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**TWO FIELD TRIPS EXAMINING THE FISCAL IMPACT OF
TERRITORIAL ADMINISTRATIVE REFORM IN UKRAINE**
(revised May 2006)

This paper reports on the findings of two recent field trips, to the oblasts of Ivano-Frankivsk and Luhansk, to explore the fiscal and budgetary implications of territorial administrative reform in Ukraine. The purpose behind these field trips was to test several hypotheses and proposals that have emerged from earlier papers produced by the DFID sponsored SUFTAR project, seeking to promote sustainable territorial and administrative reform in Ukraine (TAR).

Detailed information is presented on five rayons. Two of these are mainly industrial, two are rural and mountainous, the fifth a combination of urban and rural. Between them the five rayons may be said to represent a reasonable variety of rayon-types in eastern and western Ukraine.

The findings are reported in the following sections:

1. The nature of the village amalgamations that have been proposed so far.
2. An analysis of how amalgamation would narrow observed disparities in per capita revenues. This section also describes the current budgetary situation of the Antratseet rayon in Luhansk.
3. Local responses to these amalgamation plans.
4. The size and importance of the savings in administration costs that would be realized from amalgamation.
5. The observed variation in per capita land tax revenues is addressed in the fifth section with an eye towards determining whether land tax revenues should be subject to equalization.
6. The redistribution of personal income tax revenue that would accompany a change in the method of allocating these revenues, from an employment-registration basis to a residence basis.
7. The feasibility of transferring fiscal responsibility for secondary education from the rayon level of government to the newly amalgamated villages.
8. Discussion of whether a new property tax could be introduced to bolster the revenue capacity of the amalgamated villages.
9. Data needs related to equalization at village level.
10. Conclusions.

In each section the findings of the field trips are presented in sequence.

1. Characteristics of the Amalgamation Plans

(a) Ivano-Frankivsk oblast

The selection of pilot oblasts (Ivano-Frankivsk and Luhansk) was influenced by the fact that the Institute of Cartography had prepared draft maps for these regions, so it has been possible to use them for simulation purposes. However, for the Ivano Frankivsk pilot it was discovered that maps with the new planned territorial divisions were available for two rayons only, namely Kosivskij and Verhovinskij. Since both of them are located in the mountains, it was decided to include one more rayon (Halickij) in order to cover more diversified geographical conditions. In this case simulations are based on a version of the map of Halickij rayon, which has been prepared by the Ivano-Frankivsk oblast administration and which has tried to follow the general criteria set out in the draft law on territorial reform. For the analysis of the impact of personal income tax allocation based on place of residence an additional rayon was chosen, the Tysmenyckij rayon, which directly surrounds the city of Ivano-Frankivsk.

Table 1 below illustrates the possible change in the number of territorial units in our pilot areas.

Table 1. Number of local government units in Ivano-Frankivsk oblast – before and after amalgamation

	Old territorial organization	New territorial organization
Rayon tier		
Cities of oblast significance	5	2
Rayon	14	13
Hromada tier (selected rayons)		
Halickij rayon	41 (including 2 towns)	9(*)
Kosivskij rayon	40 (including 1 town)	17
Verchovinskij rayon	22	8
All rayons together	490 (including 10 towns)	no maps prepared for the entire oblast

(*) number based not on official draft prepared in the Institute of Cartography but on own estimations prepared in the oblast, referring to Bezsmertny reform criteria.

Interestingly enough, the present fragmented territorial structure of town and village councils is not a very old one, as it was to some extent produced after 1990. Before that date the number of councils was much lower than nowadays, for example in Verchovinskij there were 15 councils and 28 in Kosivskij rayon. So the pre-1990 number of councils was in the middle between the present very fragmented and the territorially consolidated option suggested by the "Bezsmertny draft".

(b) Luhansk oblast

(i) Antratseet rayon

In the Antratseet rayon of Luhansk oblast there are two competing visions of how amalgamation might proceed. One of them is referred to as the Bezsmertny plan after the Verkhovna Rada member heading the Rada committee responsible for framing the terms and conditions of territorial-administrative reform. The other is a counter proposal put forward by the rayon administration of Antratseet. Antratseet appears to be the only rayon in Luhansk for which the Rada committee has drawn up an amalgamation plan to date. Here we look at the content of each proposal, comparing their similarities and contrasting their differences.

Under the Bezsmertny plan the rayon of Antratseet would be enlarged to include the large city of Sverdlovsk and its neighbouring rayons. Since the rayon's own amalgamation plan does not envisage any geographic enhancement of the rayon, comparisons of the two alternative plans ignore this feature of the Bezsmertny plan in order to compare like with like. For what it is worth, however, the Bezsmertny plan would create four sub-regions within the enhanced rayon, each having a large rayon city and several *hromady* or amalgamated villages-towns. In the sub-region where the city of Antratseet would become the central rayon city, there would also be three *hromady*. The city of Krasny-Luch would become the rayon city of another sub-region that would have six *hromady*. In the third sub-region, where Rovenky would become the central rayon city, a total of five *hromady* would be established but with two of them drawn from the neighbouring rayon. Finally, the newly added rayon city of Sverdlovsk would have four *hromady* attached to it.

Abstracting from the territorial expansion of the rayon, this plan entertains the creation of twelve *hromady* within the current rayon boundaries of which the smallest would be 4,013 in population size and the largest 17,966.

An unusual attribute of the Antratseet rayon is that each of its three large cities encompasses several villages all of whom have their own councils. Krasny-Luch has seven of them, Antratseet six and Rovenky eight. In the case of Krasny-Luch many of these villages are located at a considerable distance from the city centre. One of them, for example, is approximately sixty kilometres from the city itself. According to the Bezsmertny plan, Krasny-Luch would be stripped of its village empire entirely. Four of the villages would be absorbed into one of the new and three *hromady* would themselves become new *hromady*. A much more modest shakeup is envisioned for the other two cities. Antratseet would lose only one of its villages to a new *hromada* while Rovenky would be shorn of only two of its villages, one of which would become a new and the other of which would become a member of this new *hromada*. As a result of this regrouping, ten city villages and fourteen rayon villages would be remoulded into twelve new *hromady*.

The alternative rayon inspired amalgamation plan has a somewhat different view of how the rayon's villages should be reconfigured. It too envisages the emergence of twelve *hromady* but only seven of these coincide with the designation found in the Bezsmertny plan. The largest of them would have a population of 15,850 and the smallest 3,519. The rayon scheme also differs in its treatment of the city villages. Two of Krasny-Luch's villages would be transferred to nearby *hromady* and another three would become *hromady* themselves. However, two of the existing villages would remain in the fiscal grasp of the city. As in the Bezsmertny plan, one of the villages in Antratseet would be shifted to a new but different *hromada* one from that suggested in the Bezsmertny plan. Two of Rovenky's villages would be transformed into new *hromady*. In the end, eight city villages and fourteen rayon villages would be converted into twelve new *hromady* responsible for providing public services to sixty-five population clusters.

A visual presentation of these competing amalgamation schemes is presented in the form of two maps presented in Appendices 1 and 2 of the report. Although these maps convey a great deal of information about the proposed amalgamations they do not clearly indicate in either case how individual villages would be treated and the differences in treatment between the two plans. To better understand this issue, Table 2 provides a list of the existing villages in Antratseet and describes the fate that would await each one according to the alternative amalgamation proposals. The table also gives a better appreciation of the differences between the two plans.

Table 2. Village Reorganization under Alternative Amalgamations

	Bezsmertlny plan	Rayon plan
Krasny-Luch villages		
Zaporizhke	in Fashivka *hromada*	in K-Kyt *hromada*
Sofiivska	in K-Kyt *hromada*	new *hromada*
Hyrstelnenke	in K-Kyt *hromada*	in K-Kyt *hromada*
Shterivka	in Petrovka *hromada*	new *hromada*
Meysinsk	new *hromada*	in K-Luch city
Petrovka	new *hromada*	new *hromada*
Varysheve	new *hromada*	in K-Luch city
Antratseet villages		
Kamyane	in Shotovka *hromada*	in Yacenevka *hromada*
Rovenky villages		
Yacenevka	new *hromada*	new *hromada*
Proletarsky	in Yacenevka *hromada*	new *hromada*
Rayon villages		
Esaulivka	in N-Hagolchek *hromada*	in N-Hagolchek *hromada*
Ivanovka	new *hromada*	new *hromada*
Krasny-Kyt	new *hromada*	new *hromada*
Malomykolaivsk	in Ivanovak *hromada*	in Shterovka *hromada*
Nyzhny Nagolchyk	new *hromada*	new *hromada*
Fashivka	new *hromada*	in K-Kyt *hromada*
Bobrykovo	in Dyakova *hromada*	in Dyakova *hromada*
Dyakovo	new *hromada*	new *hromada*
Koshari	in Yatsenivka *hromada*	in Proletarsky *hromada*
Krasnalutske	in Antratseet city	in Antratseet city
Mykytovka	in Petrovka *hromada*	in Shterovka *hromada*
Rafaelivka	in Mihailivska *hromada*	in Gornyak *hromada*
Rebrykovo	in Yatsenivka *hromada*	in Proletarsky *hromada*
Chervona Polyana	new *hromada*	new *hromada*

(ii) Krasnodon rayon

In Krasnodon rayon the rayon administration has also recently developed an amalgamation plan for its territory. The main features of this plan are presented in Table 3 below. Under this plan the fifteen villages radas that currently exist would be consolidated into seven new *hromadas*. The smallest of these new territorial units would have a population size of 2,550 while all of the others would closely conform to the Bezsmertny criterion of a minimum size of 5,000. For example, the largest of these new units would have a population of 5,681.

