

MEASUREMENT OF FISCAL CAPACITY FOR CROATIAN LOCAL AND REGIONAL GOVERNMENT UNITS

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Abstract

The main objective of this paper is to give an overview on the most important issues regarding measurement of fiscal capacity for local and regional government units considered as fundamental to the development of a system of intergovernmental transfers and equalisation grants.

The paper gives a general background for analysis of those issues in Croatia. In order to achieve this, the number and size of local and regional governments, the present model of financing of the local and regional government units and basic structure of the intergovernmental finance in Croatia will be presented.

The brief overview on theoretical concepts for measuring fiscal capacity will be elaborated. Understanding the manner of calculating fiscal capacity (the measure of the ability of local and regional government units to finance public services) it is possible to make the best decisions on intergovernmental transfer and equalisation grant system.

Special attention is given to measures of fiscal capacity for Croatian local and regional government units. In this part of the paper, a brief summary of the experiences of the transition countries concerning the measuring fiscal capacity will be added.

This paper addresses the difficulties in developing the existing fiscal capacity measures for local and regional government units in terms of scarce and low quality of data in transition countries.

The paper will conclude with a summary of the strengths and weaknesses of the overall intergovernmental finance system with elaboration of the importance on the determination of the manner of calculating fiscal capacity as a basis to make the best decisions about transfer and grant system and a discussion of planned or possible reform efforts.

Key words: fiscal capacity, local and regional government units, local and regional finance, Croatia.

JEL Classification: H7

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1. Executive summary

The purpose of this paper is to give an overview on the most important issues regarding the measurement of fiscal capacity for local and regional government units as fundamental to the development of a system of intergovernmental transfers and equalisation grants.

There are several definitions of fiscal capacity. The most appropriate defines the fiscal capacity of regional or local self-government unit as the potential ability of the government in the region or in the city (municipality) to raise revenues from their own resources in order to fund a standardised basket of public goods and services.

A measurement of fiscal capacity should be an important factor in determining the allocation of intergovernmental grants in order to equalise the amount of resources available to each of the regions or cities.

There are several major approaches or concepts to measuring fiscal capacity of local and regional government units: (1) the representative tax system (RTS), (2) the representative tax system (RTS) using regression analysis, (3) the income with exporting, (4) the maximum amount of revenue, (5) per capita personal income, (6) gross regional product (GRP), and (7) the level of total taxable resources (TTR).

The major characteristic of the Croatian system of local and regional self-government is fragmentation and a number of small local and regional self-government units. The sub-national level of government is a two-tier system and consist of 426 municipalities and 124 towns (cities) as local self-government units and 20 counties plus the City of Zagreb as regional self-government units.

Local government system in Croatia is a constantly subject to various analyses, mainly due to the ongoing decentralisation process. The results of various analyses were almost identical: tax revenues are the most important revenue source in the budget of sub-national units. Grants from the central government to local governments were growing over the last few years.

The basic source for the financing of local and regional government is shared taxes between the central government and the lower levels of government (income tax and surtax on income tax are the most important revenue sources).

A measurement of fiscal capacity in Croatia is the base for determining the allocation of intergovernmental transfers and grants in order to equalise the amount of resources available to each of the regions or cities. There are two major kind of transfers and grants in Croatia: (1) grants and transfers from the state and county budget to regional and local self-government units and (2) equalisation grants for decentralised functions from the state budget to regional and local government in order to cover major public services expenditure (education, health care, social welfare and fire-protection).

Grants for local and regional government are realised in line with the capabilities of the state budget, in a way to secure grants for the local units without fiscal capacity so mandatory functions can be maintained. The criteria for the calculation of the grants for local and regional self-government changes every year. Equalisation grants for decentralised functions are provided from the state budget to cover public expenses in the area of primary and secondary education, social welfare and health care, which are transferred to local and regional self-government units.

The main measure of the fiscal capacity is the amount of income tax revenues collected. The equalisation grant volume, for the finance of the decentralised functions is calculated as the difference between the minimal required expenditure for the public services finance (determined on the basis of the minimal financial standard) and the amount of the corresponding income taxation.

The equalisation grant system requires constant monitoring, analysis and improvements. One of the key areas for which a better solution is required is the definition of the minimal financial standard.

In Croatia there is selected regional and local data for the measurement of fiscal capacity but further improvements are expected.

The solutions regarding equalisation transfers are similar in all transition countries. This means that the practical solutions are not effective in terms of equalisation of both fiscal needs and fiscal capacity.

The comprehensive measurement of the fiscal capacity enables a suitable estimation of the fiscal capabilities and requirements for the finance of public service provision on the subnational level throughout the Republic of Croatia, as well as in other transition countries.

2. Introduction

The fundamental part of the development of a system of intergovernmental transfers and grants is an understanding of the concept of fiscal capacity and fiscal effort. There are several reasons for the existence of transfers and grants which are designed by the central state to give support to sub-national government. The most important are: additional revenue sources for financing local and regional public goods and services and equalisation of resources between regions and local areas in one country.

The purpose of the paper is to provide an overview of the measurement of fiscal capacity for the Croatian local and regional government units. In order to accomplish that, the third part of the paper provides general background for the analysis of this issue in Croatia. Fourth part of the paper gives the definition of fiscal capacity. The brief overview on theoretical concepts for measuring fiscal capacity is given in the fifth part of the paper. Special attention is given to measures of fiscal capacity for Croatian local and regional government units, which is elaborated in the sixth section of the paper. Seventh section of the paper consists of the brief summary of the experiences in the transition countries on measuring fiscal capacity. In the eight section the paper addresses the difficulties in developing measures of the fiscal capacity for local and regional government units in terms of scarce and low quality of data in transition countries. The paper concludes with a summary of the strengths and weaknesses of the overall intergovernmental finance system with an elaboration of the particular importance on the determination of methods of calculating the fiscal capacity as a basis to make the best decisions about transfer and grant system and a discussion of planned or possible reform efforts.

3. General background

3.1. Croatian system of local and regional self-government

To enable better understanding of the context and the nature of intergovernmental fiscal relations and measurement of fiscal capacity for Croatian local and regional self-government units, this part of the paper gives a short explanation of Croatian system of local and regional self-government.

The legislative framework of local and regional self-government in Croatia was formed with the passing of the Constitution of the Republic of Croatia in 1990.

There are several important laws and other regulations regulating legal autonomy of local and regional governments with respect to budgeting, expenditure and revenue raising authority, property ownership, borrowing etc.

Croatia has today a *two-tier system of sub-national government*. *Municipalities, towns and cities* represent the local level of government and *counties* represent the regional level of government. *The City of Zagreb* has status of a local and regional level of government.

Following the latest amendments, the territory of Croatia consists of *426 municipalities and 123 towns (cities)* at local level, the City of Zagreb and of *20 counties* at regional level, which makes a total of 570 sub-national units (see Table 1).

The population size of local and regional self-government units in Croatia varies widely. The majority of population lives in small municipalities, relatively small towns and medium-sized counties (see Table 2 and 3).

