Budapest University of Economic Sciences and Public Administration

THE PRACTICE OF MUNICIPAL INFRASTRUCTURE FINANCE IN HUNGARY

Modelling municipal investment activity

Dissertation

Izabella Barati Stec

Budapest, 2003.

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List of tables

List of figures

1 INTRODUCTION

Among the Central European transition economies, Hungary was one of the firsts to reform its municipal system, to introduce rules accelerating the decentralisation process. Since 1990 the state administration was decentralized leaving a great deal of autonomy to the local self-governments.

The Parliament guaranteed the independence of municipalities by several laws, among which the most important are the Constitution and Act LXV (1990) on local government. Based on these laws, municipalities have their own financial resources independent of centralised decisionmaking, they have the right to levy taxes, and they are free to decide on how this money is spent. The Act XXV (1996) on municipal bankruptcy regulates the processes to be followed in case a municipality is not able to meet its obligations. This law is still unique among the countries of the region.

In Hungary, the public and private sectors are no longer separate .Due to their increasing deficit caused by vanishing state subsidies and privatisation, municipalities have been forced to involve the private sector into their investments.

The biggest challenge of the coming years is whether municipalities will be able to meet the requirements set by the private sector, and whether the state can speed up the reforms that are still needed to make municipalities creditworthy.

The dissertation describes the structure of Hungarian municipal finance and the features of municipal investment activity in detail, gives a full picture of the revenue-raising possibilities, and also introduces the opinion of Hungarian and international researchers on the subject. It introduces a regression model that enables governmental decision-makers to assess municipal investment capability based on independent data, such as the amount of municipal loans, the size of the settlement, or the geographical location of the municipality.

The regression equation provides an efficient tool in investment policy, as its determinants show which variable has a greater effect on the value of investments. By using the results of the analysis it would be possible to customise investment-enhancing programs, thereby making them suitable for the characteristics of a specific region.

In Hungary, municipal investment has slowed, mainly due to financial reasons. As a consequence, the dissertation emphasises the financial side of investments. Based on Hungarian and international experience, we can expect an increase in outside financial resources in municipal investment, such as loans and private sector funding, as traditional financial resources, such as state subsidies and income from privatisation, are decreasing. In the dissertation I describe an institution that, by encouraging municipal credit market participation, would have a positive effect on investment activity.

The methods of research

Literature analysis

The background of the research includes studies written by researchers at

the Public Policy Department of the University of Economics and Public Administration, the outcomes of international projects such as the Subnational Development Program,[1] and international public policy literature from recent decades.

Data analysis

In 1995 the Social Research Institute (TARKI) started to develop a database on municipalities. It is based on a questionnaire sent out to each municipality every year. The average response rate has been about 35%. The data were weighed based on the municipal data of the Central Statistical Office (regional, settlement type and population) so that they represent the whole country. The first three questionnaires were almost identical and did not include questions about economic expectations. In 1999 and 2000 the revised questionnaires included questions about municipal budgets and economic expectations, making it possible to analyse the changes in the answers from one year to the next. Accordingly, this dissertation uses the data of 1999 and 2000, when the author also participated in designing the questionnaire and analysing the answers.

The questionnaires and the main characteristics of the municipalities that answered the questionnaires can be seen in Appendix I.

Modelling

Through factor and regression analysis I define which variables depend on each other and to what extent, and further, which variable has an effect on the independent variable, the municipality's rate of investment. The model makes it

[1] A collaboration of the Canadian Urban Institute, the World Bank, the British Know-How

possible to assess the future impact of governmental decision-making in the field of municipal investments. Municipal data has not been examined this way in Hungary before.

The hypotheses to be examined in the dissertation are as follows:

1. Municipal credit market behaviour depends on the size of its budget, its geographical location and the number of inhabitants.
2. Similar municipalities (same group, similar size, and same region) behave in a similar way when investing.
3. Loans play an important role in investments made by smaller municipalities, although their acceptance in the credit market is low.
4. Municipal investment behaviour is predictable if we know the municipality's location, its tax base, its borrowing, and its budget.

Fund, and the Open Society Institute.

2 THE HUNGARIAN MUNICIPAL SYSTEM

2.1 The structure of the municipal system

Act LXV (1990) on local governments created a new form of public administration, the essence of which is that the population of each municipality has the right to form a local self-government and to elect representatives empowered to make decisions independently from the central authorities.

Hungary abandoned municipal hierarchy and vertical integrity of settlements, a practice of the previous political era, when bigger municipalities had greater rights and more political power, and upper tiers of the hierarchy were responsible over lower tiers.

Like other post-socialist states, Hungary took the first steps towards creating a democratic administrative system, and moved from a centrally planned economy towards a market economy (Jenei, [2000]).

Local self-government

Under the new administrative system, all municipalities have the same basic rights. The obligations and rights of municipalities are regulated in the Act on local governments. The act makes it possible for a municipality to take over tasks from a higher tier, if the municipality is able to do so without adversely affecting the carrying out of its obligations.

We see two exceptions in the system of „equal municipalities" -- one is the

status of cities with county rights, and the other is Budapest, the capital.

The county capitals and cities with a population of over 50000 people may take over county responsibilities.

The Act on local governments deals with the responsibilities of Budapest in a separate chapter, due to its special status.

The county level

We can distinguish among three organs at the county level: the county government, the county administrative office, and special administrative bodies.

The county governments have little power compared to their situation before 1990. They are responsible for tasks that can only be carried out at a higher level than municipalities, and even in those cases, the municipality can take these tasks over, if it has the necessary capacity. It is important to note that the county government can not raise revenues on its own.