Despite some variation in population size, the geographic areas covered by these new *hromadas* are roughly the same. This feature of the amalgamation plan can be appreciated by referring to a map of the plan shown in appendix 3 of this report.

Table 3. Comparative analysis on existing radas and on *hromadas* of new model of Krasnodon rayon

	The name of rada	**Population**	**The name of *hromada***	**Population**
1	Novosvetlovsky	4006	Novosvetlovsky (1+14)	5578
2	Velykologovsky	1263	Biloskelevatsky (10+7+6)	4937
3	Novoolexandrovsky	1729	Velykosuhodolsky (12)	2550
4	Simeykynsky	2689	Samsonovsky (8+9)	3398
5	Myrnensky	1942	Simeykynsky (2+3+4)	5681
6	Parhomenkovsky	2545	Verhnesheverivsky (5+13)	4916
7	Davydo-Mykilsky	1076	Verhnegarasymivsky (11+15)	4427
8	Novoannovsky	1899		
9	Samsonovsky	1499		
10	Biloskelevatsky	1316		
11	Verhnegarasymivsky	2980		
12	Velykosuhodolsky	2550		
13	Verhnesheverivsky	2974		
14	Hryashuvatensky	1572		
15	Porichinsky	1447		
	Total	**31487**	**Total**	**31487**

2. Per Capita Revenues

(a) Per Capita Revenue Disparities Before and After Amalgamation

Ivano-Frankivsk Oblast

It is usually assumed that amalgamation reform leads to a reduction in disparities in revenues between affluent and poor local governments. Indeed, measures of disparity are usually lower if we consider larger territorial units, but the situation is far from tautological. Much depends on the geographical distribution of affluence and poverty. Merging two units with very low per capita revenues does not lead to the creation of one larger unit with high per capita revenues.

First, consider the situation in the Ivano-Frankivsk oblast. Assume that nothing else changes except territorial organization. In particular there are the same sources of revenues for the rayon and for the lowest level of local governments. Although in Ivano-Frankivsk rayon the changes on rayon level would not be very big, the change would lead to the decrease of per capita revenues (without transfers) of the general fund in cities of oblast significance (due to their merger with surrounding territories) and a parallel increase in some of the rural rayons. For example per capita revenues of Ivano-Frankivsk city would drop from 470 to 393 hryvna per capita, in Kalush from 414 to 246 and in Yaremcha from 262 to 151 hryvna per capita. At the same time in Kolomyjskij rayon revenues per capita would increase from 76 to 145 hryvna. But for most of the rayons nothing would change, since their boundaries would not change either. Since the least affluent rayons would be affected by amalgamation, the minimal value would also increase from 61 to 86 hryvna per capita. As a result, the ratio of the highest to the lowest value would decrease from 7,7 to 4,55 and the ratio of median to minimum value from 2,28 to 1,62.

Consider next the three pilot rayons and the variation in revenues of basic local governments within them. In this case observed disparities are even larger. In Verhovinskij rayon, village councils' per capita revenues without transfers are very low and vary from 24 hryvna (with five more villages in which revenues are below 30 hryvna per capita) to over 100 hryvna in two villages, reaching a peak in Verhovyna (192 hryvna per capita). The median value is 38 hryvna. The territorial reform would change the situation by reducing the level of disparities, but only to a minimal extent. The variation would be from 30 to 192 hryvna with a median value of 44 hryvna. The ratio of maximum to minimum value would decrease from 8 to 6,4. For the majority of local councils in Kosivskij rayon the situation is even more miserable. Per capita revenues without transfer vary from 12 hryvna to 230 hryvna in Kosiv city (with two other councils reaching over 100 hryvna per capita). The median value is 24 hryvna per capita. After the amalgamation the variation would be a bit lower – from 16 to 230 hryvna (and Kosiv would be the only unit with revenues per capita over 100 hryvna), while the median value would increase from 24 to 26 hryvna per capita. Also the variation is even larger than in previously analyzed cases. The ratio of maximum to minimum value would remain very high after amalgamation, though it would fall from 19,17 to 14,38.

Revenue disparities are highest in the Halickij rayon. But the most radical amalgamation suggested for the Halickij rayon brings also the most radical decrease in the level of income disparities. It is not very surprising, since it is easier to undertake radical amalgamation in lowlands rather than in the mountains, where physical accessibility of an area provides a natural barrier for the more radical changes in territorial organization. Although in general the level of affluence in Halickij rayon is higher than in Kosivskij or Verhovinskij, the present level of disparities is also very high. Per capita revenues without transfers vary from 8 hryvna to 183 hryvna in Halich city and 247 hryvna in Burshtyn city. The median value is 23 hryvna per capita.

After the amalgamation the level of disparities would reduce significantly. The minimum value would be 15 hryvna per capita, while maximum 185 hryvna, with medium value of 34 hryvna per capita. The ratio of maximum to minimum would reduce from 30,88 at the moment to – still high, but more than twice lower – 12,2 after amalgamation. The results of these calculations are summarized in table 4 and in figures 1 and 2.

Table 4. The potential impact of territorial amalgamation on the level of revenue disparities (per capita revenues of general fund, without transfers)

	Rayons in oblast		Halickij rayon		Kosivskij rayon		Verhovinskij rayon	
	Before amalgam.	After amalgam	Before amalg.	After amalg.	Before amalg.	After amalg.	Before amalg.	After amalg.
Maximum value	470	391	247	183	230	230	192	192
Median value	139	139	23	34	24	26	38	44
Minimum value	61	86	8	15	12	16	24	30
Maximum/ Minimum (%)	770	455	3088	1220	1917	1438	800	640
Median/ Minimum (%)	228	162	288	227	200	163	133	147

Fig. 1.

The impact of territorial amalgamation on revenue disparities of rayons in Ivano-Frankivsk oblast (per capita zahalnyj fond revenues without transfers)

Fig. 2.

The impact of territorial amalgamation on revenue disparities of hromadas in Ivano-Frankivsk oblast (per capita zahalnyj fond revenues without transfers)
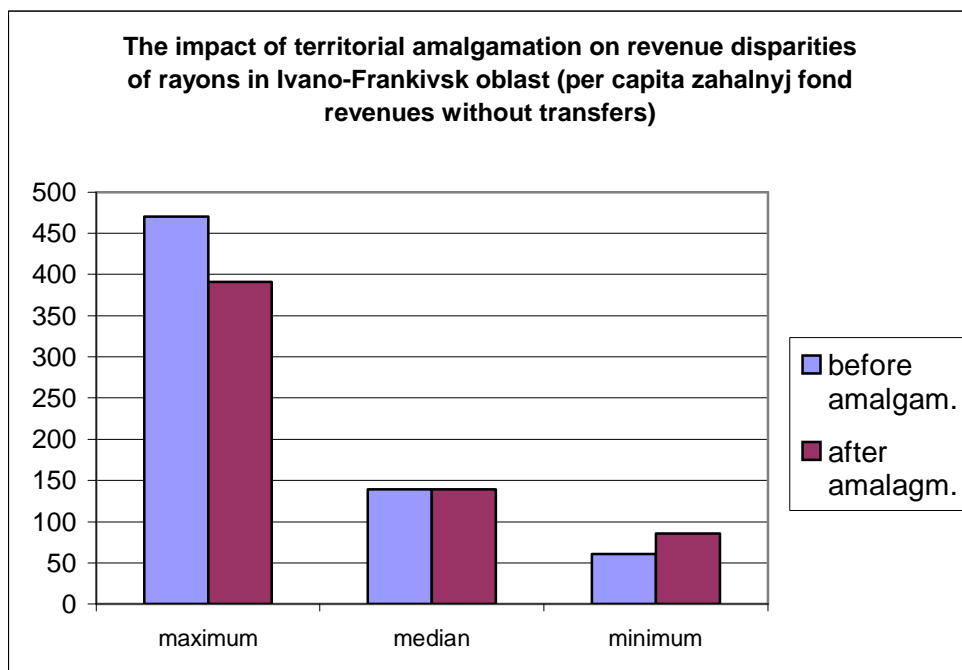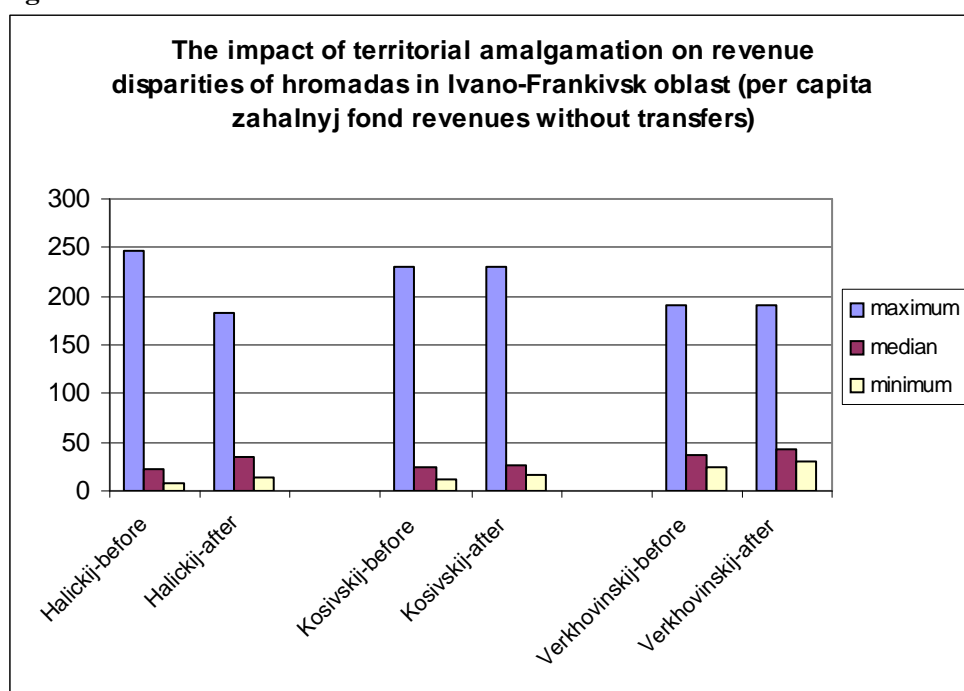
Luhansk Oblast

A similar picture of diminishing per capita revenue disparities emerges when attention is shifted to Antratseet rayon in Luhansk. Consider, for example, two of the proposed *hromady*, Nyzhny Nagolchyk and Dyakova that are adjacent to each other in the amalgamation plans. Without amalgamation the observed range of per capita revenue differentials among villages is 73-97 hryvna in Nyzhny Nagolchek and 42-88 in Dyakova. If amalgamation were to take place, per capita revenue in the Nyzhny Nagolchyk *hromada* would become 84.6 hryvna and in the *hromada* of Dyakova it would be 60.3 hryvna. In the absence of amalgamation the ratio of the maximum to the minimum level of per capita revenue is 2.3. With amalgamation this same ratio would drop to 1.4.