Table 1 Number of municipalities and towns, by counties

County	Towns	Municipalities	Total local self-government
Zagrebačka	8	26	34
Krapinsko-zagorska	7	25	32
Sisačko-moslavačka	6	13	19
Karlovačka	5	17	22
Varaždinska	6	22	28
Koprivničko-križevačka	3	22	25
Bjelovarsko-bilogorska	5	18	23
Primorsko-goranska	14	21	35
Ličko-senjska	4	8	12
Virovitičko-podravska	3	13	16
Požeško-slavonska	4	6	10
Brodsko-posavska	2	26	28
Zadarska	6	27	33
Osječko-baranjska	7	35	42
Šibensko-kninska	5	14	19
Vukovarsko-srijemska	4	26	30
Splitsko-dalmatinska	16	39	55
Istarska	10	29	39
Dubrovačko-neretvanska	5	17	22
Međimurska	3	22	25
Grad Zagreb	1		1
TOTAL	124	426	550

Source: Authors' review, based on Official Gazette, different issues

Table 2 Population in local and regional self-government Units

	Total	%	Average
Republic of Croatia	4,437,460	100.00	-
City of Zagreb	779,145	17.56	-
Republic of Croatia (excluding the City of Zagreb)	3,658,315	82.44	-
Population in municipalities	1,366,219	30.79	3,214
Population in towns (including the City of Zagreb)	3,071,241	69.21	24,768
Population in towns (excluding the City of Zagreb)	2,292,096	51.65	18,635
Population in counties (including the City of Zagreb)	4,437,460	100.00	211,307
Population in counties (excluding the City of Zagreb)	3,658,315	82.44	182,916

Source: Republic of Croatia, Central Bureau of Statistics, 2002. Census *March 31 2001* [online], Available from: [<http://www.dzs.hr/Hrv/Popis%202001/popis20001.htm>]

Table 3 Data on local and regional self-government units

Municipalities Population group	No. of municipalities	%	Towns Population group	No. of towns	%	Counties Population group	No. of counties	%
			< 5,000	18	14.63	< 100,000	3	14.29
< 1,000	31	7.33	5,001 – 10,000	39	31.71	100,001 – 200,000	12	57.14
1,001 - 3,000	212	50.11	10,001 – 50,000	55	44.72	200,001 – 300,000	1	4.76
3,001 - 5,000	112	26.48	50,001 - 100,000	7	5.69	300,001 – 400,000	3	14.29
5,001 - 10,000	61	14.42	100,001 – 200,000	3	2.44	400,001 – 500,000	1	4.76
>10,000	7	1.66	>200,000	1	0.81	>500,000	1	4.76
TOTAL	423	100.00	TOTAL	123	100.00	TOTAL	21	100.00

Sources: Pigey, J. H., Mikelsons, M., Cvijanović, D., Šišinački, J., Vilka, I., 2002. *How Many is too Many Local Governments? Territorial Reform and Cooperation among Local Governments for Public Services Delivery. Experiences and Lessons from Europe. Volume 2 - Main report.* Local government reform project – Croatia, Zagreb: The Urban Institute.

Republic of Croatia, Central Bureau of Statistics, 2002. Census *March 31 2001* [online], Available from: [<http://www.dzs.hr/Hrv/Popis%202001/popis20001.htm>]

3.2. Basic competencies of local and regional self-government

Based on provisions of the Law on Local and Regional self-government, counties in their self-governing scope of authority are responsible for the functions of regional character. Municipalities and towns (cities) perform tasks of local significance, which directly address the needs of citizens and which are not assigned to state bodies by the Constitution or by law (see Table 4).

Towns with more than 30,000 inhabitants may be also responsible for functions which otherwise fall within the competence of counties, as long as they ensure the necessary conditions for performance of these services.

Table 4 Mandatory functions of local and regional self-government Units

Municipalities, towns and cities	Counties
<ul style="list-style-type: none"> - community and housing planning - physical planning and zoning - utility services - child-care - social welfare - primary health care - primary and secondary school education - culture, physical culture, and sports - consumer protection - protection and improvement of the natural environment - fire protection and civil defense 	<ul style="list-style-type: none"> - education - health care - physical planning and zoning - economic development - traffic and transport infrastructure - planning and development of the network of educational, medical, social and cultural institutions

Source: Author's systematisation

Special administration departments and services in cities and counties are responsible for state administration affairs that are transferred to the level of local and regional self-government.

3.3. Present system of intergovernmental finances and revenue sources

The Law on Local and Regional Self-Government Financing is the legal basis of local government finance system. This law defines sources for financing of the operations of municipalities, towns (cities) and counties, various types of taxation, distribution of funds among the different levels, tax base, taxpayers, rates, as well as calculations and forms of tax payment.

Local and regional self-government unit realise revenue through:

- own sources,
- shared taxes,
- grants from the state and county budget,
- equalisation transfers for decentralised functions, and
- shared revenues.

Local governments' *own sources* include income from local governments' own property, from county, city or municipal taxes, from fines, fees, and charges.

Croatian law outlines the *distribution of shared revenues* between the state and local authorities. Local self-government units are entitled to the revenue from *shared taxes* and fees collected within their area, at a percentage stipulated by the law. Shared taxes are income tax, profit tax, and tax on real estate transactions.

Table 5 Local and regional self-governments' taxes

Municipal, town and city taxes	County taxes
<ul style="list-style-type: none"> - surtax on income tax - consumption tax - tax on vacation homes - tax on idle lands - tax on unused commercial real estate - tax on unused building plots - tax on firm or name - tax on the use of public surfaces 	<ul style="list-style-type: none"> - tax on inheritance and gifts - tax on motor vehicles - tax on boats and vessels - tax on gambling machines

Source: Author's systematisation

The income realised through *income tax* is distributed in a manner that it distinguishes whether municipality or city finances or not decentralised functions in selected public services including education, health care, social welfare and fire-protection and with respect to the special area that a local government unit belongs to. A distinct distribution of income tax is provided for the City of Zagreb. Within the area of local self-government units which have founded public fire-fighting units and which finance the regular work of the employees therein, the share of a municipality and town in income tax increases as a percentage of income tax.¹

A share in the distribution of revenue from *profit tax* for municipalities and cities is 20%, for counties 10%, and for the state 70%.

A share in the distribution of revenue from *tax on real estate transactions* for municipalities and cities is 60%, and for the state 40%.

Regarding *grants, transfers or subventions*, a system of financing community needs has been designed in such a way that grants are used solely as funds to support local self-government units with poor fiscal capacity.

Equalisation grants for decentralised functions are ensured from the state budget to cover public expenses in the area of primary and secondary education, social welfare and health care, which are transferred to local and regional self-government units.

¹The share of the state in the distribution of income tax from the area of these municipalities and cities reduces by the same percentage.

Shared revenues of the state, municipality and city is the revenue from agreed annual concession fees for pumping mineral and thermal water, and for the use of water for the public water supply.

Apart from the a fore mentioned taxes and grants, local self-government units have numerous other revenues introduced on the basis of special acts and/or decisions of representative bodies, such as *charges and fees*, which are contained and stated in the *non-tax revenues* of their budget.

Table 6 **Distribution of shared taxes**

Shared taxes	Central government budget	Counties	Municipalities, towns and cities
Income tax	25.6% share of income tax for equalisation fund 21%	10% + share of income tax for decentralised functions 9.4%	34% + share of income tax for decentralised functions 2.9%
Profit tax	70%	10%	20%
Tax on real estate transactions	40%	-	60%

Source: Author's systematisation

Table 7 **Additional share of income tax for decentralised functions**

Function	Additional share of income tax, %
Education	
- primary	2.9
- secondary	2.0
Health care	
- health care institutions	2.5
Social welfare	
- social welfare centres	0.4
- home for elderly people	1.6
Fire protection	
- public fire brigades	1.0

Source: Author's systematisation

3.4. Local and regional budget revenue and expenditure analysis

Viewed as a whole, *current revenue* account for the major share in total revenues of municipalities, cities and counties. The share of *capital revenues* amounted to 4.6% in 2003. The share of *grants* amounted to 14.6% in 2003. The share of *tax revenues* in total revenues was 56% (see Table 8).

The largest share of the tax income of sub-national government units is collected from the share in the *distribution of revenues from shared taxes* (income tax and surtax on income tax and profit tax). It together account for approximately 50.5% of total revenue in 2003.

Own tax revenues of sub-national budgets amount to only 2.5% of the total tax revenues of towns, municipalities and counties.

Non-tax revenues of all sub-national budgets amount to 24.8% of the total revenues and grants. If non-tax revenues are added to the own tax revenues and capital revenues, the share is considerably higher and accounts for 31.9% of total sub-national budget.