The county administrative office represents the central government at the county level. It consists of the regional offices of the ministries, and its task is to carry out regional administrative tasks (for example the tax offices).

The special administrative bodies, such as the labour office or the regional development councils, also carry out administrative tasks. The difference is that these tasks also require the co-operation of the non-governmental sector.

2.2 Size of municipalities, economies of scale

Hungarian municipalities – with an average population of 4000 -- are smaller than municipalities in most OECD countries, although we can find even more fragmented systems in France and Switzerland. When talking about the size of municipalities, we have to add what responsibilities a particularly sized municipality has to fulfil.

If we consider both, we can say that Hungarian municipalities have greater responsibilities than other municipalities of the same size in the OECD countries. This raises the question of economies of scale.

Many small settlements, although obliged to collect and treat waste water and garbage, are not able to fulfil such responsibilities and are not able to carry out the necessary investments on their own.

The literature suggests three possible solutions for this problem. One is encouraging the formation of associations of municipalities. The second is creating notary districts, and the third is the amalgamation of municipalities.

2.2.1 Municipal association versus amalgamation

The joint establishment of municipal associations is a well-known idea and practice for Hungarian municipalities. When certain tasks are carried out for larger numbers of people, the per capita cost decreases. This is typically true for services where the constant costs are high, such as garbage and sewage treatment and gas investments.

In many countries with fragmented municipal systems, in order to reach economies of scale, municipalities are obliged to carry out tasks together or to form associations.

Table 1. illustrates the average population of municipalities in the EU countries.

The increase in the number of inhabitants not only decreases the average cost of a service, but has advantages in other areas of municipal management as well, such as by decreasing the administrative cost of the municipality. Smaller municipalities normally operate with higher administrative costs per capita, which, as the number of inhabitants increases, decrease faster than other costs (for example the cost of control) increase.

Table 1. Population data of municipalities in the EU countries

	Number of municipalities	Average population	Number of municipalities before amalgamation	Rate of decrease
Austria	2 301	3 400	3 500 (1970)	34 %
Belgium	589	17 200		
Denmark[2]	275	19 100	1 391	80%
Finland	455	11,200		
France	36,559	1,600		
Greece	5,922	1,800		
Holland	636	27,000	1,050 (1950)	39%
Ireland	*			
Luxembourg	118	3,400		
Great Britain	*			
Germany	16,121	5,000		
Germany	8512		24,000 (1965)	65%

[2] In Denmark, for example, the principal criterion when creating the municipal and county levels was the optimal size of units for efficiently providing services, such as education and healthcare.

(Laender)				
Italy	8,104	7,000		
Portugal	275	34,200		
Spain	8,082	4,800		
Sweden	288	30,900	2,500 (1950)	88%

* As the different tiers overlap each other, the calculation of this data is not possible

Source: DEXIA – Credit local de France – Credit local de Belgium. [1999]: Local Finance in the Fifteen Countries of the European Union. DEXIA. Belgium. pp. 26 - 29.

Forced amalgamation, of course, also has negative effects.

One disadvantage of increasing the size of municipalities is that citizens are further removed from decision making, meaning that their possibility of influencing it decreases. This argument was frequently used by politicians against the practice of amalgamation.

In Hungary, the strongest impediment against forced amalgamation is the bad memory of the council system. Forced co-operation among municipalities deprived small villages of services such as elementary education.

Although creating bigger units often means reaching economies of scale, creating big units might have the negative effect of over-using a service. This is summarised by the spillover effect. If a service is used by more than the optimal number, the quality of the service decreases. Typical examples are education and healthcare.

Finally, the more people using a service, the more difficult it is to satisfy personal requirements, which is the opposite of the idea of the „customer driven

municipality". The quality of a service is better, the closer it is to the customer.[3]

2.2.2 Types of municipal associations

In Hungary, forced amalgamation could not come into practice because of the historical background of the municipalities, but since 1994 it has been possible to create free municipal associations for special purposes. These municipal associations are favoured by the state subsidy system, such that a municipality that is a member of an association will receive more money towards carrying out a particular task than it would receive if it did not belong to an association.

The following types of associations exist:

- The most common form of association occurs when the representative body of a municipality agrees with another municipality that an office of the latter will perform tasks or services for it. The contract between the two municipalities must be very detailed, especially about the sharing of costs.
- Two or more municipalities can agree that the institution of one can act on behalf of the others. This form of co-operation is much stronger than the one above, because one institution represents common interests, and each of the other municipalities must transfer some of its rights to the acting one.

[3] Huther and Shah (1998) created an index for measuring "good governance". Countries with a result below 40 points have "bad governance", while those above 50 points have good governanace. Switzerland received 75 points, Hungary received 54 points. (Huther and Shah, 1998. pp 7.)

- Two or more municipalities may decide to create a common decision-making body, to co-manage an institution, or to employ people commonly. The main difference between this and the previous ones is that in this case, the rights do not belong to one member of the association, but to an institution, office, etc. created for the specific purpose.

- Two or more municipalities can form an association with independent legal personality that is therefore able to take on obligations in its own name (not through the members) and raise its own revenues (not only funded through transfers from the members). Apart from a co-operation agreement, this form also requires a founding charter.

- Local government associations can have regular working relations with other local government associations or legal entities. These relations can take many forms, as laws do not regulate them.

  Since 1996, according to Act XXI (1996) on regional development, municipalities can create regional development associations in order to co-ordinate their development plans or to establish shared funds for development purposes.