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A general conclusion from both field visits is that planned territorial amalgamation might indeed significantly reduce existing disparities in per capita revenue distribution, although they would still remain at a relatively high level. And it would be naïve to expect that territorial reform itself would eliminate horizontal imbalance. Consequently, while there might be some relief for the equalization pressure, a strong equalization system would be still needed. It is even more true if new *hromady* are granted an extended scope of functions, for which the horizontal equity principle would require a corresponding system of transfers.

Taking into account the observed disparities in local revenues, one may consider including revenues of the "second basket" (defined in the article 69 of the Budget Code) in the equalization system.

In the analyzed rayons of Ivano-Frankivsk oblast, for example, more than half of "article 69" revenues come from the land tax. As it is presented in the table 4, territorial variation of revenues

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from this source is very significant, even after territorial amalgamation and creation of relatively large *hromada* units. In Halich rayon the difference between the highest and lowest per capita value is more than 30 times, in Kosiv rayon it is more then 6 times and in Verkhovina rayon almost twice (the case for equalizing land tax is discussed in detail in section 5).

If we discuss potential equalization scheme, it should be constructed in that way that it does not provide a disincentive for local revenue collection. First, the equalization does not need to be full, i.e. it may reduce level of differences, but not liquidate them. Second, the calculations should refer to the tax base rather than to actual collection, which in turn depend (among others) on rates of local fees, exemptions granted by local councils and efficiency in the collection itself. It means such a change would require expanding the data base collected on local government finance and could not be introduced immediately.

(b) Current Fiscal Situation of the Cities of Krasny-Luch and Antratseet and the Rayon of Antratseet and its Villages

Table 5 below presents a 2005 snapshot of the revenue levels and main revenue sources of the city and rayon budgets as well as of the fourteen village council budgets. This table reveals several interesting features of local budgets in Antratseet. Thanks in large part to the system of equalization transfers the disparities in per capita general fund revenues between the two cities and also between them and the rayon are relatively insignificant. Per capita revenue disparities are much greater across the array of village budgets. The village with the highest level of per capita revenue enjoys a more than four-fold advantage over the village at the bottom. Three factors seem to lie behind these observed disparities. First, villages vary in the number of population clusters they serve and those with a greater number have higher expenditure needs. The village of Malamikolayvck, for example, has a single population cluster whereas the village of Bobrekova has four. Secondly, per capita revenues tend to be relatively high in those villages where land tax collections, which are not subject to equalization, exceed revenues from the personal income tax. Finally, size matters. The higher per capita revenues in smaller villages reflect the presence of diseconomies of scale in some expenditure functions, particularly administration.

Another feature of local budgets shown in this table is the high degree to which local budgets depend on transfers as a source of finance. In nine of the fourteen villages equalization transfers alone account for over one-half of total general fund revenue. For the rayon of Antratseet, equalization transfers make up 74 per cent of the total amount of general fund revenue. These figures would be even higher if subventions, received by four villages, were considered along with the equalization transfers. Under the proposal to shift the funding and management of secondary education to village budgets, the extent of transfer dependence would become even greater unless additional revenue sources were found.

A final feature of these budgets worth noting is the current concentration of expenditure responsibility at the rayon level as opposed to the villages. If total village general fund revenues, 6,261,525 hryvna, are compared to the size of the rayon general fund, 19,438,000, the rayon accounts for about 75 per cent of consolidated rayon expenditure.

Table 5. 2005 Revenues of Local Budgets in Antratseet

	General Fund Revenue	Personal Income Tax	Land Taxes	Equalization Transfer	Number of Residents	Revenue per Resident
Krasny-Luch city	69,154	24,030	3,452	24,524	136,000	509
Antratseet city	46843	18,226	1,665	14,830	87,100	538
Antratseet rayon	19,438	1,903	156	14,432	34,800	546
Villages:						
Esaulivka	227	9,6	10,6	165	1,591	143
Ivanovka	1,229	447	19,7	373	7,923	155
Krasny-Kyt	508	45	68,4	349	3,735	136
Malomykolaivsk	163	9,6	6,5	138	1,978	82
Nyzhny Nagolchyk	403	62	25	276	1,698	237
Fashivka	326	20	14	255	2,870	113
Bobrykovo	630	61	27	225	1,934	572
Dyakovo	806	44	39	681	2,953	272
Koshari	317	9	104	172	915	398
Krasnalutske	348	14	29	81	1,100	316
Mykytivka	104	1,3	1,68	94	401	259
Rafaelivka	370	124	164	48	1,400	264
Rebrykovo	350	19	75	256	2,041	172
Chervona Polyana	487	86	40	303	4,360	112

For the rayon as a whole the revenues shown in table 5 support the operation of 18 secondary schools, 5 rayon hospitals, 24 first-aid stations, 27 clubs and libraries and 6 pre-schools. Each of the 14 villages having their own local council is endowed with its own secondary school, first-aid station, club and library.

A common fiscal complaint voiced by nearly every budgetary participant in Antratseet is that they have to consistently dip into their second basket revenues in order to finance the satisfactory operation of their delegated expenditure responsibilities. One worrisome consequence of this practice is a general inability to adequately maintain and repair, let alone replace, an ageing and deteriorating public sector infrastructure almost of which has been inherited from Soviet times. A random sample of seven village budgets indicated that maintenance spending for this group constituted only four per cent of their total expenditure in 2005. For this same village group capital spending to finance repair and reconstruction was planned in the amount of 12,693 hryvna, about one per cent of total planned expenditure. However, this tiny capital budget was only executed to the tune of 4,300 hryvna.

Inadequate capital budgets have some implications for territorial-administrative reform. Low levels of capital spending translate in part into poor quality rural roads that are frequently impassable during winter months. Transportation barriers that compromise access to public services in turn argue against the goal of extensive service consolidation.

3. <u>Local Reactions to the Amalgamation Proposals</u>

Ivano-Frankivsk Oblast

The impression is that most of financial specialists in the oblast administration were in general sympathetic with the idea of amalgamation on the *hromada* level, although they had a lot of doubts about details and about realism of its quick implementation. Starting from criteria in Bezsmertny report, they even produced their own "prognosis" of maps for some of rayons which were not covered by the exercise undertaken by Institute of Cartography.

Luhansk Oblast

The response of local budgetary officials to the proposed amalgamation can be described as at best lukewarm. While most officials were not opposed to the idea many were sceptical of its benefits and a number of them felt that it was a misplaced policy priority. Many asked why and why now? A widely held view was that policy concerns should be tied to the issue of local economic development and that territorial-administrative reform should be placed on the policy shelf for the next 3-4 years.

The rejection of the Bezsmertny plan, which galvanized the rayon administration into developing their own amalgamation plan, also seems to clearly indicate the need for extensive local participation in any successful amalgamation effort. The Bezsmertny plan was viewed as a top-down policy measure that failed to properly consider some local peculiarities.

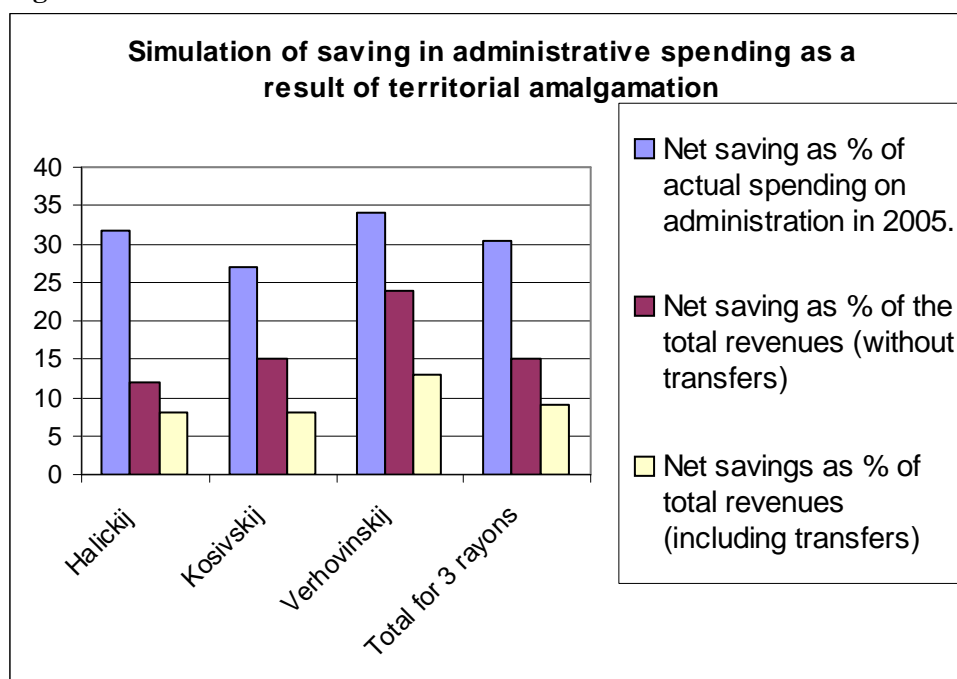## 4. Cost Savings from Amalgamation - How Significant?