Table 8 Total revenues and grants of sub-national budgets, in %

Revenues	2002	2003
I. Total revenues and grants	100.0	100.0
I.A. Total revenues	86.8	85.4
I.A.I Current revenues	81.6	80.8
- Tax revenues	57.1	56.0
Income tax and surtax	40.3	38.7
Profit tax	11.0	11.8
Property tax	3.4	3.0
Sales tax and other taxes	2.4	2.5
- Non-tax revenues	24.5	24.8
I.A.II Capital revenues	5.2	4.6
I.B. Grants	13.2	14.6

Source: Ministarstvo financija, 2004. Godišnje izvješće Ministarstva financija za 2002./2003. godinu. Zagreb: Ministarstvo financija. Available from: [<http://www.mfin.hr/godisnjak>]

Note: Data refers on 53 local government units (20 counties, the City of Zagreb and 32 big cities).

In the structure of total expenditures of local and regional self-government units, *current expenditures* amounted 72.8%. The largest share of total expenditures is accounted for expenditures for the purchase of goods and services, transfers and labour expenditures.

Table 9 Sub-national budget expenditures, by economic classification, in %

Expenditures	2002	2003
I. Total expenditure and lending minus repayment	100.0	100.0
II. Total expenditures	99.0	98.5
III. Current expenditures	78.3	72.8
1. Wages and employer contributions	21.7	19.1
2. Material expenditures	37.3	34.0
3. Financial expenditures	1.3	0.7
4. Subsidies and transfers	18.0	19.0
IV. Capital expenditures	20.7	25.6
V. Lending minus repayments	1.0	1.6
Overall deficit/surplus	9.4	0.9

Source: Ministarstvo financija, 2004. Godišnje izvješće Ministarstva financija za 2002./2003. godinu. Zagreb: Ministarstvo financija. Available from: [<http://www.mfin.hr/godisnjak>]

Note: Data refers on 53 local government units (20 counties, the City of Zagreb and 32 big cities).

3.5. Process of decentralisation

Croatia is a highly centralised country based on two important indicators: the share of revenues and expenditures of sub-national government in gross domestic product (GDP) and the share of revenues and expenditures of sub-national government in the total government budget revenues and expenditures. In 1999 the share of local budget revenues in consolidated revenues of the general government budget totalled 10.32%, and their share in GDP amounted to 5.47%. In 2000, the year before the launch of the first phase of decentralisation process in Croatia, the share of local budget revenues in consolidated revenues of the general government budget totalled 10.93%, and their share in GDP amounted to 5.35%. (Jurlina Alibegović and Šišinački, 2004)

At the moment, the Ministry of Finance does not publish all data on the execution of local and regional government budgets for years 2001², 2002 and 2003. Because of the technical changes in the manner of collecting and distributing the data, for the budget year 2001 it only disposes with 70% of local and regional budgets. Furthermore, on the basis of available data, the share of local and regional budget revenues in consolidated general government budget revenues totalled 8.82% and 4.12% of the GDP.

²For the years 2001, 2002 and 2003 the Ministry of Finance has disposed only with data for 53 local and regional government units (20 counties, the City of Zagreb and 32 big cities) out of 570 local government units that, by law and government decree, cover decentralised functions in primary and secondary education, social welfare and health care.

The fiscal data for the year 2002 are the first data showing the results of the first phase of decentralisation process in Croatia. Data shows that the share of local budget revenues in consolidated revenues of the general government budget totalled 10.05%, and their share in GDP amounted to 4.64%. Data shows that higher participation of local and regional self-government in consolidated general government budget and more efficient public sector as two major goals of the decentralisation process have not been achieved yet.

Because of insufficient information, any further comments concerning the data from the local and regional government budgets and referring to the achievements of the decentralisation process in Croatia are not possible at the moment.

The share of revenues of local and regional government in the total amount of revenues of the consolidated general government in Croatia in comparison with other transition countries is much lower. While in Croatia the share of total revenues by local government is 10.05%, the share of revenues in other countries is: 20.8% in the Czech Republic, 26.7% in Hungary, 28.8% in Poland, 22.1% in Estonia, 25.0% in Latvia and 22.8% in Lithuania³. These data indicate that Croatia is a highly centralised country and that the issue of fiscal decentralisation is a particularly comprehensive problem.

One of the most important tasks of the Croatian Government is the reduction and the rationalisation of public expenditures. Besides that, Croatia has started the work on decentralisation of special public functions, which will result in decentralisation and delegation of certain organisational and administrative work and activities from the central level to local and regional self-government units.

In July 2001 the first phase of the decentralisation process began, covering issues of administrative and financial decentralisation. A decentralisation model has been established in selected public services, including education, health care, social welfare and fire protection. The proposed decentralisation model was that expenditures for wages and employer contributions in primarily and secondary education, part of current expenditures in health care and social welfare sector are ensured in the government budget, but other material expenditures, expenditures of current maintenance and capital investment have been transferred to the local government budget. Besides functions of primary education, secondary education, health care and social welfare, function of fire

³Ebel, R. D. and Yilmaz, S., 2002. *On the Measurement and Impact of Fiscal Centralisation*. The World Bank, Policy Research Working Paper 2809, Washington, D.C.: The World Bank, pp. 8.

protection has transferred to local self-government. Local government units are responsible for financing regular activities of public fire brigades.

Table 10 Revenues and expenditures of local and regional self-government in the total amount of revenues and expenditures of the consolidated general government in Croatia, in %

	1995	1996	1997	1998	1999	2000	2001*	2002	2003 Plan
Revenues	9.20	11.30	11.60	10.80	10.32	10.93	8.82	10.05	9.40
Expenditures	8.60	11.20	11.40	11.60	10.57	10.04	8.71	10.11	10.13

Note: * Because of change in program of collecting data on local budgets for the fiscal year 2001, the Ministry of Finance has disposed only with data on outrun of 53 of sub-national budgets (21 counties budgets and 32 cities budgets).

Source: Ministry of Finance, <http://www.mfin.hr>

Table 11 Revenues and expenditures of the consolidated general government in GDP, in %

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total revenues and subsidies	48.22	50.37	48.62	52.56	52.98	48.93	47.60	46.17	46.59
State Budget	28.34	29.05	27.34	31.66	32.74	29.27	31.64	37.16	38.69
Extra budgetary funds	15.44	15.65	15.62	15.22	14.77	14.31	11.84	4.37	3.23
Local self-government*	4.44	5.67	5.66	5.68	5.47	5.35	4.12	4.64	4.67
Total expenditures and borrowing minus repayment of debt	48.93	50.74	49.83	52.07	55.19	53.97	50.75	48.81	49.54
State Budget	26.46	25.35	23.52	24.28	25.08	23.83	26.17	37.11	38.01
Extra budgetary funds	18.27	19.71	20.61	21.75	24.27	24.72	20.31	7.03	6.37
Local self-government*	4.20	5.67	5.69	6.04	5.84	5.42	4.28	4.67	5.16
Total deficit/surplus	-0.71	-0.37	-1.21	0.49	-2.21	-5.04	-3.15	-2.63	-2.95

Note: *Because of change in program of collecting data on local budgets for the fiscal year 2001 and onwards, the Ministry of Finance has disposed only with data on outrun of 53 of sub-national budgets (21 counties budgets and 32 cities budgets).

Source: Ministry of Finance, <http://www.mfin.hr>

The major change in revenue sources for municipalities and counties is the possibility of introducing new municipal and city taxes, as well as the possibility of introducing different levels of surtax on tax on income tax depending on the size of the municipality.

Distribution of shared revenue sources between the state and sub-national government has changed. The most significant change is in the distribution of income tax revenues, with a larger part of income tax revenue going to local government units. A special part of income tax revenue is reserved for covering expenditures regarding decentralised functions in primarily and secondary

education, health care, social welfare and fire protection. For local government units that do not have enough resources for financing decentralised functions there has been established equalisation grants for decentralised functions.

Described changes in financing the system of local and regional government have focused on one major objective – the transfer of responsibilities in providing part of public services to the local and regional level and at the same time securing revenues for financing the transferred responsibilities.