The central government's tool for encouraging municipal associations is not to give them direct subsidies, but to threaten them with less if they are not associated with one. If the number of recipients of a particular service does not reach a level set by the government, the municipality is not eligible for a subsidy.

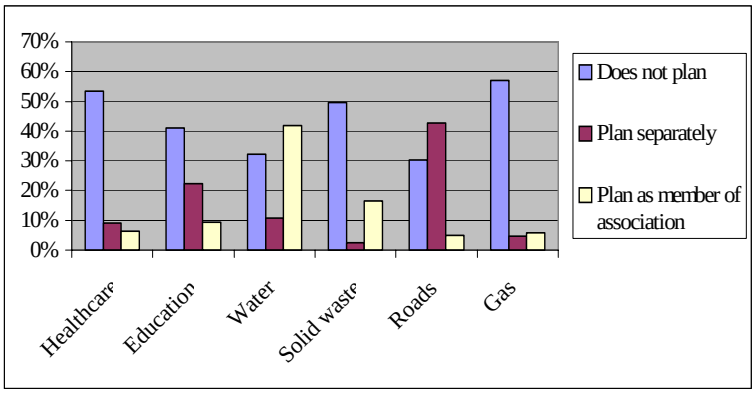
Municipalities can be members of more than one association, if their

responsibilities require. Of course, these multiple member associations are more complicated to administer, which is one impediment to their establishment.

The questionnaire sent to the municipalities by TARKI in 2000 contained questions about why local governments form associations. Fifty-two percent of municipalities said that their main reason to form an association was the lower management and operating cost of services. Seventy percent of them said that the reason was that investment costs are lower, and for 76% of municipalities, the most important reason for forming associations was the higher success rate at subsidy applications. It seems that although municipalities realised that carrying out responsibilities together with other municipalities means rationalising long-term costs, their main incentive to co-operate is minimising starting investment costs.

Figure 1. illustrates that investments with high starting costs are typically carried out by associations.

Figure 1. Municipalities making investment plans in 2000 as a percentage of all municipalities



Source: Izabella Barati. [2000]: Municipal data in 2000. TÁRKI. Budapest. pp. 14.

2.2.3 Notary districts

Currently, there are 593 notary districts in Hungary, established by 1003 municipalities. According to paragraph 39 of the Act on local governments:

- Neighbouring municipalities with less that one thousand inhabitants can create notary districts for the purpose of fulfilling their administrative responsibilities. A municipality's share of the costs of such a district is in proportion to the number of its inhabitants unless agreed otherwise.
- Municipalities with fewer than one thousand inhabitants may maintain independent administrative offices if they are able to appoint a notary meeting the qualification requirements set by law.

The reason to create notary districts is to effectively fulfil administrative responsibilities.

The higher the number of inhabitants within a notary district, the higher the amount of central government subsidies.

2.2.4 The legal status of municipal associations

When talking about municipal associations, a question to be discussed is their legal status, that is, whether they are a body of municipalities, or they represent a new governmental tier.

If we accept the first version, i. e. that they are bodies of municipalities, (functional regionalism (Péteri - Davey, [1998])), then the financing mechanisms are not properly regulated. Their right of levying taxes is questionable, and they

can get central subsidies only through their members. (The member municipality applies for it and then transfers the money to the association.) This point is crucial when applying for investment loans. Without a steady revenue source such associations are not creditworthy.

The other possibility is to view them as a separate, formal governmental tier. It could follow the old territorial structure (county, smaller units), but could also be a new level, independent from the old structure.

Table 2 summarises the positive sides of the two alternatives.

Table 2. The advantages of forms of regionalization

Functional regionalism	Formal governmental tier
More flexible system	Equality
Individual needs ⇒	Equal treatment of needs
„competition" is strong	No exemptions
More suitable for Hungarian traditions (citizens' participation)	Could be a tool for macro-stabilisation
	Enhanced administrative effectiveness

Source: Kopányi et al. [2001]: Hungary. Modernising the Subnational Government System. The World Bank. 417. Discussion paper. Washington, DC pp 5.

2.2.5 The future role of municipal associations

Given that the EU favours bigger units to smaller ones through its subsidy policy, the role of Hungarian municipal associations might change in the future. In EU practice, municipal associations are not rare; municipalities are often obliged to co-operate or – as we saw in Table 1 - even amalgamate.

In the American practice, „associations" can levy taxes, which, if possible

in Hungary, would be one more incentive for creating associations.

Although associations will not levy taxes in the near future, they can issue bonds for financing common investments.[4] The repayment of the loan would be secured by the revenue stream generated by the investment (revenue bond).

[4] According to Hungarian laws, municipalities actually can levy taxes, if they create a common representative body, and transfer their tax-levying right to it. If municipalities would accept this practice, it would radically change the financing methods of investments, and would increase the use of loan types, such as general obligation bonds. Chapter VI deals with the different bond types in detail.

3 DELEGATING AND FINANCING MUNICIPAL TASKS

Among municipal systems, we can differentiate between Nordic and southern type systems. The Nordic type describes bigger municipalities with more responsibilities, while the southern type describes smaller municipalities with fewer responsibilities. The Hungarian system does not fit either category, as according to the municipality size it is closer to the southern, but according to the municipal responsibilities, it is closer to the Nordic type system.

One way of measuring the decentralisation of a country is to look at what level is responsible for what kind of services.

According to Musgrave (1984) there are three main types of public services -- allocation, redistribution and stabilisation -- the latter two of which are better kept at the central level.