(a) Cost Savings in Ivano-Frankivsk Oblast

Spending on administration is usually an area in which scale effects due to the amalgamation process have the most direct impact and can be measured relatively easily. It is especially so in countries like Ukraine, where amount of spending is very strictly regulated by norms governing the number of staff and their salaries. Although our general recommendation is to give more flexibility to local governments in terms of staffing and individual earnings, our theoretical exercise is based on the assumption that the same norms would apply after amalgamation of territorial units. This allows a comparison of actual spending in 2005 with theoretical spending after the reform. In Ivano-Frankivsk the impact on spending on a rayon level would be minimal, since only very limited changes in the division of the oblast into rayons are expected. Therefore we concentrate on the basic tier (towns and village councils before and *hromada* after amalgamation). It is assumed for the moment that no other conditions would change, and the only change would be the territorial amalgamation. Expenditure functions for example remain the same. The expected economy of scale is illustrated in table 6 and in figure 3.

Table 6. Possible impact of amalgamation on current administrative spending on the lowest tier of local government (town, village councils versus new *hromada*)

	Actual spending in 2005 (1)	Simulation of spending by new *hromada* (2)	Net saving (1)-(2)	Net saving as % of actual spending on administration in 2005	Net saving as % of the total revenues (without transfers) of the zahalnyj fond	Net savings as % of total revenues (including transfers)
Halickij	2319,9	1581,7	738,2	31,8	12	8
Kosivskij	2589,1	1886,3	702,8	27,1	15	8
Verhovinskij	1458,3	960,8	497,5	34,1	24	13
Total for 3 rayons	6367,3	4428,8	1938,5	30,4	15	9

Fig. 3.

Simulation of saving in administrative spending as a result of territorial amalgamation

The expected benefit is quite considerable, with a net saving of around 27% in Kosivskij, and even 34% in Verhovinskij rayon. How important would it be for the overall budget (general fund)? One needs to take into account that administration plays a very significant role in the structure of spending of the lowest tier local governments. In Kosivskij rayon's towns and villages, spending on administration constitutes over 50% of total revenues without transfers, so economy of scale in administrative spending would allow a saving of 15% in revenues without transfer or 8% of the total budget. In Verhovinskij rayon the impact might be even more important. Administrative spending constitutes there over 70% of the general fund revenues (without transfers), so the reduction in spending for administration would allow savings of 24% of revenues without transfers or 13% of the overall budget. The scale of saving would be slightly lower in the Halickij rayon, where administrative spending presently constitutes "only" 38% of revenues without transfers. The amalgamation would allow savings of 12% in revenues without transfers or 8% of total budget revenues.

In some extreme cases (for example Nizhnoberezivska and Serednoberezhivska *hromady* in the Kosivskij rayon) the simulation shows that current administrative spending in new *hromady* would be more than twice lower than in old village councils constituting the new administrative units.

Obviously, the real saving might be lower, since some additional functions might be transferred from the rayon to *hromada* level. These new functions will require some matching administrative spending from *hromada* budget, and in that case we will have a diseconomy rather than economy of scale effect, since new *hromady* are still smaller than currently existing rayons.

The second remark which is necessary for our estimation of possible saving in administrative spending is that our focus is entirely on current expenditures. It may happen that some capital spending might be necessary in order to provide proper conditions for the work of administration of new, enlarged local governments (*hromady*). This issue would require a separate investigation. However it is possible that proper use of existing buildings (both in the main settlement and in the smaller villages of *hromady*) may allow to avoid additional investments in office space.

Nevertheless, our calculations show clearly that the economy of scale might be very substantial.

(b) Cost Savings in Luhansk Oblast

One of the major benefits anticipated from amalgamation originates in the cost savings that would result from having fewer village councils to finance. The size of these savings depends on the size of the villages subject to amalgamation and their number. Villages in the size range of one to two thousand typically devote around three-quarters of their budgets to paying for the costs of administration. Even in a fairly large sized town, such as Petrovska with a population of slightly over 15,000, the costs of administration absorb thirty per cent of total budget resources.

To illustrate the magnitude of the cost savings associated with amalgamation, consider the details of the Bezsmertny plan. According to it, four city councils in Krasny-Luch city would be abolished as a result of the village being assigned to one of the neighbouring *hromady*. One village council in each of the other cities, Antratseet and Rovenky, would also be eliminated. In addition, village councils would no longer exist in the rayon villages of Esaylivka, Malamikolayvska, Bobrekova, Koshari, Mikitovka, Rafaelivka and Rebrekova.

In 2005 the amount spent on administration by the village councils that would disappear under amalgamation totals 1,278,733 hryvna. Whether this amount represents a significant saving depends on what it is compared to. Compared to the 2005 total expenditures of the 14 rayon villages, the saving in administration costs would be 17 per cent. Compared to the total amount of village expenditure, excluding those villages retained by the cities of Antratseet and Rovenky, the saving amounts to 10 per cent.

5. The Variation in Land and Fixed Agricultural Tax Yields Between and Within Rayons

Land taxes in most rural local budgets, along with proceeds from another rural land based tax, the Fixed Agricultural Tax, comprise the single largest source of revenue in so-called second basket revenues. Because they belong to the second basket they escape the equalization of revenue sources provided by the formula based transfer system. If per capita land tax collections vary widely across different local government jurisdictions, an argument can be made for including land taxes in so-called first basket revenues for equalization purposes. If this were to happen, however, some adjustments would be required on the expenditure side of the equalization formula to ensure that the revenue transfer from the second to the first basket did not automatically reduce the amount of equalization transfers.

The issue of land taxes arises in the context of territorial-administrative reform because if additional expenditure responsibilities are given to newly formed *hromady,* additional revenue sources should also be found to avoid increasing transfer dependency. Granting *hromady* a larger share of the land tax is one candidate for an additional revenue source. However, if per capita land tax yields vary a great deal, this particular source of additional revenue would have the unattractive feature of exacerbating per capita expenditure differentials and working in opposition to the transfer formula that provides for equalization of revenue sources.

This part of the report attempts to shed some light on the extent to which there is wide variation in per capita land taxes. Presumably, whatever variation is observed is related to differences in the quantity and quality of land held in different local government jurisdictions or the size of the effective tax base. Some of this variation is also related to differences in local government propensities to grant tax relief. To improve the accuracy of our estimations we also try to relate our observations to revenue capacity, not just actual revenues. In Ivano-Frankivsk, we add to actual collections the consequences of locally decided tax exemptions and tax rate reductions. In both Ivano-Frankivsk and Luhansk the calculations also take into account arrears in payments for both the land tax and the fixed agricultural tax.

Ivano-Frankivsk Oblast

In Ivano-Frankivsk oblast, for the rayons analyzed more than half of "second basket" revenues are attributable to the land tax. Revenues from the fixed agricultural tax are considerably smaller. In Halych rayon they account for only about one-sixth of the revenues provided by the land tax. In the other two rayons (Kosiv and Verkhovyna) the tax has no revenue implications as these are mountainous areas where farms are exempt from the tax. According to the collected data, local tax reductions or exemptions are small in the case of the land tax while in the case of the agricultural tax they play a significant role only in Halych rayon. In Halych rayon tax reductions almost equal the amounts of tax collected. Territorial variation in potential per capita revenues from these two taxes is very significant as illustrated in figures 4 and 5.

Fig. 4.

Potential revenues from land tax and agriculture tax per capita - old and new territorial organisation (3 rayons of Ivano-Frankivsk oblast, without payment arrears)