4. Definition of fiscal capacity for LRGUs

There are several definitions of fiscal capacity. *Fiscal capacity* of regional or local self-government unit can be defined as the potential ability of the government in the region or in the city (municipality) to raise revenues from their own resources in order to pay for a standardised basket of public goods and services. (Snah, 1997; Martinez-Vasquez and Boex, 1997) Fiscal capacity can be defined as the ability of governmental jurisdiction to translate economic activity within its geographic borders into public spending. (Chernick,1998)

The concept is both hypothetical and comparative, reflecting the differing amounts of revenue jurisdictions could collect, rather than what they actually raise. Any definition of fiscal capacity must start with a measure of economic activity, such as income produced, income received by residents, or property wealth. The ability to transform the economic base into public revenues depends both on the type of taxes that are legally available and on the economic constraints facing the jurisdiction.

At the local level, both factors are very important. Localities are legal creatures of their states, and taxing authority varies both across and within states. This means, the more restrictive the set of revenue instruments, the lower the fiscal capacity. Economic constraints are measured by the elasticity of the jurisdiction's tax base and depend on the extent of interjurisdictional and interregional tax competition. If two cities have equal economic bases, but one faces more perfect suburban locational substitutes than the other, then it will also have lower fiscal capacity. Measures of fiscal capacity should take into account both the statutory framework, shaping the tax system and the economic base elasticity.

The difference in the economic or the tax base between the local and the regional self-government units causes the differences in the fiscal capacities. The

principal tax base (income, real-estate, market sales or transactions) are not equally available to all governmental levels. Local and regional units with high fiscal capacity are able to generate higher income and thus provide more public services per capita with the same tax burden. Lower per capita tax burden implies a lower fiscal capacity of the local and regional units resulting in lower levels of public services provision per capita. Therefore the differences in the fiscal capacity represent the main cause of the horizontal fiscal inequality among the sub-national governments.

Sub-national units have different fiscal capacity for the procurement of public services in comparison to the income, tax and fiscal efforts. The causes are connected with the differences in the public goods procurement costs between different government levels. Furthermore, various demographic, geographic and other characteristics of the sub-national units can influence the demand structure of the various local units. Horizontal fiscal equalisation takes account of all of these factors: fiscal capacity, procurement costs and the needs programme. Should the equalisation grants be based on the fiscal capacity measurements, this should provide the stabilising effect on the income of the local and regional units.

The estimate of the fiscal capacity of specific sub-national units changes in line with the value of the tax base. A lower tax base of the sub-national units disables the minimum acceptable level and quality of the public services provision. On the basis of the fiscal capacity evaluation, the decisions are made regarding the levels of grants and transfers on the local and regional unit level.

A measurement of fiscal capacity should be an important factor in determining the allocation of intergovernmental grants in order to equalise the amount of resources available to each of the regions or cities.

Apart from the fiscal capacity, fiscal, tax or revenue efforts need to be defined. These can be defined as the degree to which a central government or sub-national self-government unit utilises the revenue bases available. The level of fiscal, tax or revenue efforts are affected by the level of the tax rates applied (if sub-national governments have discretion over rates), by the level of exemptions granted (if sub-national governments have discretion over the structure of the tax), and by the tax enforcement effort exerted by the tax administration authorities. The level of fiscal effort is typically measured as the ratio of the actual amount of revenues collected to some measure of fiscal capacity. This implies that the level of fiscal effort is defined as the ratio of actual revenue

collections divided by the region's fiscal capacity. (Martinez-Vasquez and Boex, 1997)

Fiscal, tax or income efforts are used in the estimations of the per capita tax basis when identifying data for the fiscal capacity equalisation in the financing of goods and services. Tax efforts, as well as the fiscal capacity, can provide a measure of the tax or tax-deductible income level. Individually, the measured level of the tax effort indicates the frequency of use of the each tax basis in comparison to other local or regional units.

The value of the fiscal, tax or income effort in the excess of 100 indicates that the local or regional unit has collected a higher amount of taxation income in relation to the per capita national average. This situation can have several implications. Primarily, that the needs of the local population in the regional or local units are higher in comparison to the other communities. Secondly, the local or regional units may have lower income per capita in relation to other units and therefore requires higher tax efforts to maintain average per capita expenditure on national level. Third, due to the demographic and geographical characteristics, local and regional units require more per capita expenditure in relation to the national average in order to provide public services to local communities.

5. Measures of fiscal capacity for LRGUs

Estimating the fiscal capacity of the local and regional units is not an easy task, thus there are several major approaches or concepts to measuring fiscal capacity of local and regional government units:

- the representative tax system (RTS),
- the representative tax system (RTS) using regression analysis,
- the income with exporting,
- the maximum amount of revenue,
- per capita personal income,
- gross regional product (GRP), and
- the level of total taxable resources (TTR). (Chernick, 1998; Martinez-Vazquez and Boex, 1997)

5.1. The representative tax system (RTS)

Under RTS, fiscal capacity is defined as weighted sum of the major tax bases potentially available to the jurisdictions being compared. As a measure of fiscal capacity for a region, the fundamental concept of the RTS is to calculate the amount of revenue that a region would collect if it were to exert average fiscal effort. This is done by collecting data on revenue collections and (proxies for) tax bases for each of the taxes under consideration for every sub-national region. Based upon information on all tax bases for every region as well as the national average fiscal effort for each of the taxes, we can compute the amount of revenues that each region would collect under average fiscal effort.

At the local level⁴, the major taxes are the real property tax, general and selective retail sales taxes, the income tax, the business income tax (profit tax) and the other taxes, which represents miscellaneous small taxes.

The general expression for RTS in jurisdiction i is given by the following equation:

$$RTS_i = t_{PROP}B_{PROP,i} + t_{SALES}B_{SALES,i} + t_{INCOME}B_{INCOME,i} + t_{PROFIT}B_{PROFIT,i} + t_{OTHER}B_{OTHER,i} \quad (1)$$

In equation 1, the subscript *PROP* refers to the property tax, *SALES* to general and selective sales taxes, *INCOME* to individual income tax, *PROFIT* to business income tax or profit tax, and *OTHER* to other small taxes.

The weight on each tax base is the average tax rate on that base. The average may be across jurisdictions or it may be weighted by the jurisdiction's share of the total population.

The RTS is based upon the typical legal authority over tax instrument and the average fiscal behaviour of the sample. If particular jurisdiction faces a more (or less) restrictive legal framework than the average (for example, is not allowed to use a particular tax or faces a tight rate or levy restriction) its reduced ability to raise revenue will not be directly reflected in its RTS. The only effect will be small and indirect, through its influence on the average tax rates used to compute each city's RTS.

⁴This refers mostly to developed countries, and part of this definition relates to transition countries.

The RTS measure fails to capture differences in the comparative fiscal environment or the political economy of different jurisdictions.

There are two ways to adjust the RTS measure to take into account the fiscal capacity of those jurisdictions that rely on a broader menu of taxes than the typical jurisdiction.

One way to do so is to use population-weighted average tax rate. Because larger jurisdictions tend to have more tax instruments available to them, using population-weighted averages will tend to give more weight to larger jurisdictions in defining fiscal capacity.

As a compromise way of dealing with the problem of restrictions on available tax instruments, we modify the RTS concept by defining a restricted tax capacity for the subset of taxes that are common to all jurisdictions. This approach has the advantage of not requiring data on tax bases such as business income tax, which are not available for small jurisdictions. The measure for the property tax is the average property tax rate in the region multiplied by each jurisdiction's per household property tax base.

5.2. The representative tax system (RTS) using regression analysis

The use of regression analysis in the RTS reduces the data requirements for the measurement process. Rather than collecting data on the actual collections and tax bases for every single tax component, the RTS regression method only requires information on the total amount of revenues collected for each region plus data on a series of proxies for the tax bases for each region.

5.3. The income with exporting

The income with exporting approach of measurement of the fiscal capacity is based on the premise that fiscal capacity should reflect the amount of revenue that could be raised if each jurisdiction's residents faced the same tax burden. Resident income is augmented by a jurisdiction's ability to export a portion of the taxes to non-residents. Fiscal capacity is defined as:

$$FC = K*Y(1 + e) \tag{2}$$

In equation 2, K^* is a standardised tax burden, usually defined as the average resident tax burden for all jurisdictions. Y is per capita income and e is the average export ratio. The export ratio, defined as *exported taxes/local taxes*, measures the revenue that comes from non-residents per money unit (EUR, USD, HRK) of tax paid by residents. As shown in equation 2, exporting enhances fiscal capacity, because it allows a portion of the cost of public services to be paid by non-residents. While exporting lowers the cost of public services for residents, for non-residents, it raises the cost of doing business in the jurisdiction. Non-residents may respond to this higher price by reallocating firms, place of employment, or location for shopping. If reallocation occurs, there could be a decline in the jurisdiction's fiscal base.