Municipal systems with small autonomous municipalities face the specific problem of the transboundary effects of services. This problem exists in Hungary. It means that the effect of a public service in one municipality may be a negative or positive externality for another settlement, which did not ask for the effect, did not pay for it, or was not compensated for the harm caused by it.

These are called spillover effects. In order to minimise these effects, services should be delegated to the lowest level that is able to manage it, and where most affected people can express their wishes. (Huther- Shah [1998] pp. 10., Shah [1994].) This is also expressed by the subsidiarity principle.

There are three forms of dividing tasks between the levels of government.

- Pure separation means the lower level fulfils its responsibilities independently from the higher ones, and has discretional decision-making rights that the state has no control over.
- Shared responsibility is when the upper and lower tiers co-operate when carrying out certain tasks.
- Official relationship is when the lower tier is obliged to carry out programs supervised and designed by the upper tiers.

In Hungary, the responsibility for most functions is shared among the governmental tiers, and when delegating tasks to the lower levels, the subsidiarity principal is taken into account.

As a consequence, the county is only responsible for tasks that satisfy the needs of more than one settlement, but at the same time, if a settlement is able to provide the service, it can take it over from the county.

The potential hazard of this practice is that the county is often left with the most expensive tasks to carry out, such as maintaining hospitals. In the light of the fact that the revenue raising capacity of the county is limited, this problem requires special attention from the central government.

3.1 Settlement and regional development, as a complex municipal task

Settlement development means investments that have major importance to the lives of the inhabitants of a particular settlement. Settlement development is

one layer of regional development, one element of the system.

Settlement development itself is a complex system if we take into account the complexity of tasks to be carried out, as it comprises the simultaneous solution of environmental, technical, and economic problems. In the municipal documentation it is represented by the following:

- The municipality has a long term (3-5-10 years) development plan;
- The investment plan matches the financial and loan raising plans;
- The technical parameters in the technical development plan and the land use plan are in accordance with the above plans. (Horváth M. – Szirmai [2000], McAully [1999]).

Another layer of this complexity is represented by the number of actors needed in settlement development. The development process requires the involvement of a growing number of actors from the private and non-governmental sector, and the involvement of churches in services. This process can be "caught" in the continuous increase of the amount of budget line "subsidies and other transfers", as this amount is for covering the work done by them.

The different forms of private sector involvement in public services are dealt with in detail in chapter IV.

The third element of complexity is that these layers must be built upon each other. The municipal, county and state development plans must be in accordance with each other. In order to reach this "harmony", and avoid conflicting plans, the state uses a very sophisticated co-ordinating and subsidy system. (Horváth M. - Szirmai [2000], Csefkó [2000])

3.1.1 The institutions of regional development

As a consequence of history, transport development, and different natural environment the differences among the regions in Hungary are great, despite the small size of the country. Budapest has always been far ahead of the “rural areas”, which became a serious problem after World War I, when a great part of the territory, and so the regional centres, were cut off from the country.

In different density of population, we can catch the remnants of the Turkish era in Hungary. In the territory not occupied by the Turks – South-Trans- Danube and the northern and eastern part of the Great Plain – the population of villages is below 1000, but villages are close to each other, while on the Great Plain, the population of villages is typically between 5-10,000, and villages are far from each other.

The differences in the size of the settlements have determined the future development of regions ever since.

After 1945 the small villages, being at the bottom of the settlement-hierarchy, were deprived from development funds.

Central development plans only considered sectoral, industrial perspectives, while regional differences were ignored. In 1971, the “National Settlement Development Concept and Regional Development Principles” ended this practice, but they still did not solve the problem of the already declining regions. It was a town development concept, supposing that towns, as centres of development, will have a positive effect on their rural surroundings.

As a consequence, the biggest challenge of settlement and regional development is still the treatment of regional interrelations.

Settlements can form regional development associations (talked about in detail in chapter II), the purpose of which is to create common funds, co-ordinated programs, etc. Regional development municipal associations are represented by one appointed member in the county regional development councils.

County regional development councils were formed in 1996. These are special bodies working at the county level, with the purpose of representing national regional development goals and co-ordinating the different county development plans.

The set-up of the county regional development councils illustrates that regional development is not only the responsibility of the state, but requires the co-ordination of several actors.

Members of the county regional development council include:

- The chairman of the county government assembly;
- The mayors of the cities with delegated county rights;
- Representative of the Minister of Environment;
- Representatives of chambers of commerce from the county;
- Representatives of the municipal regional development associations from the county (one for each statistical micro region in the county);
- Representatives of the labour council from the county (one for the employer and one for the employee side).

The county regional development council reviews each micro region's development plan. Of course, there is no hierarchical relationship among the plans,

but those not matching the county's preferences will not receive county funds.

The next level of development is the level of the regions. Two or more county regional development councils can establish a regional regional development council in order to treat problems that require larger capacities than exist in a single county.

Creating regional regional development councils is not obligatory, except for the Budapest and the Balaton regions, but a good reason for creating them is that these units will receive the highest subsidies from the European Structural and Cohesion Funds (Beluszky [2000]).

The Hungarian regions are illustrated in figure 2.

Figure 2. Regions and counties in Hungary

Source: www.ksh.hu, the homepage of the Central Statistical Office

3.2 Financial sources for fulfilling responsibilities

When decisions are made about financial questions - such as which governmental level collects what kinds of revenues, which ones of them will be earmarked and which ones will not, to what level they will be redistributed, etc. -- the efficiency of the system is also determined.

It is generally true that the higher the local income (fees and taxes) in the municipal budget, the more responsibilities are delegated to the local level, and vice versa.