Fig.5

Potential revenues from land tax and agriculture tax per capita - old and new territorial organization (3 rayons of Ivano-Frankivsk oblast, with payment arrears)
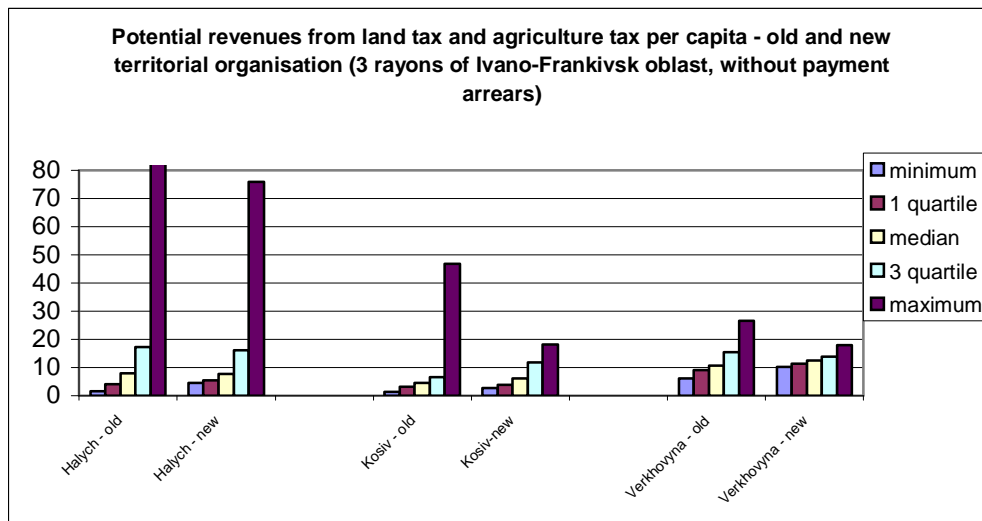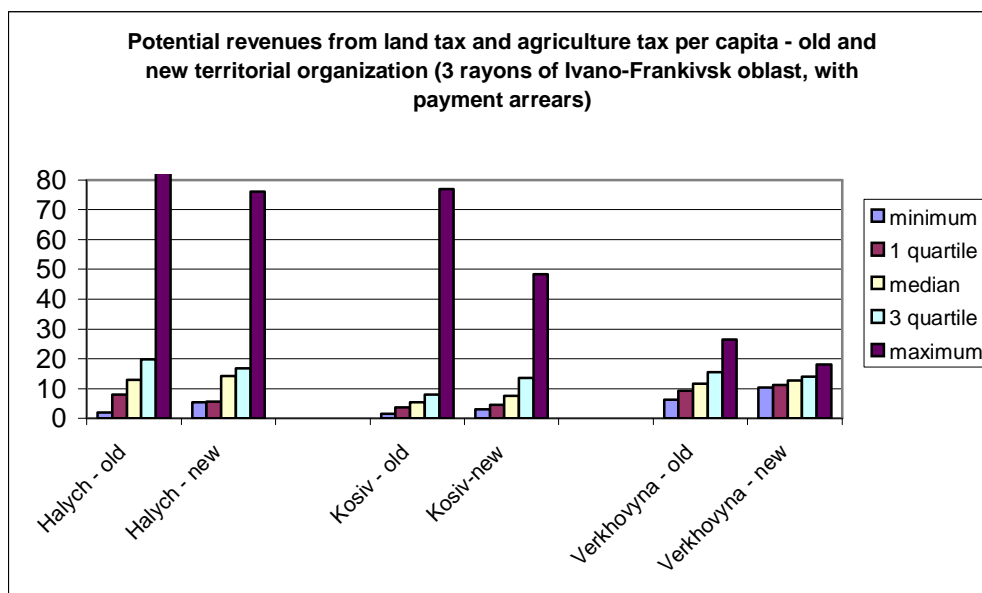
In all three pilot rayons the potential amalgamation would lead to very considerable reduction of territorial disparities in per capita revenues. However, differences – especially in Kosiv and Halych rayons – would remain significant and would justify call for equalization.

Luhansk Oblast

Table 7 below shows calculations of the ratio of the maximum per capita yield to the minimum for cities and rayons in Luhansk oblast and for villages in Antratseet rayon. This is for Land Tax only, i.e. it does not include the Fixed Agricultural Tax, and is based on actual tax collected since data on tax reductions and exemptions was not available. The intra-rayon discrepancies in Antraseet are particularly notable.

Table 7. Land Tax Variation (maximum/minimum per capita yield)

Budget	Measured Variation
Cities of Luhansk	7,65
Rayons of Luhansk	11,1
Villages in Antratseet city	18,8
Villages in Krasny-Luch city	14,4
Villages in Rovenky city	12,5
Villages in Antratseet rayon	47

In an attempt to achieve a closer estimate of revenue capacity of - rather than actual revenue - for Luhansk oblast, tables 8 – 10 compare figures for all land tax (Land Tax and Fixed Agricultural Tax) collected against assessed tax liability. Land taxes are not always paid on time and when tax arrears accumulate over time and are cleared intermittently in subsequent tax years observed land tax collections may distort the connection between land tax receipts and the underlying size of the land tax base. In other words, current collections of land tax contain a mixture of payments for current tax assessments and for back taxes and penalties. It is arguably the case that the base of the land tax, i.e. revenue capacity, is more accurately portrayed by the amount of land tax levied annually than by the amount of tax collected.

Table 8 attempts to determine the size of this measurement distortion by comparing the differences between Land Tax charged and paid in 2005 for the villages located in Krasnodon and Antratseet rayons. At an aggregate level, in Krasnodon rayon there is a significant imbalance between land taxes that were assessed and those that were collected. In 2005 930,565 hryvna was charged in total but more than twice that amount, 1,924,961 hryvna, was collected. In Antratseet rayon a closer aggregate balance was achieved: 645,044 hryvna was assessed and 641, 933 was collected. However, as table 7 reveals, this aggregate balance masks a great of offsetting imbalance at the village level. As of January 1 2006 total land tax arrears in Antratseet rayon ran to 915,309 hryvna.

The general picture that emerges from a study of table 8 is that in both rayons there is at least one high yielding village that collects more than it assesses and at least one low yielding village that assesses more than it collects. The result is that the range of per capita collections (4.1 to 547.2 in Krasnodon and 1.1 to 170 in Antratseet) is extended beyond that which is observed for assessments (4.5 to 193.2 in Krasnodon and 1.6 to 155.2 in Antratseet). On this basis it is preferable to rely on assessment rather than collections data as the more reliable indicator of the size of the land tax base.

That said, however, the conclusion reached in relation to rayons in Ivano-Frankivsk oblast remains unchallenged. Extremely large differences exist in the revenue productivity of the Land Tax among villages.

Analysis of the Fixed Agricultural Tax (table 8) generates a picture highly similar to that of Land Tax although the amounts involved are much smaller. In both rayons there is a gap between the amount of Fixed Agricultural Tax charged in any year and the amounts received, with significant inter-village variation in the balance between these two amounts.

Table 8. Per Capita Land Tax Yields (hryvna)

		Assessed	Collected
	Antratseet		
1	Esaulivka	9	10
2	Ivanovka	4.95	1.6
3	Krasny-Kyt	17.6	23.6
4	Malomykolaivsk	3.75	3.8
5	Nyzhny Nagolchyk	21.8	19.5
6	Fashivka	.7	.6
7	Bobrykovo	3.5	3.8
8	Dyakovo	1.6	3
9	Koshari	98.3	133
10	Krasnalutske	92.8	13
11	Mykytivka	1.8	1.1
12	Rafaelivka	155.2	170
13	Rebrykovo	18.8	34.4
14	Chervona Polyana	2.4	2.5
	Krasnodon		
1	Novosvetlovsky	13	13
2	Velykologovsky	7.7	11.9
3	Novoolexandrovsky	4.5	4.9
4	Simeykynsky	11.3	12.7
5	Myrnensky	26.6	33.6
6	Parhomenkovsky	8.1	10.9
7	Davydo-Mykilsky	13.2	4.5
8	Novoannovsky	5.4	4.1
9	Samsonovsky	154.7	327.1
10	Biloskelevatsky	193.2	547.2
11	Verhnegarasymivsky	10.5	10.9
12	Velykosuhodolsky	69.3	161.9
13	Verhnesheverivsky	5.2	8.1
14	Hryashuvatensky	12.1	14.9
15	Porichinsky	6.5	8.1

Table 9. Per Capita Revenues from the Fixed Agricultural Tax in 2005 (hryvna)

		Assessed	Collected
	Antratseet		
1	Esaulivka	2.5	6
2	Ivanovka	2.7	6.7
3	Krasny-Kyt	3.7	4.7
4	Malomykolaivsk	.06	.05
5	Nyzhny Nagolchyk	3.7	10.3
6	Fashivka	2.2	2.6
7	Bobrykovo	9.5	10.7
8	Dyakovo	8.7	8.2

9	Koshari	**4.9**	**4.7**
10	Krasnalutske	**22.8**	**28.9**
11	Mykytivka	**5.5**	**5.8**
12	Rafaelivka	**19**	**7.6**
13	Rebrykovo	**1.7**	**2.7**
14	Chervona Polyana	**7.2**	**7.4**
	Krasnodon		
1	Novosvetlovsky	**4.6**	**4.5**
2	Velykologovsky	**3.2**	**2.7**
3	Novoolexandrovsky	**4.5**	**4.9**
4	Simeykynsky	**11.3**	**12.6**
5	Myrnensky	**1.1**	**1.2**
6	Parhomenkovsky	**19.2**	**18.1**
7	Davydo-Mykilsky	**23.3**	**15.3**
8	Novoannovsky	**16.4**	**9.6**
9	Samsonovsky	**4.8**	**7.5**
10	Biloskelevatsky	**43.1**	**23.8**
11	Verhnegarasymivsky	**.25**	**.22**
12	Velykosuhodolsky	**11.3**	**11.1**
13	Verhnesheverivsky	**2.1**	**4.5**
14	Hryashuvatensky	**21.3**	**20.1**
15	Porichinsky	**2.9**	**1.8**

Table 10 aggregates village data to give a picture of the discrepancies which might occur between the proposed *hromady* in Krasnodon rayon. As in Ivano-Frankivsk, amalgamations would have the effect of significantly reducing intra-rayon disparities in revenues from all land taxes. For tax assessed the disparities would reduce from a factor of 32. 3 to 8.3, and for tax collected from 34.1 to 18.6.

Table 10. Assessed and Collected per capita Revenues of the Land and Fixed Agricultural Taxes in Hromady proposed for Krasnodon rayon (hryvna)

	name of Hromada	**Population**	**Assessed Tax**	**Collected Tax**
1	Novosvetlovsky	5,518	22	22.5
2	Biloskelevatsky	4957	85.6	172
3	Velykosuhodolsky	2550	80.6	173
4	Samsonovsky	3347	81.4	196
5	Simeykynsky	5681	15.7	18.2
6	Verhnesheverivsky	4916	15.4	21.3
7	Verhnegarasymivsky	4427	10.3	10.5

The data from both Ivano-Frankivsk and Luhansk clearly demonstrates that there are wide discrepancies in the revenue productivity of both land and fixed agricultural taxes and, as hinted at earlier by the data in table 5, these can be the source of fairly large differences in the level of per capita expenditure among villages.

These discrepancies would be reduced by village amalgamation and the formation of *hromady* but substantial disparities would remain.