5.4. The maximum amount of revenue

The maximum amount of revenue a jurisdiction could raise with its existing tax structure is concept of the fiscal capacity, which shows the existence of a revenue hill for LGUs. At tax rates close to the summit of the revenue hill, the value of extra public expenditures financed by a tax increase is more than offset by the decline in the tax base.

5.5. Per capita personal income

The most obvious source of revenue for a regional and local government is the income of its taxpaying residents. As a result, the most common measure of fiscal capacity has become the per capita level of personal income.

The main advantage of using per capita personal income as a measure of fiscal capacity is that its wide availability and its simplicity. The problem with per capita income as measure of fiscal capacity is that it does not necessarily measure the tax bases available to each region well (sales taxes, tourist taxes, etc.).

5.6. Gross regional product (GRP)

Gross regional product (GRP) is the regional equivalent of gross domestic product (GDP). GRP is defined as the total value of goods and services produced by the region's economic resources (land, labour, and capital) over a given period of time. Since the total value of goods and services produced in a region

is equal to the income received by the owners of the employed economic resources, GRP reflects the total amount of income potentially subject to taxation by the regional government. GRP is a more comprehensive measure of the fiscal capacity than per capita income because GRP includes income generated within a region irrespective of the location of residence of the worker or producer.

One of the problems with the use of GRP as a measure of fiscal capacity is specific to the structure of taxes. For example, the collection of the profit tax can be based on the location of corporate headquarters, not on the location of economic activity of the company.

5.7. The level of total taxable resources (TTR)

Total taxable resources (TTR) are a measure of fiscal capacity that is closely related to gross regional product (GRP). TTR recognises that while GRP is a good measure of the total amount of economic activity that takes place in a region, GRP does not include the effect of certain federal taxes and transfers on the fiscal capacity of subnational regions. As such, several adjustments are made to GRP to arrive at TTR. First, certain federal or state taxes are subtracted from GRP, because these funds are unavailable to regional and local government as a source of revenue. Next to arrive at TTR, each region's GRP has to be augmented with the amount of direct federal or state transfers to firms and individuals. These transfers increase the wealth of a region's producers and households, which increases the ability of the region to raise revenues.

5.8. Needed data and information for implementation the fiscal capacity approaches

Required data and information for implementing the fiscal capacity approach depends on the structure of local government's tax revenue⁵. The most common are:

- number of population by jurisdiction,
- number of families by jurisdiction,
- data on market value of residential and commercial properties,
- gross income,
- individual income tax revenues,

⁵Here we do not say anything about intergovernmental grants and variations in the cost of providing public services.

- property tax revenues,
- local sales tax revenues,
- business income tax or profit tax revenues,
- other small tax revenues, and
- tax rates for every tax bases.

6. Measures of fiscal capacity for Croatian LRGUs

The Croatian fiscal system considers the local and regional authority's fiscal capacity as the real measure of the capability of revenue collection and expenditure finance. Acceptable measure of the fiscal capacity is the per capita income and the required funds for the public services finance by the local and regional governmental levels.

Measuring the fiscal capacity serves as the basis for the determination of the intergovernmental transfers and grants policy towards the lower government levels, with the aim of balancing the development of all localities in the country. There are two basic types of grants and transfers in Croatia⁶, and these are the following:

- grants and transfers from the state and county budget to regional and local self-government units,
- equalisation grants for decentralised functions from the state budget to regional and local government to cover public expenditures in major public services (education, health care, social welfare and fire-protection).

6.1. Fiscal capacity and grants system

Grants and transfers from the state and county budget are used solely as funds supporting regional and local self-government units with poor fiscal capacity. This means that the system of financing the community needs has been designed in such a way that grants are used as equalisation revenue.

The primary aim of the grant system is uniform provision of the public services in Croatia. Considering that the revenues from local budget for the large number of

⁶This part of the paper is mainly based on Jurlina Alibegović, D., 2004. Intergovernmental Finance and Fiscal Equalization in Croatia. Paper prepared and presented at LGI OSI Policy Forum on Fiscal Equalization, 18-19 November, 2004, Belgrade, Serbia and Montenegro.

local government units are insufficient, grants are given from the state and county budget resources.

Grants for regional and local government are realised in line with the state budget abilities, in a way to secure grants for the counties, but also directly for the municipalities and cities in areas of special government concern.

Each year, the Budget Act includes the basic criteria for the calculation of grants. These criteria are applied for all units in the area of special government concern.

Grants to counties refer to the correction of the fiscal capacity to the budget and investments into development programs of the counties, municipalities, and cities in their area of interest.

*The criteria for the calculation of the grants for counties*⁷ in the areas of special government concern are the following:

- the number of inhabitants according to the 2001 census,
- the average revenues of the county budget in 2002 per capita on national level (national average) and the revenues of the county budget per county inhabitant,
- the average expenditure on capital programs, financed by the county budget in 2002 per capita on the national and county level.

At least 50% of the current grants of the county are distributed for municipalities and cities that are not direct grant beneficiaries. The county outlines the criteria for the distribution of parts of these grants.

Grants to municipalities and cities relate to the correction of the fiscal capacity towards the budget, stimulation of investments into development programs and the rationality of the implementation of the various public functions of the municipalities and cities.

The criteria for the calculation of the grants for municipalities and cities in areas of special government concern are the following:

- the number of inhabitants according to the 2001 census,
- the average income per municipality and city on national level (national average) in 2002,

⁷An example in this case is the state budget for 2004 and needed data for calculation of the grants refers to the fiscal year 2002 because the Ministry of Finance usually needs two years to collect data on the execution of the local and regional self-government budgets.

- the average income per capita in the areas of special government concern, i.e. specific municipality or city,
- the level of expenditure for capital programs in 2002 as part of the total expenditure,
- the balance of material expenditure (number of inhabitants and expenditure per capita) in 2002,
- the rationale of the execution of the system functions (employment numbers, expenditure per employee) and the expenditure for the functions of the city (up to 30.000 inhabitants) in 2002 and,
- the correction variable for the gradual transition to the new model of grant calculation.

6.2. Fiscal capacity and equalisation grants for decentralised functions

Equalisation grants for decentralised functions are provided from the state budget to cover public expenses in the area of primary and secondary education, social welfare and health care, which are transferred to local and regional self-government units.

*Specific legislature*⁸ defines the public functions transferred from the state to county and city level. These Acts specify the types of public expenditure financed from the budgets of local and regional self-government units.

The Decision of the Government of the Republic of Croatia defines the criteria and the standards for securing the minimum provisions of the public needs in the sectors of primary education, secondary education, health, social welfare and fire protection. The Government of the Republic of Croatia sets out these minimum financial criteria and standards⁹ on an annual basis along with the state budget.

⁸Primary education: Primary education Act; secondary education: Secondary education Act; for social welfare: Social welfare Act; for health insurance: Health insurance Act; and for fire protection: Fire protection Act.

⁹The criteria and standards for the provision of the minimum financial standard of public needs for elementary, secondary education, health care, social welfare and fire protection have been set out for the current fiscal year on the basis of expenditures in previous fiscal year.

Material and financial costs for financing education expenditures are defined on the basis of average annual expenditure per student. Maintenance expenditures and capital constructions expenditures are defined per student, per classroom and per school.

Maintenance expenditures of health institutions owned by the municipalities and the City of Zagreb are defined on the basis of the following criteria: number of insured persons, number of location of health care institution, number of health care institutions and number of beds in health care institutions per a certain county or the City of Zagreb.

