somewhat reduced by introducing coefficients for use (residential/commercial/industrial etc) and location (based on a rough

comparison of relative property values between towns and neighbourhoods within them), as shown in examples described below.

The latter negative consequence (inability to collect significant tax yields from a tax based on meterage) is more a myth than a reality. In Poland the property tax, in spite of its "per square meter" character, raises around 1% of GDP or about 15% of total communal revenues annually. It is illustrated by the figure below:

Fig. 1.

Revenues from the property tax as % of GDP (1994)

source: Limitations of local taxation..., 1998.
Note: in UK data include also revenues from the tax on commercial properties, which is not a local government tax

In Poland the property tax is the most important source of own revenues for the lowest level (*gmina*) government. It is raised both on built-up properties and on empty plots of lands (but not when used for forestry or agriculture, which are taxed by separate agriculture tax and forest tax). It brings to local governments over 3 billion of dollars per annum, an amount constituting more than 15% of total *gmina* budget revenues, or 45% of revenues from own sources (without revenues from subventions and tax sharing).

Setting the actual rate of property tax is the role of each local council within maximum rates set by national legislation. In addition the council (in some cases the mayor) is authorized to grant tax reductions or exemptions for some categories of tax payer. The maximal rate is automatically increased every year by the rate of inflation, as announced by the Main Statistical Office.

The rates vary depending on the type of property. For example in 2004 the maximum rate for residential houses was 0.52 zloty (around 0.17 $) per square meter while the rate for buildings used for commercial activity could reach 17.31 zloty per square meter (around 5.50 $). The most important rates are illustrated by the table 1. A local council can additionally vary this rate depending on type of commercial activity. As a result of such a structure of maximal rates, over 75% of revenues from property tax come from business. A very big difference between levels of taxation on residential houses and commercial properties may be considered controversial, since it may potentially reduce the accountability of local policy choices by local authorities towards residents-tax-payers.

11

Table 1. The most important maximal rates of local taxes in Poland

	2001	2002	2003	2004
- residential houses	0.46 PLN/sq.m.	0,49 PLN/sq.m	0.51 PLN/sq.m.	0.52 PLN sq.m.
- commercially used buildings	15.86 PLN/sq.m	16.83 PLN/sq.m	17.31 PLN/sq.m	17.42 PLN/sq.m
- commercially used empty plots of land	0.56 PLN/sq.m	0.60 PLN/sq.m	0.62 PLN/sq.m	0.63 PLN/sq.m
- other building structures such as airports, antenna masts, waste disposal plants etc.	2% of the value used for depreciation purposes			