The Hungarian system on this point is controversial, because a wide range of services is delegated to the local level with a relatively low income.

The Hungarian Constitution and the Act on local governments also contain provisions on the financial resources that the state should provide when delegating a service to the local level. As the two laws do not use the same wording, it is possible to use each of them to support certain arguments. According to the Constitution, the state should provide the “necessary” funding, while according to the Act on local governments, the state should provide the “sufficient” financial sources with the delegated service.

In my understanding, the state should provide the possibility and capacity for the municipality to raise local revenues for a specific service, e.g., through taxes and fees, but should not guarantee the revenue itself. So the state does not have to finance a local service up to 100%, but has to enable the municipality to raise funds

for it. This is in accordance with the European Charter on Local Self-Government[5],

and this is the rule in most developed countries.

3.2.1 Local revenues versus state transfers

Public finance literature agrees on two reasons for increasing the proportion of the municipal budget raised through its own revenue. One is the “fiscal”, the other is the “accountability” argument. (Bahl, [2000]).

I. The first reasons that central governments facing tight budget constraints, in order to solve their own deficit problems, will decrease the amount of transfers to the local level. The decrease in the transfers increases the local deficit, which can be solved by raising local income. If a municipality has local revenue sources, it is less vulnerable against changes in the central transfer policy. A typical action of a government that faces a deficit is to decrease transfers, rather than to take over the collection of local taxes. Moreover, where there are shared taxes, the state is likely to increase those taxes that it does not have to share with the local level.

II. The accountancy argument refers to the transparency of the way the budget is spent. Local investments are financed from taxes that constituents pay directly or indirectly into the local budget. If constituents pay the money into the central budget, its route is difficult to follow, but if they pay it into the local budget, the local representatives are directly accountable. The higher the share of money paid into the local budget, the more power the taxpayer wants to exercise over local decision making.

The following can be added as a third argument:

III. When a municipality increases its local revenues, it also raises its fiscal capacities, as it will possess discretional revenue and will become independent from central decisions. This has a positive effect on the municipality's credit rating, making other revenue sources, such as loans, available.

3.3 The Hungarian municipalities' own revenues [6]

The municipalities' own revenues, based on accounting rules and economic principles, can be further divided into current operational revenues and investment revenues.

Current operational revenues are as follows:

1. Revenues of municipal institutions,
2. Rental fees,
3. Revenue from interest,
4. Business income,
5. Local taxes and duties,
6. Environmental and monument protection fines.

Investment revenues are:

1. The income from selling buildings and other property,
2. The income from municipal investments

3. The income from selling shares and bonds,
4. The income from financial investments
5. The income from selling flats,
6. Privatisation revenue,
7. Income from selling other property rights. (Dr. Schimdt – Kadók – Herneczky [1996]).

A general rule is that current expenses cannot be financed from investment income because this would lead to using up the municipality's property.

3.4 Local tax system

3.4.1 The parameters for evaluating the local tax system

When designing a local tax system, several questions must be answered to help in choosing among the possibilities, e. g., how broad the discretion of the settlements should be, what the historical background for implementing a special tax is, etc.

There are five parameters based on which we can compare, and choose among, local taxes[7].

1) Efficiency.

An efficient tax will have no effect on economic decisions. A tax cannot be 100 % efficient, but the goal should be that the tax will have the least

possible distortion on the price of the services and goods, and will have the least possible impact on the amount consumed.[8]

2) Fairness.

One can speak about horizontal or vertical equalisation. The first means that people in the same situation pay the same tax. Vertical equity is very difficult to achieve. This latter means that the better-off are taxed more heavily than the worse-off. This can be reached by very complicated redistributive, equalisation systems.

3) The cost of tax administration.

This cost should not be higher than the benefit deriving from its collection. Each tax imposes extra costs on their payers by the necessary audits, accounting, record-keeping, billing, collection, enforcement, etc.) These costs should be minimised.

4) The possibility of tax competition.

When a tax is levied on a mobile base, taxpayers will have an incentive to move to a settlement with a lower tax rate. This is a “catch 22”, because the municipality is left without a tax base, and the municipality that attracted the taxpayer with the lower rate will not be able to raise taxes because it would lose its attractiveness. This process will go on until the average tax rate is so low that it is not even efficient to collect it. (The administration costs will be high compared to the benefits.)

5) The possibility of exporting the tax.

When a municipality has the possibility of taxing non-residents, it will do so. This happens when a municipality taxes those activities that are able to

pass the tax to consumers from other jurisdictions.

3.4.2 Local taxes in Hungary

In 1991, the new local tax law came into force (Act C of 1990 On local taxes), and it has been amended by the Parliament almost every year since. According to the law, local governments have discretion to decide if they want to levy local taxes or not, and at what rate.

The Act on local taxes describes the tax types (the objects and payers of the tax) and the maximum level of tax a municipality can levy.

Local decrees about taxation must contain provisions about the following issues: (i) who is the taxpayer, (ii) what is the basis of the tax, (iii) exemptions, (iv) the rate of the tax, (v) the conditions of beginning and ending tax obligations.

Finally, local taxes in Hungary should be evaluated according to the above criteria.

In Hungary there are three main local taxes[9] -- the business turnover tax, the communal tax and the property tax. The personal income tax is not a real local tax, it is a shared tax, but it is a good example to illustrate how a municipality can become defenceless against central decisions if the right of setting rates and shares is at the central level.