The Decree of the Government of the Republic of Croatia defines the manner in which the calculations are made for the purpose of balancing the decentralised functions of the local and regional self-government units from the state budget in a specific fiscal year. The Decree contains a table with the summary overview of the resources for the decentralised functions and the formulae for the calculation of equalisation grants (see Box 1).

The financing of the decentralised functions has been taken-over by counties, the city of Zagreb and further 32 cities¹⁰, the financing of which is secured by the additional share of the income tax for the decentralised functions¹¹ (see Table 7). In case the above mentioned units of local and regional self-government do not have sufficient funds within the additional share of the income tax in any given fiscal year, they are entitled to *equalisation grants*.

The criteria for the selection of cities which, together with the counties and the City of Zagreb, take-over the financing of the decentralised expenditures for primary education were that these cities have more than 10.000 inhabitants, or are county capitals and that the income tax per capita in 1999¹² was higher than 400 HRK.

Fiscal capacity analysis of the counties, cities and municipalities, in relation to the network of institutions in primary and secondary education, health, social welfare and partly in fire protection concluded that due to the unbalanced development

Material costs and other current expenditures of social welfare institutions are defined per number of personnel employee in a certain welfare institution. Criteria for social welfare assistance in the form of transfers regarding heating costs are defined per number of care recipients.

Employee expenditures in public fire brigades and other material and financial expenditures for public fire brigades are based on the following criteria: number of fireman in a public fire brigade, average number of activities of public fire brigade in the period 1999-2003 and number of citizens that live in the municipality or the city who is establisher of the public fire brigade.

¹⁰There are 32 cities in total which have taken-over the decentralized functions and their financing. These are the following: Samobor, Velika Gorica, Vrbovec, Zaprešić, Krapina, Kutina, Sisak, Karlovac, Varaždin, Koprivnica, Bjelovar, Crikvenica, Opatija, Rijeka, Gospić, Virovitica, Požega, Slavonski Brod, Zadar, Osijek, Šibenik, Vinkovci, Makarska, Split, Labin, Pazin, Poreč, Pula, Rovinj, Umag, Dubrovnik and Čakovec.

¹¹Additional parts of the income taxation for the decentralized functions are the following: for primary education 2.9%, secondary education 2.0%, social welfare 2.0%, health care 2.5% and fire protection 1.0%.

¹²In the year prior to the beginning of the decentralisation process and the enactment of the decentralisation legislation for which data was available concerning the budgets of the local and regional self-government units. Due to the process of regulation preparation in the first half of 2001, the process of decentralisation proper begun on the July 1st, 2001.

of the local and regional self-governments, the decentralised functions are transferred on the county levels (20), the City of Zagreb and the level of a certain number of cities (32). This means that 53 local and regional self-government units in total have taken the obligation of financing the decentralised public expenditures.

Legislation provides for the possibility that a municipality or a city with more than 8.000 inhabitants or multiple municipalities or cities jointly totalling 8.000 inhabitants can on the basis of the Decree finance the decentralised expenditures for primary education.

Each unit of local and regional self-government plans the expenditure for the decentralised functions in its annual budget. The state budget plans the income for the decentralised functions according to the income estimates of each separate additional section of the income tax. The income difference is planned from the equalisation grants resources in the state budget under the heading *expenditures for the equalisation grants for the decentralised functions*.

The financial resources allocated to each of the decentralised functions are decided on the basis of real expenditure in the previous year and the minimal standards estimates for each function. It should be added that the state budget provides its share of the income tax, i.e. the additional part for each function and the equalisation grants.

The municipalities and the City of Zagreb finance the decentralised function by transferring the funds for the primary and secondary education, health, social welfare and fire protection, to the ultimate users (institutions). The relevant legislation and/or decrees define the financing priorities¹³.

The state budget transfers the funds for the decentralised functions to the counties, the City of Zagreb and cities on a monthly basis. In return, they are required to provide a report to the Ministry of finance every three months outlining the amount of obligations according to each decentralised function and the amount of funds transferred to the end-users (institutions) for these functions.

¹³The priorities are the costs of transportation of the students in primary education, transport of employees in secondary education, and the energy costs for heating and lighting in primary and secondary education.

Decentralised financing (transfer of funds and functions) from the state to local and regional self-government level aims to strengthen the responsibility of the local authority in the implementation of the public functions in their area of responsibility. In addition, the aim is to build an efficient public sector, closer to the citizens and their needs.

The formulae for the calculation of the equalisation grants are shown in Box 1. As the formulas show, publishing the minimal financial standards for the primary and secondary education, social welfare, health and fire protection, and the calculation of the required additional funds for the decentralised functions requires the co-operation of the Ministry of Finance with the relevant ministries, local and regional self-government units and the end-users. The end-users (institutions) receiving the funds for the decentralised functions should construct their own financial plans with corresponding explanations, forming the data basis for the calculation of the total annual resource amounts.

On the basis of this brief overview of the transfers and grants system in Croatia, it can be concluded that the main measure of the fiscal capacity is the amount of income tax revenues collected. The equalisation grant volume, for the finance of the decentralised functions is calculated as the difference between the minimal required expenditure for the public services finance (determined on the basis of the minimal financial standard) and the amount of the corresponding income taxation.

6.3. Fiscal capacity and advantages and disadvantages of the grant system

The calculation of the fiscal capacity of the local and regional authorities should present the starting value in the fiscal equalisation system. Mainly as this is the only means by which an accurate indication can be obtained concerning the ability of a local unit to finance personal requirements, as well as identifying the local units requiring additional finance through grants and transfers.

Grants and transfers are the most common means of additional finance of the local and regional units. Their goal is the fiscal equalisation. The grants and transfers are available only to those municipalities, cities and counties, which have an above-average fiscal capacity. In other words, those unable to finance the required expenditure through their own funds. Briefly stated, the grant for a specific municipality, city or county is calculated as the difference between the level of essential budgetary expenditures and the volume of the fiscal capacity.

Grants for local and regional government are realised in line with the abilities of the state budget, in a way to secure grants for the local units without fiscal capacity for financing mandatory functions.

The criteria for the calculation of the grants for local and regional self-government changes every year. This does not leave enough room to sub-national government to forecast all revenues in their budget. The result of that could be seen as lack of financial capacity to manage planned activities and local development. Lack of financial capacity to manage development is characteristic of more than 30% of local government units because these units cannot cover current expenditures with current revenues.

The equalisation grant system requires constant monitoring, analysis and improvements. One of the key areas for which a better solution is required is the definition of the minimal financial standard. As the decisions of the Croatian government provide detailed criteria and standards (the expenditure types entering the calculation of the minimal financial standard) it is essential to monitor the costs according to the type and amount and create a performance-based system with incentives in order to increase rationality and generate better results.

Apart from this, the equalisation grant system should eliminate the unfounded element and introduce the criteria of the real cost of providing the public service. The formula has some space to add the variable "quality standard for the provision of the public service" as decentralised provision of local public services should imply a higher satisfaction level of local population by the services provided by the public sector.

Because of constant increase of number of towns and municipalities without considering capacity to provide services it is needed to establish clear and measurable criteria for local government units to meet in providing mandatory services to their citizens. Criteria should exclude all political aspects whether to form the new local government units or not, but carefully examine if the local government units will be capable to autonomously manage its development. This will have great implication for design of the future grant system in Croatia.