Note: 1 dollar is approx. 3.4 PLN

Fig. 2.
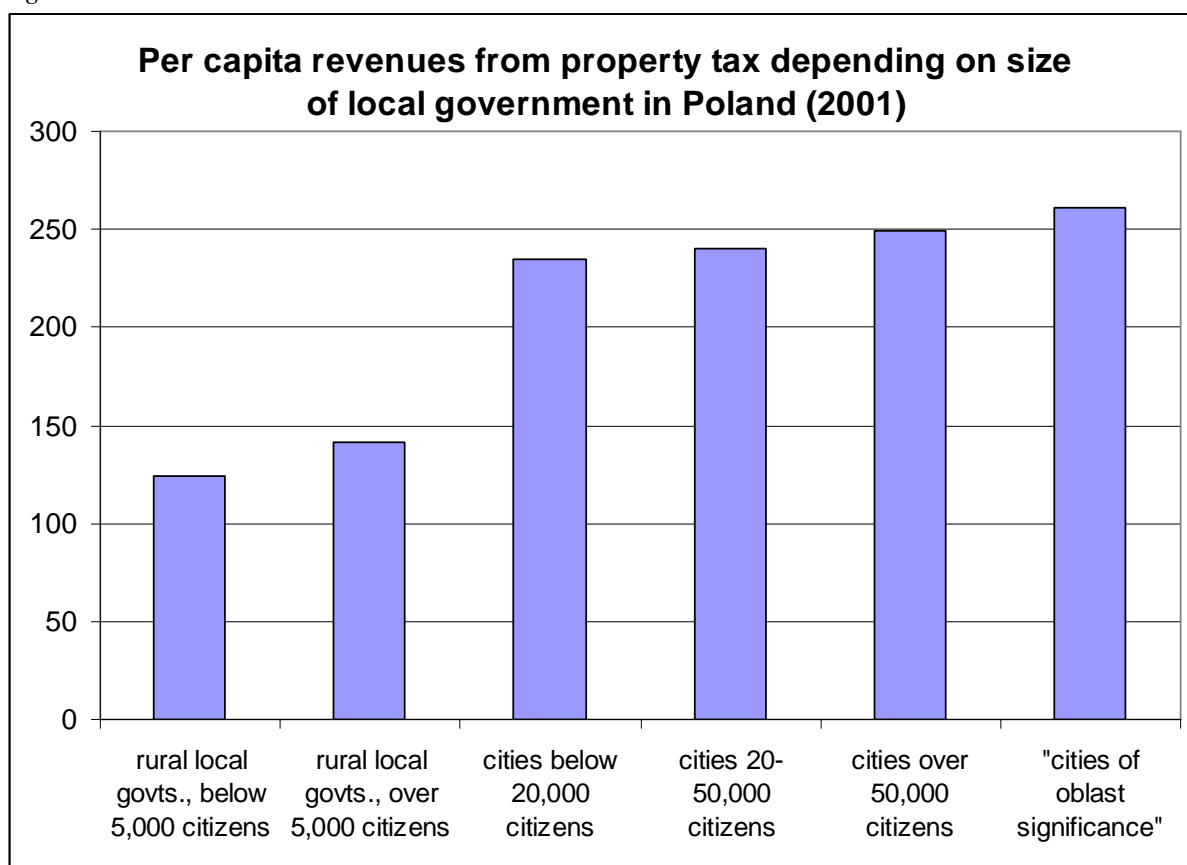
Note: figures in Polish zloty per capita; 1 US dollar is approximately 3.3 PLN.

Figure 2 shows that such a construction of the tax generates significant revenues both in large and small local authorities. Although revenues per capita in the largest cities (cities of *powiat* status – close equivalent of Ukrainian cities of oblast significance) are more than twice larger than in small rural communities, the revenues to rural local governments are still substantial and usually provide more than 10% of local budget incomes.

Czech Republic and Slovakia[1] provide interesting examples of additional variation of maximal rates depending on type of location. Because typically the value of properties is much larger in big cities than in smaller, peripheral communities, the maximal rates reflect the size of settlement

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[1] The regulation is not valid for Slovakia any more, since 2005 local governments enjoy an unlimited freedom to set rates of local taxation.

Address: Sofiyivska Str., 25, office 1, Kyiv, Ukraine, 03150;
Tel.: (38 044) 599 57 30, **tel./fax:** (38 044) 492 97 78; **e-mail:** tkorneyeva@largis.org.ua

unit. Until 2005, in Slovakia the rates were adjusted by the following coefficient depending on the size of town/village:

- – 1 in villages <1,000
- – 1.4 in villages 1-6,000
- – 1.6 in towns 6-10,000
- – 2 in towns 10-25,000
- – 2.5 in cities over 25,000
- – 3.5 in district capitals or in spa resorts
- – 4 in regional capitals
- – 4.5 in Bratislava, the capital city.

In additional local government may vary the rate according to the location in particular districts of the city.

A combination of Polish and Slovak experience in this respect may be an interesting option for Ukraine to consider.

Annex 2

The Search for a Simpler Transfer Formula

The Paper argues for a simpler expression of expenditure needs in the intergovernmental transfer formula based on relative needs rather than absolute costs. This Annex suggests how this might be done.

To cut through the thick fog of separate calculations in the current formula, this new approach to the formula suggests using a two-stage estimation approach.

In the first stage, the demographic size and the structural characteristics of the population of each local government area would be used to compile the basic determinants of expenditure need for every functional category covered by the formula. The central idea behind this compilation is to obtain an objective measurement of the number of actual or potential consumers of each type of service in the formula, both for the country as a whole and for each local government area.