The intra-rayon differentials in per capita land revenue exceed those measured between rayons and lend support for the position that these revenues should be equalized on a formula basis. However, if this were done, a revised equalization scheme should take into account the nature of the services financed from the second basket and, in particular, that the number of users of communal services may differ from the number of residents as well as that service costs may differ among localities. As in many European countries, the system might be based on weighted population where for towns and cities users of services such as roads for example are normally larger than the number of residents and unit costs of these services are often higher than average.

6. The Allocation of the Personal Income Tax: Residence versus Registration

The Budget Code introduced a number of budgetary measures that were designed to strengthen the accountability structures of local governments in Ukraine. Ironically, however, the Code's treatment of where the proceeds of the personal income tax should be directed has acted to weaken accountability. Prior to the introduction of the Code many local governments were financed in part by the personal income tax that was levied on a residence basis. The residence principle is generally felt to be the correct approach in assigning revenues to local governments because most people consume the public services they enjoy where they live rather than where they work. Local governments are apt to be more responsive to the public service wishes of their residents when those residents are an important source of the local government's revenue stream.

A further argument favouring the residence principle is found in article 5 of the Ukrainian personal income tax law. Under this article taxpayers who are entitled to a tax refund are required to claim it from the local government in the area where the taxpayer resides. Thus not only does the local government not benefit from the tax paid by its residents, it also shoulders the burden of paying tax refunds.

The Budget Code, nonetheless, eschewed the residence principle and chose instead to allocate personal income tax proceeds either to the locality in which a business is registered or to the locality in which a business has branch activity. Given the tension in the Code between these alternative revenue destinations, it seems that in practice if a business has a fixed presence in a locality, in the form of an office and an accountant, that locality will receive the personal income taxes generated by the business.

If the Budget Code were amended to convert the personal income tax into a residence based tax, what would be the magnitude of the revenue shifts that would accompany this change? Two efforts to answer this question are described below, first for the Krasnodon rayon where data are readily available and secondly for the Halickij and Verhovinskij rayons in Ivano-Frankivsk where the data are somewhat more problematic.

(a) Krasnodon rayon, Luhansk Oblast

The change from a residence to a place of employment or origin basis for allocating personal income taxes has highly predictable consequences. Villages and cities with a large employment base would be expected to gain revenue at the expense of residential villages with small employment bases resulting in a much more unequal distribution of revenues. This expectation is clearly borne out in the case of Krasnodon rayon for which village level personal income tax data are available for 2001 when the residence principle operated and for 2002 when the Budget Code took effect. Table 11 below indicates the size of the revenue shifts that occurred in each of the rayon's sixteen villages between 2002 and 2001. Krasnodon is similar to Antratseet in that coal mining is the dominant economic activity. Krasnodon's coal mines, however, are much more successful than those found in Antratseet, and Krasnodon consequently is one of the few donor rayons in Ukraine.

Due to the change in income tax principle in 2002 nine villages suffered declines in their personal income tax base and in a few that base virtually disappeared. Six other villages experienced expansion in their income tax bases and for four of them with very large coal mines the change was a fiscal bonanza as their tax bases grew by over a thousand per cent. The gains exceeded the losses by a large margin indicating that the city of Krasnodon and perhaps other rayons as well, where miners reside, also lost revenue.

Table 11. Budget Code Revenue Redistribution: Krasnodon Rayon

Village	Change in Personal Income Tax Base 2001-2 (%)
Novosvetlovsky	-29
Velykologovsky	-89
Novoolexandrovsky	-90
Semenetsky	-8
Myrnynsky	1,135
Parhomenkovsky	-74
Devedo-Nikolsky	-56
Novoannovsky	-26
Samsonovsky	2,401
Biloskelevatsky	4,823
Verhnererachemovsky	-15
Velykosuhodolsky	968
Verhneshevervsky	103
Hrashevatensky	31
Porechensky	-81

If this exercise were repeated in other rayons, especially ones without coal mines, less dramatic revenue shifts would probably be observed but the general pattern would likely be the same. Large cities and towns with factories and services would be seen to gain revenue at the expense of smaller villages.

If the residence principle were adopted, or readopted, the revenue effects shown in Table 8 would run in reverse. Smaller residential villages and cities would reclaim personal income tax revenues from the more industrialized villages. From the perspective of territorial-administrative reform this would be a desirable outcome as it would reduce the degree of transfer dependence in many villages.

(b) Halickij and Verhovinskij rayons in Ivano-Frankivsk Oblast

Available data allow for only a very rough estimation of the impact of changing from a registration-place of employment to a residence basis for the personal income tax (PIT). The methodology of calculation is based on following steps:

1. For 1997 we have data on the allocation of revenues from PIT based on place of residence (it is the last year for which such data is available).
2. We calculate the share of PIT revenues of each *hromada* (or rayon) in overall PIT revenues in 1997.
3. We assume that the change to residence base in 2005 would result in the same territorial distribution. With this assumption, the share calculated in step 2 can be multiplied by the total amount collected in 2005.

One may notice that this methodology is very much a simplification, since it assumes no major change in territorial allocation of wealth and in territorial allocation of firms between 1997 and 2005. Moreover, our data for 1997 tell us about revenues from PIT in individual territorial budgets. In 1997 the local governments share in PIT revenues was not standardized, i.e. it could be different for two different territorial units. This variation is another source of potential errors

in our estimations. But even such a simplified calculation has not been possible for every area in question. For Kosivskij rayon it was impossible to find 1997 data, so estimation has not been performed.

Table 12. Estimated impact in 2005 tax year of the change of revenues due to allocation of PIT on residence base

a. Halickij rayon

	By work place	Estimation - by residence	By residence as % of by work place
Galytska, the City of Galych	662,0	1979,5	299,0
Butshtynska, City of Burshtyn	3098,0	1393,2	45,0
Bilshivtsivska, the town of Bilshivtsi	91,74774	177,7	193,7
Blyudnykivska, the village of Blyudnyky	23,39211	87,7	374,9
Dubivetska, the village of Dubivtsi	85,09587	54,8	64,4
Zadnistryanska, the village of Zadnistryansk	38,83433	77,3	199,1
Kinashivska, the village of Kinashiv	32,41505	100,1	308,8
Komarivska, the village of Komariv	54,71139	145,4	265,8
Maryyampilska, the village of Maryyampil	54,57557	125,1	229,2

b. Verhovinskij rayon

	By work place	Estimation - by residence	By residence – estimation by rayon administration	By residence (estimation on the basis of 1997 data) as % of by work place	By residence (estimation by rayon administration) as % of by work place
The town of Verhovyna	581,7	520,2	549,3	89,44	94,4
Iltsivska	59	74,0	76,0	125,36	128,8
Zelenska	23,9	34,5	23,9	144,18	100,0
Verhnio-Yasenivska	44	64,7	54,0	147,08	122,7
Usterikivska	89,6	59,7	92,1	66,60	102,8
Yablunytska	55,4	74,8	55,7	135,02	100,5
Grynyavska	27	47,1	27,0	174,32	100,0
Krasnoyiliska	58,2	62,2	57,7	106,86	99,1

Data in table 12 present results of estimation performed accordance with the methodology referring to 1997 data, as presented above. In both Halickij and Verhovinskij rayon there are two *hromady* which would lose by the change to a residence based PIT, while the rest of the territorial units would gain. The loser is usually the central *hromada* of the rayon (like Verhovina in the Verhovinskij) and/or the unit with the largest employer on its territory (like Burshtyn with a big power plant or Dubivce with a big stone-pit). More peripherial *hromady* would gain from the change of the system. In Halickij rayon the largest increase in individual *hromada* revenue represents more than a tripling of revenues. On the other hand, the losers might lose around half of their present PIT revenues. Changes in peripherally located Verhivinskij rayon would be much lower. We may expect the largest change in the capital city and surrounding *hromady* (in

this case Ivano-Frankivsk city which would probably lose heavily, and surrounding *hromady* which might gain a lot), but unfortunately we do not have relevant data for these territorial units. But the estimation presented in two paragraphs above is very imprecise. There are two cases which are analysed much more precisely on the basis of contemporary data. First is estimation made by rayon administration for Verkhovinskij rayon. Such a calculation based on contemporary data has not been very difficult, since there are no big companies operating in the rayon, most of population is rural-agricultural, so the impact of change in the PIT system would not be very big in this rayon. Calculation presented in the table 8 suggest that Verkhovina town would slightly lose, while other *hromady* would slightly gain as a result of the suggested change, but the difference between present and proposed system would not be very significant.

Much more interesting is the case study of employees of the Burshtyn power plant – the largest enterprise in all three pilot rayons. The detail study of employees place of residence allowed to make estimation of the impact of the proposed change. Revenues from PIT of employees of the power plant provide over 62% of total PIT revenues in the Burshtyn *hromada*. A more detailed illustration is provided in table 13.

Table 13. Impact of PIT by residence on *hromada* revenues from PIT of Brurshtyn power plant employees

	Present revenues from PIT (2005)	Present revenues from PIT of power plant employees	Revenues from power plant PIT as % of total revenues from PIT	Revenues from PIT of power plant employees – residence base	Change in total PIT revenues as % of present PIT revenues
Galytska	662,0	0	0	59,7	+9,0
Burshtynska	3098,0	1923,9	62	1453,1	-53,1
Bilshivtsivska	91,7	0	0	44,5	+48,5
Blyudnykivska	23,4	0	0	9,7	+41,4
Dubivetska	85,1	0	0	4,5	+5,3
Zadnistryanska	38,8	0	0	168,3	+433,8
Kinashivska	32,4	0	0	9,2	+28,4
Komarivska	54,7	0	0	1,6	+2,9
Matyyampilska	54,6	0	0	0,6	+1,1
Other (in other rayons)	NA	0	0	172,8	NA

The table 13 shows that even change introduced for employees of one company might have a significant impact on revenues from PIT in several territorial units in the whole rayon. Revenues from PIT in Burshtyn *hromada* would drop more than twice, while the revenues in Zadnistrianska *hromada* would increase more than 4 times. In a few other *hromady* the change of revenues would exceed 40%. We are unable to provide more case studies of this kind, but one may assume that the extent of changes would be similar in other locations with similar concentrations of employees in one big company.