1. *The business turnover tax.* The base of the business turnover tax is mobile, and as a consequence it can be "exported" into other settlements where the tax rate is lower, thus inducing tax competition. This tax fails

almost every criterion mentioned above. Besides being exportable and inducing tax competition, it has a negative impact on economic activity, distorts prices and is sensitive to economic cycles. It is often transferred to the consumers of the product of the taxed business, making them pay indirectly for the improvements that only a small circle of the consumers enjoy (those living where the company pays the tax). It also has a very negative psychological effect -- taxpayers often feel that it is a kind of a "punishment", although they are the ones bringing work possibilities into the settlements[10]. It is also not independent from the changes of the central government's economic policy.

2. *The communal tax.* The Hungarian Communal Tax is a head tax (levied on a per capita base, a typical form of lump-sum tax). Although 60% of municipalities have introduced it, the communal tax income represents only 2% of municipal budgets. The local public finance literature often treats this tax as the appropriate form for internalising the congestion costs that residents impose on each other. However it is very regressive.

3. *The tax on improvements on real estate*

   This tax is paid by owners of buildings. The basis of the tax is either the market value or the area (size) of the property, as defined in the municipal decree. Based on the experiences of the developed world, the "ideal" local tax is the property tax. It is not exportable, is not sensitive to economic cycles, and is best administered by the local government since it requires identification of each parcel of land, improvement, and change in ownership. This is the tax that produces the most stable income for the municipality, which has a very positive impact on

improving creditworthiness. But it has some disadvantages as well. For example the valuation of property is not an exact science but an art (Bird, 1999). It is very unpopular being the only tax the taxpayers directly face.

3.5 Fees for services

Unlike user fees, taxes are mandatory levies that are not directly linked to specific services. Rather, they serve redistributive purposes.

User fees are linked to specific services, and they can be narrowly defined as charges levied on consumers of goods and services. Public finance literature suggests that they should be used as broadly as possible, although their use has some practical constraints. (Barati – Szalai [1999]).

1.) *They are rarely efficient.*

Efficiency means that they are equal to the real marginal cost, which is extremely difficult to define. The opportunity cost[11] and the social cost of an activity should be considered when deciding the charge levied on consumers.

2.) *Positive side effects.*

When an activity has positive side effects (positive externality), local governments like to subsidise this activity in order to encourage it.

3.) *Non-excludable public services.*

There are many non-excludable public services, that is, those that the non-payers cannot be excluded from the use of. In these cases, financing from taxes is more adequate than financing from fees.

3.6 Transfers from the central government

3.6.1 Grants and normatives

The literature of decentralisation pays a lot of attention to the question of intergovernmental grants, the main reason being that the aim of transfers is to create a balance between the different regions' incomes and expenditures, as municipal responsibilities have to be fulfilled everywhere. The main question is whether it is possible to design a grants system that strikes a balance between the expenditure needs and the allocation of revenues.

The main forms of grants are (i) unconditional (general) grants, (ii) conditional non-matching grants and (iii) matching grants.

I. Unconditional (general) grants. The central government supports the municipality without any condition concerning the use of the grant. This type of transfer gives the most autonomy to municipalities, and is most in accordance with Article 9 of the European Charter on Local Self-Government.

The European Charter of Local Self Governments **Article 9**

1 Local authorities shall be entitled, within national economic policy, to adequate financial resources of their own, of which they may dispose freely within the framework of their powers.

2 Local authorities' financial resources shall be commensurate with the responsibilities provided for by the constitution and the law.

3 Part at least of the financial resources of local authorities shall derive from local taxes and charges of which, within the limits of statute, they have the power to determine the rate.

4 The financial systems on which resources available to local authorities are based shall be of a sufficiently diversified and buoyant nature to enable them to keep pace as far as practically possible with the real evolution of the cost of carrying out their tasks.

5 The protection of financially weaker local authorities calls for the institution of financial equalisation procedures or equivalent measures which are designed to correct the effects of the unequal distribution of potential sources of finance and of the financial burden they must support. Such procedures or measures shall not diminish the discretion local authorities may exercise within their own sphere of responsibility.

6 Local authorities shall be consulted, in an appropriate manner, on the way in which redistributed resources are to be allocated to them.

7 As far as possible, grants to local authorities shall not be earmarked for the financing of specific projects. The provision of grants shall not remove the basic freedom of local authorities to exercise policy discretion within their own jurisdiction.

8 For the purpose of borrowing for capital investment, local authorities shall have access to the national capital market within the limits of the law.

II. Conditional non-matching grants. This is an earmarked grant; the municipality can only use it for specific purposes. Its effect is smaller than the central government often expects due to substitution mechanisms - the expenditures that the municipality used for that

purpose before the grant become free to be spent on another program. The municipality can reduce its efforts in the area of grants. This type of transfer is the most appropriate method for local governments to meet national standards regardless of their revenue capacity.

III. Matching grants. Sub-national governments are required to contribute to a subsidised program. A typical form of matching grants is partial cost reimbursement, which can be a very effective tool convenient to the central government as it can direct municipal spending by lowering the local „price" of services.

Table 3 summarises the different grant types.