- In the case of administrative costs, the population would be weighted, as it currently is in the formula, by a set of coefficients that reflect the presence of scale economies in larger cities and rayons. For oblasts, norm based employment levels would be used.

- For health care, the demand for services would also use weighted population variables, where the weights would take into account the relatively higher demands of the very young and the very elderly as well as well as differences in demand between men and women.

- In the area of education, weighted student populations would drive the expenditure need calculation and here, again as is currently done, the weights would mirror observed variation in the costs of educating different types of student in different locations.

- Social service needs would be captured by reference to the number of persons within the major categories of the population for whom the government has a statutory duty of social care, including the elderly, disabled or chronically ill, children requiring social care, the mentally ill, homeless people. Other measures might include levels of unemployment and per capita household income.

- Cultural expenditure needs would also draw on the use of population weights with larger cities having higher weights in recognition of the cultural benefits these larger cities export to non-residents.

In short, the calculations of expenditure need embodied in this first stage would use a great deal of the methodology relied upon in the current formula. The second stage of applying the formula, however, would represent a sharp departure from current formula practice.

Making use of all of the demand related information in the first stage, the second stage would express in a single equation the overall expenditure needs of a local government relative to the national average need. This single equation would also incorporate the expenditure needs of mountainous areas and eliminate the practice of separate calculations for these areas..

Each term in this equation measures the functional expenditure needs of a local government compared to the national average measure of need. In the case of education, for example, if a local government educates more weighted students per capita than the country overall, it has above average expenditure needs in this particular area. And, assuming it is a transfer recipient, it would receive a larger transfer under the formula on account of these above average needs. In each functional spending area the focus is on measuring relative expenditure needs rather than on financing the existing network of public sector facilities.

Presenting the workings of the expenditure side of the formula in this manner makes it easier to understand and interpret and, by doing so, significantly enhances the formula's transparency. Furthermore, the data needed to implement the formula's expenditure side all rest on the verifiable demographic profile of a local government. In that sense the formula is capable of being rolled out to the new administrative territorial units that would emerge from territorial administrative reform. The demographic data of these new units should not be difficult to obtain. Simplifying and clarifying the presentation of the expenditure side of the current formula is an important aspect of developing a simpler formula.

A single equation that captures the aggregate expenditure needs of each local government relative to the national average would have the following mathematical structure:

$$(1)\ V_j/P_j = V/P_U \{\varphi_A\ \phi_j^A K_A + \varphi_H\ \phi_j^H\ (\lambda P^*_j/P_j/\sum \lambda P^*_j/P_U) + \varphi_E * (S_j/P_j)/(S_U/P_U) + \varphi_{SC}\phi_j^{SC}((1+\alpha_j)P_j/\sum(1+\alpha_j)P_j) + \varphi_S (R_j/P_j)/(R_U/P_U)\}$$

The variables appearing in this expenditure formula have the following interpretation:

V = the volume of total local government spending in the State budget;
V_j = the volume of estimated expenditure needs in the j'th local government; the subscript "j" refers to the oblast level administration, and cities and rayons within an oblast; the treatment of mountainous areas is dealt with in the appendix;
P_j = population of the j'th oblast or the j'th city or rayon within the oblast;
P_u = population of Ukraine;
P^*_j = age and sex weighted population of the j'th local government;
P^*_u = age and sex weighted population of Ukraine;
S_i = the weighted number of students in the j'th local government;
S_u = the weighted number of students in Ukraine;
R_j = the number of weighted social service recipients in the j'th local government;
R_u = the number of weighted social service recipients in Ukraine.
φ_k = the share of total expenditure, V, allocated to the k'th expenditure function in the State budget;
φ_j = the share of total oblast expenditure allocated either to the oblast administration or to all cities and rayons in the oblast for the functional expenditure categories labeled as either A(administration), H(health care), or CS(culture and sports); in health care for example, this share is defined as .65 for cities and rayons.
K_A = adjustment coefficient for scale economies in public administration;
λ = a scalar reflecting the supply of health services by State funded institutions to a local government area;
α_j = weight given to population size in the supply of cultural services.