As we discuss above our estimation of the impact of change is only very rough and far from being complete. In fact there is no data necessary, nor methodology to make a more precise estimation in the scale of the whole country. Therefore, if the recommended change of PIT to residence based allocation is going to be introduced, it would be useful to consider a transitional period which would help to avoid a shocking change, and would allow time for analyzing data and developing properly adjusted equalizing mechanism. In Poland for example, in 1992 when the PIT was introduced, the initial allocation of local government share was based on equal per capita base calculated for every region separately (i.e. the local share in PIT was calculated for every region, and then the amount was divided among municipalities in this region on an equal

per capita basis). Then in the second half of 1990s there was a gradual change (25% according to residence base in the first year, 50% in the second etc.) until 1998, when the shift towards the residence based allocation was completed.

7. The Feasibility of Transferring Secondary Education to New *Hromady*

(a) Ivano-Frankivsk Oblast

There are two immediate questions that come to mind in determining the feasibility of devolving secondary education to the enlarged *hromada* tier. Is there a sufficient contingent of children of relevant age in every *hromada* to make operating such a school reasonable? Is there sufficient physical infrastructure, namely school buildings available in every *hromada?*

Answering the second question is relatively easy. It involves seeing whether there is at the moment at least one secondary school (osnovna shkola) on the territory of the planned *hromada*. The answer is positive, at least as it regards the three rayons taken into detailed scrutiny. In Verhovinski rayon there are at least 2 such schools in each of the planned *hromady* . In Kosivskij rayon there are two *hromady* in which would be one secondary school, while in the others there are at least two. In Halickij rayon, where the planned amalgamation is the most radical, there is only one *hromada* which would have two secondary schools, while in others there would be at least four.

It is a bit more difficult to assess the quantity of children of relevant school age. There are no village level statistics on numbers population broken down by individual, detailed age groups. Therefore our indirect estimation is based on two indicators:

(1) number of children of 0-6 years divided by six. It gives a rough estimation of the number of children who might be of relevant age within the next 10 years. But even this information has been difficult to collect. In two rayons we collected it through health care statistics of child-care. In the third rayon (Halickij) we have only data on rural population, but we have failed to collect similar data on urban population.

(2) number of pupils in 11-15 years age cohorts in schools which are currently operating on each territory.

This indirect investigation suggests a positive answer. The first indicator varies between:
- 23,5 and 93,7 in Halickij rayon (as we mentioned above, data for Halich rayon includes only information on children living in rural areas. The real numbers – including urban residents – would be even higher)
- 37,5 and 163,5 in Kosivskij rayon
- 37,5 and 80 in Verhovinskij rayon

The second indicator suggests that the lowest number of children in the class created on the basis of already existing schools for 11-15 years, might be 15 in one *hromada* in Kosivskij rayon (Sheshorivska *hromada*). In just one more case it would drop below 20. In Verhovinskij rayon the minimal number would be 23 and in Halickij 20. Thus from the point of view of the demand side, such a devolution of function appears justified. There is no single *hromada*, in which children of given age cohort would not fill a class of reasonable size.

(b) Luhansk Oblast

The rayon of Antratseet currently operates nineteen secondary schools that together have a student intake of 3,572 pupils. Most of these schools serve 2-3 population clusters. Of the nineteen secondary schools, thirteen of them offer classes in grades one through to eleven. Four

other schools only offer classes up to the ninth grade while two have classes only up to the fourth grade. Only one of the thirteen full service secondary schools has a small number of students in different grades. All of the others have a student body of between 145 and 424 students. Moreover, within this latter group of secondary schools there is a fairly even distribution of students across the different grades indicating a steady demand for secondary education in the foreseeable future.

The rayon has a limited school bussing program but where it cannot directly provide bussing to students it contracts with private parties to provide school transportation.

In terms of the amalgamation plans every new *hromada* that has been proposed would have a full service secondary school. The only exception would the *hromada* of Petrovska which would become a new *hromada* under either of the plans that have been put forward.

In terms of territorial-administrative reform there appears to be no serious impediment, on either the demand or the supply side of secondary education, to transferring responsibility for secondary education from the rayon to the new *hromady*.

8. New Property Tax for *Hromady?*

An earlier SuFTAR report recommended considering a new local tax, which would be a simplified form of the property tax, in which the tax yield would depend on the usable area of the building and different rates would apply to residential and commercial properties. The question is whether there is a sufficient data base on properties, which would allow introduction of such a tax.

Ivano-Frankivsk Oblast

Our pilot study suggests that the situation, although far from perfect, is better than we initially expected. There are four major sources of necessary of information:

1. BTI (Byuro Tekhnichnoj Dokumentacji) which has data on privatized properties. In Ivano-Frankivsk there are two BTI's – one located in Ivano-Frankivsk and one in Kolomyja – and they cover the whole territory of the oblast. Altogether in Ukraine there are over 300 BTIs which indicates that in some other oblasts the service is much more fragmented – for example there are about 25 BTIs in the Odessa oblast. According to our information, Ivano-Frankivsk BTI is among the best organized in the country, but still the level of advancement in collecting required information is around 60%, but it varies from 30 to 80% in individual rayons. The weak point is availability of data in electronic form. For example in Ivano-Frankivsk BTI there are 180 employees, but they have only 45 computers.
2. Zhek (municipal housing companies) which have information on housing and other stock in cities.
3. City halls have information on private housing buildings (not necessary privatized, also those which were built as private).
4. Form 1 of Pohospodarska kniha and form 3 of Alfavitna kniha domohospodarstw, which are an excellent sources of information on rural areas.

There are at least three problems with a current data availability. One is that data is incomplete, especially for urban areas. Second, is fragmentation of sources of information which makes data processing much more time-consuming. Third is a poor availability of data in an electronic form, which access very time-consuming, frequently requiring "manual" access to files on each, individual property.

The pilot study in Ivano-Frankivsk oblast was able to collect concrete (although incomplete) data on areas of buildings in each of the *hromady* of the three selected rayons. The data on Verkhovinskij rayon, which is mostly rural, is the closest to be complete, although we miss data on Verkhovina, which is a village of urban character (selishche miskovo typa). For Kosivskij rayon we miss data on industrial properties. For Halickij rayon we failed to collect any data on non-housing properties.

The collected information allows even for some simulations on what yields might be possibly collected by the new tax. The simulation is based on the assumption that the maximal tax rate would be equal roughly to 10% of the rate currently applied in Poland. It means that the maximal rate for residential buildings would be 0,10 hryvna per annum for 1 square meter; for commercial buildings the rate would be 2,90 hryvna per annum for 1 square meter.

The assumed difference between rates in Poland and in Ukraine is both to reflect the lower "ability to pay" of Ukrainian taxpayers and to avoid any excessive shock of the new tax burden, which could lead to a taxpayers revolt. It is not to say that we treat the Polish model of the

property tax as ideal. For example, the difference between rates of taxation for housing and commercial buildings in Poland is probably excessively high. But this model seems to be good enough for the first set of rough estimations.

Table 14. Possible impact of the tax on building on revenues of *hromada*

a. **Halickij rayon**

Hromada	Tax yield on residential buildings	Tax yield on commercial buildings	Present revenues of general fund (without transfers)	Tax on buildings as % of present revenues
Galytska, the City of Galych	14972,90	NA	1281200,00	1,17
Butshtynska, City of Burshtyn	43046,00	NA	3907300,00	1,10
Bilshivtsivska, the town of Bilshivtsi	8955,30	NA	199100,00	4,50
Blyudnykivska, the village of Blyudnyky	11505,10	Na	50800,00	22,65
Dubivetska, the village of Dubivtsi	12051,10	NA	174600,00	6,90
Zadnistryanska, the village of Zadnistryansk	9206,20	NA	275600,00	3,34
Kinashivska, the village of Kinashiv	9578,30	NA	60800,00	15,75
Komarivska, the village of Komariv	14228,50	NA	124500,00	11,43
Maryyampilska, the village of Maryyampil	12253,80	NA	84700,00	14,47

b. **Kosivskij rajon**

Hromada	Tax yield on residential buildings	Tax yield on commercial buildings	Present revenues of general fund (without transfers)	Tax on buildings as % of present revenues
Brusturivska	18339,4	559,7	52000	36,34
Verbovetska	24567,4	2383,8	167900	16,05
Kobakivska	29238,6	1400,7	70000	43,77
Kosivska	34025,2	11948	1893600	2,43
Kosmatska	30610,4	1966,2	122900	26,51
Kutska	24364,9	5489,7	424500	7,03
Nuzhnioberezivska	84381,6	1815,4	119000	72,43
Pistynska	29475	3610,5	177400	18,65
Rozhnivska	18716	1403,6	152900	13,16
Serednioberezivska	30536,6	1223,8	134800	23,56
Sokolivska	28519,2	4561,7	127100	26,03
Starokutska	63330	3445,2	461100	14,48
Tyudivska	26195,2	1432,6	157700	17,52
Hymchynska	23178,2	1722,6	77100	32,30
Sheshorivska	14444,4	1493,5	117400	13,58
Yablunivska	20638,5	3970,1	276700	8,89
Yavorivska	15673	440,8	61000	26,42

c. Verhovinskij rayon

Hromada	Tax yield on residential buildings	Tax yield on commercial buildings	Present revenues of general fund (without transfers)	Tax on buildings as % of present revenues
The town of Verhovyna	NA	NA	NA	NA
Iltsivska	9577,20	23214,50	199400,00	16,45
Zelenska	4976,70	4431,20	79900,00	11,77
Verhnio-Yasenivska	12308,20	18174,30	111200,00	27,41
Usterikivska	8401,70	17298,50	171400,00	14,99
Yablunytska	10985,30	13470,50	172000,00	14,22
Grynyavska	6112,20	4874,90	77000,00	14,27
Krasnoyiliska	9069,70	18357,00	162900,00	16,84

d. Summary for three pilot rayons

	Total – from residential properties	Total – from commercial properties	% of additional revenues to zahalnyj fond (without transfers)
Halickij	135,797 hryvna	NA	Median – 6,9%(*) Minimum – 1,1 %(*) Maximum – 22,7%(*)
Kosivskij	516,233 hryvna	48,868 hryvna(**)	Median – 18,7%(**) Minimum – 2,4 %(**) Maximum – 72,4%(**)
Verhovinskij	61,431 hryvna(***)	99,821 hryvna(***)	Median – 15,0% Minimum – 11,8 % Maximum – 27,4%