**Box 1 Review of Formulas Used to Calculate Equalisation Grants
(Example for the Fiscal Year 2001)**

Primary Education

$$P_{O2001j} = MS_{O2001j} - [0,029 \times D_{2001j}] - S_{O2001j}$$

Where:

j = a certain unit of local and regional self-government. In the following text:

L = municipality, city, county

R = county only

P_{O2001j} = Grant for primary education in 2001 Lj

MS_{O2001j} = The minimal financial standard, according to the decision of the Croatian government in 2001 for the institutions in primary education Lj

D_{2001j} = The realised income from the income tax (excluding local taxation) in the Lj area, minus the part of the local self-government units financing the primary education and the part of the local self-government units financing the decentralised functions

$S_{O2001j} = [si + spli]$

si = Executed expenditure from the state budget for the period January 1st until July 30th 2001

spli = contractual, unfulfilled obligations for the maintenance and equipment and the capital obligations up to the resources levels planned by the state budget in 2001 for these expenditures for the institutions in primary education which are financed by Lj

Secondary education

$$P_{S2001j} = MS_{S2001j} - [0,02 \times D_{2001j}] - S_{S2001j}$$

Where:

j = a certain unit of local and regional self-government. In the following text:

L = municipality, city, county

R = county only

P_{S2001j} = Grant for secondary education in 2001 Rj

MS_{S2001j} = The minimal financial standard, according to the decision of the Croatian government in 2001 for the institutions in secondary education Rj

D_{2001j} = The realised income from the income tax (excluding local taxation) in the Lj area, minus the part of the local self-government units financing the primary education and the part of the local self-government units financing the decentralised functions

$S_{S2001j} = [si + spli]$

si = Executed expenditure from the state budget for the period January 1st until July 30th 2001

spli = contractual, unfulfilled obligations for the maintenance and equipment and the capital obligations up to the resources levels planned by the state budget in 2001 for these expenditures for the institutions in secondary education which are financed by Rj

Social welfare

$$P_{C2001j} = MS_{C2001j} - [0,004 \times D_{2001j}] - S_{C2001j}$$

Where:

j = a certain unit of local and regional self-government. In the following text:

L = municipality, city, county

R = county only

P_{C2001j} = Grant for social welfare centres in 2001 Rj

MS_{C2001j} = The minimal financial standard, according to the decision of the Croatian government in 2001 for the current expenditure of the social welfare centres and heating allowance R j

D_{2001j} = The realised income from the income tax (excluding local taxation) in the L j area, minus the part of the local self-government units financing the primary education and the part of the local self-government units financing the decentralised functions

$S_{C2001j} = [si + splo]$

si = Executed expenditure from the state budget for the period January 1st until July 30th 2001 for the social welfare centres,
splo = planned, unfulfilled obligations ranging up to 50% of the heating cost, from the state budget from July 1st up to December 31st for the social welfare centres financed by Rj

Health care

$$P_{Z2001j} = MS_{Z2001j} - [0,025 \times D_{2001j}]$$

Where:

j = a certain unit of local and regional self-government. In the following text:

L = municipality, city, county

R = county only

P_{Z2001j} = Grant for health in 2001 Rj

MS_{Z2001j} = The minimal financial standard, according to the decision of the Croatian government in 2001 for the current expenditure of the maintenance of the health institutions Rj

D_{2001j} = The realised income from the income tax (excluding local taxation) in the Lj area, minus the part of the local self-government units financing the decentralised functions

7. Measures of fiscal capacity for selected transition countries

Measures of fiscal capacity in transition countries unfortunately have not been seen as the basis for equalisation system. The reasons for that are insufficient local government revenues and opportunities for transfers from the central budget. The state treats equalisation transfers as an element of its influence over local governments and the system of distribution of equalisation transfers involves more negotiation instead of the application of a concrete formula. The result of the application of such equalisation transfers leads to an interesting conclusion: in essence, the methods currently used are not improving the situation of less developed local governments.

The grant system is an integral part of intergovernmental fiscal relations and as such a primary target of change. National grant systems have fiscal equalisation as one of their main objectives. Thus, as a core instrument of state fiscal assistance policy towards subnational governments, the grant system necessarily experiences rather big fluctuations.

In most countries not all the components of the state grant system are consistent with "optimal" criteria. The most important characteristics of a good transfer system are objectivity, stability and transparency. Some of transition countries show movement towards better formula-based grant system and equalisation transfers. (Slukhai, 2003)

Table 12 shows equalisation schemes employed in selected transition countries. The solutions regarding equalisation transfers are similar in all transition countries. This means that the practical solutions are not effective in terms of equalisation of both fiscal needs and fiscal capacity.

Table 12 Equalisation schemes employed in selected transition countries

Country	Equalisation procedure
Armenia	Formula, with respect to per capita incomes and expenditure need indicators, especially geographic characteristics of LRGUs
Belarus	Formula, with respect to difference between per capita standard expenditure and normative revenues
Czech Republic	No clearly defined equalisation procedure
Estonia	Formula, with size of population and difference in actual and average per capita revenues as factors
Georgia	Equalisation is done through differentiation of conditional grants for basic social needs; there are no transparent procedures for their allocation
Hungary	Equalisation is a component of the normative grant which takes into account both the revenue and expenditure sides; also investment grants are involved
Kazakhstan	Formula, with respect to per capita standard revenues and expenditures; funded exclusively through regional contributions
Kyrgyz Republic	Formula, with respect to difference in per capita revenues and expenditures; conditional grants are also employed to equalise difference in delivery of social services
Latvia	Formula, with difference in per capita revenues and expenditures to be equalised; the system is funded mainly through contributions of LGUs
Lithuania	Formula, equalisation component is included into general grants allocation; the differences in both per capita revenues and expenditure needs are involved; subnational units' contributions are practiced
Moldova	Regional differentiation of tax-sharing rates
Poland	Formula, per capita revenues are equalised up to predetermined grade by use of general subsidy
Romania	Formula, with revenue and expenditure indicators employed
Russian Federation	Formula, the regional level disparities in revenues and expenditures are equalised; the equalisation on a subregional level is very vague
Slovakia	Indirect equalisation through differentiation of sharing rates and addressed grants to small municipalities
Ukraine	Combination of differentiation sharing rates and equalisation grants; formula used since 2001, with respect to difference in expenditure needs and revenue capacity

Source: Slukhai, S., (ed.), 2003. Dilemmas and Compromises: Fiscal Equalization in Transition Countries. LGI Studies. LGI Fellowship Series. Budapest: Local Government and Public Service Reform Initiative, pp. 18.

In intergovernmental fiscal relations, the design of the transfers to close the horizontal and vertical "gaps" should be based on the expenditure needs and revenue capacity of the subnational government. The calculation of expenditure needs is a key element in well-designed fiscal relations. To calculate different expenditure needs for the relevant services that LRGUs provide a relatively up-to-date database is needed that cannot be manipulated by the stakeholders. The lack of appropriate information leads to a system that is full of interventions by

the central government to correct the mistakes resulting from discretionary decisions. LRGUs in transition countries expressed their need to guarantee the "minimum level of services", which is partly a technical term, partly political. Without subnational statistics, achieving political agreement on the minimum level of services is an illusion. (Yilmaz, Hegedus, and Bell, 2003)

The practice of transition countries shows that current approaches could be more compliant with the recommendations of theory. The problems to implement theoretical approaches are: the lack of reliable statistical data on the fiscal performance of LRGUs, insignificance of local and regional own revenues for financing LRGUs, insufficient fiscal discretion in expenditure policy and failure to find appropriate measures, especially for expenditure needs.

8. Difficulties in developing measures of the fiscal capacity for Croatian LRGUs

Fiscal capacity should present the starting value in the determination of the grants and transfers volume to the local and regional units. Fiscal capacity needs to be calculated to establish the funds available to the governmental units, and the differences, if present, in comparison to the national average.

The crucial problem of the transition countries is the determination of the fiscal capacity and the requirements of lower levels of government in the provision of public services. Estimating the fiscal capacity is made difficult due to the insufficient database on the local and regional level, particularly concerning the number of inhabitants, the demographic structure, up to the economic indicators.

The following section provides a brief comment concerning the availability of the data on the local and regional levels¹⁴, required for the estimation of the fiscal capacity of subnational government units in Croatia.

¹⁴This part of the paper is mainly based on research paper prepared by Jurlina Alibegović, D., Budak, J., Starc, N., and Šišinački, J., 2003. Local Government and Development: What Works and What Does Not. Analysis, Policy Recommendations and Training Materials for Countries of Central and Eastern Europe. Lessons Learned in Poland, Croatia and Ukraine. The Case of Croatia. Zagreb: Ekonomski institut, Zagreb. That research was funded by a grant received from OSI Budapest.

8.1. Selected regional and local data for measurement of fiscal capacity

Population by jurisdiction

The Central Bureau of Statistics (CBS) finished last census in 2001. The data on population by jurisdiction are available at Internet address of the CBS.