Table 3. Grant types and their objectives

Grant Objective	Grant Design	Better Practices	Practices to avoid
Bridge fiscal gap	Reassign responsibilities Tax abatement Tax base sharing	Tax abatement in Canada and tax base sharing in Canada, Brazil and Pakistan	Deficit grants, Tax by tax sharing as In India
Reduce regional fiscal disparities	General Non-matching Fiscal capacity equalisation transfers	Fiscal equalisation programs of Australia, Canada and Germany	General revenue sharing with multiple factors
Compensate for benefit spillovers	Open-ended matching transfers with matching rate consistent with spillout of benefits	RSA grant for teaching hospitals	
Setting national minimum standards	Conditional non-matching block transfers with conditions on standards of service and access	Indonesia roads and primary education grants, Colombia and Chile education transfers	Conditional transfers with conditions on spending alone Ad hoc grants
Influencing local priorities in areas of high national but low local priority	Open-ended matching transfers (with preferably matching rate to vary inversely with fiscal capacity)	Matching transfers for social assistance as in Canada	Ad hoc grants
Stabilisation	capital grants provided	Limit use of capital	Stabilisation grants

	maintenance possible	grants and encourage private sector participation by providing political and policy risk guarantee	with no future upkeep requirements

Source: Shah [1994], Shah [1998], Boadway, Roberts and Shah [1994 pp. 11-24.]

3.6.2 The current Hungarian grant system

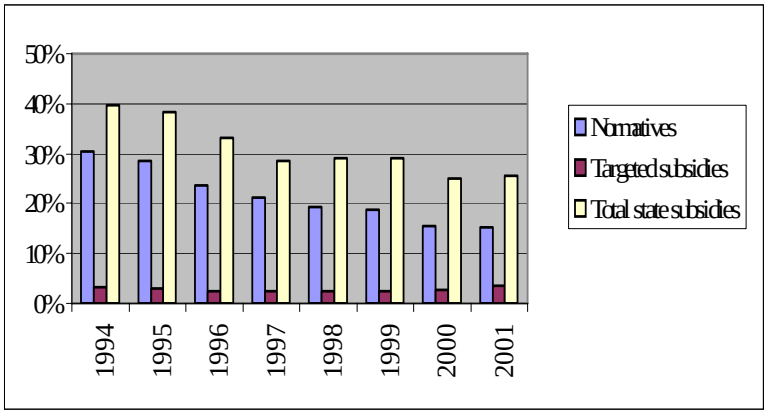
Municipal income consists of a municipality's own revenues, shared taxes and central subsidies. In Hungary, the most important revenues coming from the central level are the targeted grants, the purpose of which is to direct investment sources into areas preferred by the central government.

This chapter discusses mostly the central subsidies for investment purposes, but before going into detail, it is worth having a look at some data that describe the relationship between the central and the local budget, and help to draw final conclusions.

The Hungarian municipal sector represents 12% of the state budget, which is equal to the figure in the Scandinavian countries. The difference is that Scandinavian municipalities have much more freedom when deciding about the spending of this money than their Hungarian counterparts, showing the greater degree of decentralisation of the Scandinavian states.

If we look at the other side of the picture -- the share of centrally distributed money in local budgets -- we see that these subsidies represent a continuously decreasing share of the budget (Figure 3.)

Figure 3. The share of centrally distributed money in the local budget between 1994 and 2001.



Source: Ministry of Finance in Hungary. Department of Local Governments and Regional Development [2003.]

As we see, the last decade can be characterised by the decrease of central subsidies, especially the decrease of the normative grants, that are for financing current expenditures. For calculating the sum of the normative grant, we need an indicator and a per unit cost element. The cost elements are the same for every municipality. The indicators usually reflect the "load" measurement, e. g., number of children in school, that is a characteristic of the municipality.

The "other transfers" can be used for investment purposes. If the municipality does not spend the whole amount, it has to pay the remainder back into the state budget.

3.6.3 Investment subsidies

There are three kinds of investment subsidies in Hungary. These are (i) targeted subsidies, (ii) decentralized subsidies and (iii) subsidies for regional

equalisation.

3.6.3.1 Targeted subsidies

Targeted grants are given for large investments satisfying regional needs with an investment cost above 200 million HUF. Municipalities with investments that correspond to priority goals set by the Parliament automatically receive this grant.

The investment grant is a tool for the central government to influence municipal plans. Sometimes it is viewed as a negative thing, but it also has positive effects. Regional investments should be done in a rational way, and the central level can set the development plans for the regions by choosing the targets of the subsidy in a way that corresponds to the technical phases of multi-year programs.[12]

Furthermore, if a municipality applies for international grants, it will probably be more successful if the national government also support its plans with the targeted grants.

3.6.3.2 Decentralized targeted grants

Decentralized targeted grants are similar to targeted grants, but they appear in the sectoral ministries' budgets. Municipalities have to apply for these grants at the County Regional Development Centres. The purpose of these grants is to develop rural areas, create jobs and diminish the differences in regional development. One criteria when evaluating applications for these grants is whether the proposal helps to fulfil accession requirements and whether the program fits into the county regional development concept.

3.6.3.3 Development grants for regional equalisation

Municipalities can apply for these grants for human and infrastructure investments. Their purpose is to develop the infrastructure of underdeveloped regions with a high unemployment rate.

The committees managing the different grants co-operate with each other[13]. This means that if a municipality applies for several grants for the same investment, it is enough to submit the application once, to the place from which it is applying for the highest amount.

According to the TARKI database for 2000, about 80% of municipalities expected that in the future it would be more difficult to access grant money.

4 THE INVESTMENTS AND THEIR FINANCING

4.1 The investments to be made

It is without question that investment costs of the Hungarian government sector will grow in the coming years, especially in the environmental sector.

There is a big gap between the environmental and infrastructural situations of the current and future member countries of the European Union. In order to reduce this gap, according to the co-operation agreement with the EU, Hungary has to improve its infrastructural and environmental situation. According to conservative calculations, in the environmental sector alone some 6,8-7,6 billion euros will have to be spent in order to solve the problems (Kerekes – Kiss [1998] pp 23.).