Notes: (*) – without commercial properties, (**) - data on commercial buildings are missing in Kosivskij rayon (only buildings related to service activity, such as cafeterias, shops, but not industrial buildings), (***) – no data for Verhovina town

Table 14 demonstrates that the impact of the tax on local revenues might be very significant. Despite the fact that only partial data is available we see that the tax has the potential to add a significant amount to local revenues. In Verhovinskij rayon (in which data seem to be the most complete) the increase of general fund revenues (without transfers) would be between 11,8 and 27,4%. In Kosivski rayon in individual *hromada* it varies from 2% to an extra 72% of revenues (in spite of lack of data on industrial sites). In Halickij rayon's *hromady* the residential property tax might raise additional funds ranging from 1,1 to 22,7% of general fund revenue.

In conclusion, introduction of the tax would require some more effort in data collection, but a big proportion of the needed information is already available. The tax might considerably increase revenue collection of local governments in the lowest tier.

Luhansk Oblast

In Krasnodon rayon it was possible to collect a complete set of data on the property tax base in all of the villages and to therefore simulate the revenue consequences of introducing a new property tax for each of the proposed *hromady*. This information was assembled through the joint efforts of the village radas and the local offices of the BTI, suggesting that similar results could be generated for other rayons in Ukraine. However, in the case of Antratseet rayon only partial information on the components of the non-residential portion of the property tax base was

available so these revenue calculations were done on a village by village basis and represent under-estimates of the full revenue potential of the property tax.

The revenue simulations for Krasnodon rayon rely on the same tax rate structure as has been used for Ivano-Frankivsk oblast, namely 0.1 hryvna per square meter for residential property and 2.9 hryvna per square meter for non-residential property outside the public sector. Turning to the simulation results in table 15, it can be seen that four of the seven *hromady* would experience a revenue gain in the range of 6-10 per cent. However, two *hromady* would reap exceptionally large gains of 33 and 105 per cent because of the concentration of non-residential property on their territories. For all *hromady* taken together the projected increase in total revenue is about 17 per cent.

In Antratseet rayon data were not available on the quantity of non-residential property in three villages and was incomplete in three others resulting in an underestimation of the true property tax yield in all of these villages. Even taking into account this underestimation, the results shown in table 14 indicate that the property tax has considerable revenue promise. Collectively, the villages in this rayon would enjoy a revenue increment of 19 per cent and that number has to be considered a minimum estimate. Four of the largest villages where underestimation of the base was not a problem could achieve revenue increments of between 25 and 48 per cent.

Table 15. Prospective Property Tax Yields for Krasnodon *Hromady*

	Hromada	Residential Revenue	Non-Residential Revenue	Total Property Tax	Total Current Revenue	Percent Extra Revenue
1	Novosvetlovsky	12,708	29,197	41,905	672,276	6.2
2	Biloskelevatsky	14,252	119,361	133,613	1,342,238	10
3	Velykosuhodolsky	7,489	71,948	79,437	1,023,204	7.8
4	Samsonovsky	7,192	78,440	85,632	1,185,746	7.2
5	Simeykynsky	13,672	171,743	185,415	564,281	32.9
6	Verhnesheverivsky	12,444	53,544	65,998	940,704	7
7	Verhnegarasymivsky	6,806	461,373	468,179	446,111	105
	Total	74,563	985,463	1,060,026	6,114,561	17,4

Table 16. Prospective Property Tax Yields for Antratseet Villages

	Village	Residential Revenue	Non-Residential Revenue	Total Property Tax	Total Current Revenue	Percent Extra Revenue
1	Esaulivka	4,778	351♦	5,129	122,429	4.2
2	Ivanovka	23,379	149,495	176,874	710,433	24.9
3	Krasny-Kyt	12,158	3,370	15,528	298`687	5.3
4	Malomykolaivsk	3,898	24,563	28,461	90,822	31.3
5	Nyzhny Nagolchyk	4,203	5,655	9,858	232,475	4.2
6	Fashivka	9,555	58,667	68,222	202,990	33.6
7	Bobrykovo	4,675	NA	4,675	215,548	2.2
8	Dyakovo	7,483	262,679	270,252	563,036	48
9	Koshari	1,901	NA	1,901	134,089	1.4
10	Krasnalutske	2,692	5,571♦	8,263	85,522	9.7

11	Mykytivka	1,384	151	1535	67,812	2.2
12	Rafaelivka	2,375	NA	2,375	137,337	1.7
13	Rebrykovo	4,799	1,006♦	5,805	202,411	2.9
14	Chervona Polyana	10,570	9,411	19,981	329,182	6.1
	Total	147,164	497,808♦	644,972	3,387,893	19

♦ - under estimated

9. <u>Data Needs Related to Equalization</u>

Creation of the new *hromada* level of local government would also require the construction of an equalization formula that takes into account the basic factors influencing the calculation of spending needs. The question is what sort of demographic and other data, needed to apply the formula, is currently available. If this information were available for all towns and villages it could be relatively easily aggregated to fit the new *hromady* structure.

One obviously useful piece of information which is available for every territorial unit is population density. Institute of Cartography provides information on number of population and total area of each of new *hromady*, so calculation of population density is very easy.

The other set of useful variables is data on age and gender structure of the local population. These basic data are more problematic. The only precise information which is easily available is from the recent national census, so includes data for the beginning of 2002. The newer information on gender and age structure for village/small town level is hardly available. Such information is clearly collected, however rayon level is the lowest one for which it is stored and easily available. Demand of the financial equalization for the *hromada* level would require a change in the demographic data storage, so such a data would be possible for every territorial unit.

What is also available is very precise information on beneficiaries of various social welfare services, which is useful for estimation of spending needs related to different kinds of social welfare benefits. For every territorial unit there is available information on number of residents receiving:

- Benefits related to child births
- Benefits for pregnant women
- Mother care benefits
- Benefits for single mothers
- Benefits for poor families
- Benefits for people with disabilities
- Single payments to disadvantaged people based on the decision of Rayon State Administration
- Benefits for funerals
- Supplement for pensions of people with disabilities
- Supplement for pensions of persons over 100 years old
- Benefit for care of people with disabilities
- Other benefits for poor people
- Housing benefits
- "Gas payment" benefits
- "Electric energy payment" benefits
- Benefit for the purchase of coal

It should be added that the large proportion of this information is not available in electronic or any other "user-friendly" form, so access to information is often very time-consuming. For example, collecting of information on benefits related to new born babies required checking every individual folder established for every "case" and "manual" check of the address of each mother with a baby.

10. <u>Conclusions</u>

The two field trips to Ivano-Frankivsk and Luhansk oblasts were designed to address a common set of issues related to territorial-administrative reform. The findings from each oblast are highly similar and in broad agreement with each other. They support the following set of conclusions:

- Scrutiny of the various amalgamation plans indicated that there would be a substantial reduction in the number of autonomous village councils, about one-half in Luhansk and somewhat more than half in Ivano-Frankivsk.

- Calculations for both oblasts clearly show that one of the effects of amalgamation would be a significant decline in the disparity of per capita revenues. Nonetheless, the reduced disparity would not remove the need for an equalization scheme.

- Savings in administration costs associated with amalgamation are shown to be important in both oblasts and constitute about ten per cent of total village revenues in each oblast.

- The observed variation in per capita land tax revenue is strikingly large and capable of generating the kind of per capita expenditure disparities that the equalization formula was intended to prevent. A strong case can be made that land taxes should be equalized under the transfer formula.

- A comparison of the differences between the amounts of land tax collected and the amounts of tax assessed annually clearly indicates that the size of the land tax base is more accurately measured by the amount of tax assessed.

- In both oblasts the estimated revenue impact of moving personal income tax from an employment registration basis to a residence basis suggests that quite large revenue redistribution among villages and cities would occur. A gradual phase-in is recommended to cushion the adjustment to such a change.

- For the group of rayons that were studied it appears to be feasible transfer responsibility for secondary education to newly formed *hromady*. Both demand and supply side variables for secondary education match up well in the proposed *hromady*.

- For the rayons that have been analyzed in Ivano-Frankivsk and Luhansk oblasts the signs are promising for the eventual introduction of a new property tax on residential and commercial properties that would take the number of square meters as its base. Much of the information needed to adequately administer the tax is either available or obtainable. Our results show that a new property tax has the potential to become an important additional revenue source for newly formed *hromady*.

- Extending of formula based equalization to village/*hromada* level would require organizational changes in data collection (such as demographic data), so that information required for the formula is more easily available.

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