Employment

Data on employment is collected by the CBS through monthly and annual survey reports filled in by legal entities. Surveys include legal entities of all types of ownership, government and administrative bodies and local administrative bodies. Data is collected on the territorial principle, i.e. according to the headquarters of the legal entity (problems when estimating employment rate on lower level territorial units). Surveys do not include data on persons employed in crafts and trades – these data are collected from the records on active insurance beneficiaries of the Croatian Institute for Pension Insurance. Data on the qualification level of employees is collected in the same way as data on employment. Data on employment, broken down by sectors according to NCEA (National Classification of Economic Activities), are available at the national and regional (county) level.

Unemployment

Data from the CBS and from the Croatian Employment Service (CES). CBS collects data through Labour Force Survey based on ILO methodology with aim to measure the economic activity of the population. CES keeps the records on registered number of unemployed persons. These records also contain data on the qualification of unemployed persons, duration of unemployment, job vacancies etc. These data are available already at the municipality level.

Firm formation and number of companies at sector level

Data on firm formation could be obtained from the data base of the Financial Agency (FINA), but the latest changes in the system of payments (transferring system of payments from FINA to banks) made this data questionable (in the future).

CBS keeps the Register of Business Entities. The Register comprises legal entities, state government and administrative bodies but for now, it does not

comprise natural persons (crafts). By entering a Register each business entity is assigned a code number of activities according to the National Classification of Economic Activities (NCEA).

The National Classification of Economic Activities (NCEA) is based on the European Classification of Economic Activities (NACE) and it provides data up to the five-digit level.

There is an ongoing project of setting up a unique business registry for all legal and natural persons (crafts). This business registry should provide data on firm formation and number of companies at sector level. The project is to be finished by 2005 and the beneficiary is CBS.

FINA currently provides data on the number of companies at sector level.

Budget at local and regional level (municipality, city and county)

The Ministry of Finance produces statistics on local (city and municipality) and regional (county) budgets from 1997 and these budgets are available on the Ministry's official web page. The last available local and regional budget statistics is from 2001 budget.

The Ministry collects data on revenue structure and expenditure structure by economic and functional classification, by municipality, city and county¹⁵.

Revenue structure at local (municipal and city) and regional (county) level consists of the following revenue sources:

- tax revenues (income tax and surtax, profits tax, real estate transaction tax, tax on consumption, tax on holiday homes, tax on the use of public areas, tax on arable non-farmed lands, tax on unused company real estate, tax un-built construction sites, tax on companies and company names and other inland tax),
- non-tax revenues (revenues from communal firms, property income, rent income, administrative revenue, penalty revenue and other non-tax revenue),
- capital revenue (revenue from dividends, property income, capital transfers from non-governmental sector) and

¹⁵Local and regional budget is prepared according to *the Government Finance Statistics Manual 2001*, the latest in a series of international guidelines on statistical methodology that have been issued by the International Monetary Fund.

- grants (current and capital grants).

Expenditure structure is given by economic and functional classification.

Economic classification of local and regional budget expenditures consists of the following expense categories:

- compensation of employees,
- use of goods and services,
- consumption of fixed capital,
- interest,
- subsidies,
- grants (current and capital) and
- lending minus repayments.

Functional classification of local and regional budget expenditures consist of major function of local and regional government, as follows:

- general public services,
- public order and security affairs,
- educational affairs and services,
- health affairs and services,
- social security and social welfare affairs and services,
- housing and communal affairs and services,
- recreational, cultural, and religious activities,
- agriculture, forestry, hunting, and fishery affairs and services,
- mining and mineral extraction affairs and services, excluding fuel,
- transportation and communication activities and
- other economic activities and services.

Structure of local and regional level of government

The Central State Office for Administration is collecting the following data on structure of local and regional level of government:

- relevant data about counties,
- number of cities and municipalities in county,
- structure of government at county level,
- number of citizens by county,
- relevant data about cities and municipalities,
- structure of government at city and municipality level and
- number of citizens by city and municipality.

Regional Gross Domestic Product (RGDP) at county level

The CBS started the calculation of the GDP at the county level in the year 2001 and 2002. The GDP estimate for the local governmental level (counties and cities) is not included in the CBD research, considering that the demands set by the accession process in terms of the regulatory and statistical alignment with the EU do not require GDP estimates at a level lower than NUTS II and NUTS III.

Alternative sources of data

Data base of the Croatian Health Insurance Institute provides data on the number of insured persons, including the data on active insured persons or employees, their status (are they working in legal entity or as a natural person), their gender, and age structure. They also provide data on other population categories – this database was used when estimating total population number before the results of the population census were known.

Data are available on the level of the municipality, but on the residence principle which makes them more appropriate for estimating employment rate of the lower level territorial units (like counties and municipalities) than the employment data from CBS.

9. Summary of the strengths and weaknesses dealing with fiscal capacity and possible reform efforts

Defining the fiscal capacity and the manner of its estimation is the key to efficient system of transfers and grants avoiding the *ad hoc* decisions on the allocation of resources, which should be based on a sound projection of the fiscal capacity. Calculating the fiscal capacity is not an easy task, but one not impossible to accomplish. (Bajo, 1999)

In July 2001, Croatia initiated the application of the clear criteria in order to determine the transfers system from the state and municipality budget, as well as clear criteria to establish the equalisation grants from the state budget towards the municipalities and cities required for financing the decentralised public functions.

There is scope for improvements in the system of transfers and fiscal capacity measurements, and these can be found in the following:

- frequent changes to the number and size of local units result in non reliable data concerning the size of various tax forms, the assets of the local unit and the number and structure of local populace,
- constant increase of the number of local units, without serious consideration of the fiscal capacity has led to the situation where a considerable number of local units cannot cover their current expenditure, or secure the minimum level of public services provision,
- frequent changes to the criteria for fiscal equalisation and grant allocation has resulted in insufficient monitoring over a long enough time period, and consequently a thorough analysis of the accomplished results on the basis of predetermined criteria,
- non existence of a transparent database (mainly data concerning the various tax forms and their share in the total tax income, as well as the data concerning the non-taxable income) complicates the analysis of the real situation in the intergovernmental fiscal relations system,
- the slow rate of publishing the local and regional budgets¹⁶ leads to time delays in the solving of problems relating to the fiscal capacity calculation and the grants and transfers allocation,
- the instances of the financial surpluses in the local and regional budgets , as well as the absence of a comprehensive cause analysis indicates unsuitable solutions for the intergovernmental fiscal relations, as well as unsuitable fiscal capacity measure, and the corresponding grants and transfers system as the basis,
- in order to calculate the fiscal capacity, apart from the tax income data, other figures are required, namely: specific tax form data and its basis, other forms of taxation collected by regional and local levels and their comparison according to each tax form in relation to national average. Consequently, an estimate of the fiscal capacity is calculated, which can provide comparisons on the levels of usage of the various tax basis usage and the reasons behind the sub-average tax collection. On the basis of such analysis, it is possible to reach a relevant decision regarding the allocation of grants and transfers,
- continuous monitoring is required of the local and regional expenditure, in order to make the allocation of the grants and transfers have meaning, on the basis of the fiscal capacity and expenditure calculation.

¹⁶The Ministry of Finance publishes on its web pages the budgets of the counties, cities and municipalities, but with a several year delay. As of 2001, the Ministry does not publish the budgets of all 570 local units. For the fiscal years 2001, 2002 and 2003, the Ministry of Finance dispose with data for the budgets of 53 local and regional units (20 municipalities, the City of Zagreb and 32 large cities), forming about 70% of all sub-national budgets in Croatia.

The overall conclusion is that the comprehensive measurement of the fiscal capacity enables a suitable estimation of the fiscal capabilities and requirements for the finance of public service provision on the county, city and municipality level throughout the Republic of Croatia. Furthermore, it enables a wholesome and objective estimate, forming the basis of the decision concerning the allocation of grants and transfers as well as the efficient finance of the public services with minimal cost to the sub-national governmental level budgets.

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