On the other hand, it is not only the EU that urges these improvements. They are necessary in order to avoid future environmental problems, and the level of services is not sustainable with the current physical infrastructure. The decentralisation process also pushes local governments to make these developments.

The different sectors face the following challenges:

In the water and sewage sector, due to the continuous underdevelopment of the past, decaying pipes are causing most of the problems. Sewage collection and treatment are also in bad shape, such that especially in small municipalities we can expect big investments. Illegal sewage disposal also causes many problems.

It was typical that prices were continuously set under the costs of the service, which led to over-consumption, and to a decrease in the efficiency of the service. As this service was delegated to the local level, market principles did not gain much attention until now. Including the private sector into the sewage and water sector would diminish a part of the problems cited above, as rates would slowly reach market levels. The next problematic area is garbage collection and treatment, where we can find problems similar to those of the water and sewage service. The underdevelopment of the past caused serious water and soil contamination, which raises health problems. The hazardous wastes of industrial firms cause special problems. Garbage dumps are becoming full and opening new ones has proven to be a political decision because of the opposition of citizens. Most of the money in this sector will be spent on modernising and building new dumps.

The next problematic area is district heating. The current measuring system is too old, and does not provide an incentive to consume less. The improvements in this area will mainly be changing the metering system and modernising heat generators.

If the above investments would not take place now, they would be even more costly in the future due to the spiralling effects of deterioration.

4.2 Possible financing sources

When talking about investment financing sources, the first one that financial officers usually think of is the “cheapest” one -- the central or regional subsidy.

Next is the municipality's own revenues that are available in the budget (income from privatisation), then subsidised loans, and finally, market loans. The involvement of the public sector as partners in financing is also more frequent.

4.2.1 State grants

The different types of investment grants are the targeted grants, the targeted decentralized grants, and the grants for regional equalisation, the ones that we dealt with in detail in chapter IV. The purpose of these grants is to enhance municipal investment activity and direct investment money into the areas preferred by the government. In the last ten years, central subsidies covered approximately 50% of municipal investment expenditures.

4.2.2 Revenues from privatisation

The other 50% of municipal investments were covered by the income from privatisation. Its importance as a financial source has considerably decreased, as municipalities do not have many more sellable goods.

Since 1990, much research dealt with the topic of privatisation of municipal companies. The importance of the topic is shown by the changes that have taken place in many countries, making empirical research possible. The interesting fact about this empirical research is that it contradicts the theories of the 1980's, and found that if a municipal company was sold, it was not the fact of privatisation that made it more efficient, but rather it was the new competitive environment that applied to all service providers (Millward, [1982], Wortzel – Wortzel, [1989]).

According to Claessens and Djankov [1998], however, the picture is even more complicated. If privatisation, deregulation and stabilisation all take place at

the same time, it will increase efficiency, as politicians' power over soft loans decreases. But in the absence of stabilisation, corruption remains, making these companies less efficient than they were before privatisation, as in the new situation reaching the same level of "profit" takes more time and energy (Claessens and Djankov, [1998] pp. 7.)

4.3 Subsidies from the European Union

4.3.1 Pre-Accession Programs

Pre-accession countries can expect money from the European Union in order to bring their infrastructure levels closer to the EU standard. A priority area of grants is the area of environmental investments. In this chapter we deal with the EU funds and their criteria.

The EU promotes accession by giving loans and grants. The main channel for the loans is the European Investment Bank (EIB), and the main channel of grants is the **PHARE** program, to which in 2000 two new programs were added, the SAPARD **(S**pecial **A**ccession **P**rogramme for **A**griculture and **R**ural **D**evelopment) and ISPA (L**'I**nstrument **S**tructurel de **P**re-**A**dhésion) programs.

The regulation of the grant system of the European Union is very complicated. The projects at least partially financed from EU funds must be sustainable and cover a region. They usually involve the co-operation of several partner local governments, sometimes the whole country.

Another important criterion is that they have to comply with the EU rules,

must involve co-financing from other sources, and the partners must be chosen through a public procurement process. The accounting of the project must be done according to the accounting standards of the Union, and interim reports should be prepared several times during the realisation of the project. The applicant must communicate in one of the official languages of the EU.

Between 2000 and 2006 approximately 1 billion ECU will be spent on the development of the environmental infrastructure and transport system of the accession countries (EBRD [1999]).

Currently the **PHARE** programme is the main channel for EU grants. Originally, the EU planned to distribute 4,2 billion ECU during the period 1990-1999, but the amount between 1995-1999 only surpassed 6,7 billion ECU.

The kinds of projects financed from PHARE grants change according to the progress in eligible countries. While at the beginning of the PHARE programme's operation the development of the legal system was the top priority, later infrastructure development, especially involving more than one country, took over the top place. Accordingly, the main areas of subsidy today are projects related to the environment, transport and job creation.

The ISPA programme is planned to last between 2000 – 2006. Its main target is to raise the level of infrastructure of transport and the environment. Its budget for the period is 1.04 billion euros, 7-10% of which is earmarked for development in Hungary (Romania and Poland have the highest shares).

The amount that will be available for a particular country is based on the population, the per capita GDP, the surface area and the relative environmental infrastructure development of the country.

The purpose of SAPARD is to finance the development of rural areas in the accession countries, and to develop markets for agricultural products, and to create job opportunities. The program started in 2000, and will end in 2006. During this time the amount of grants will be 520 million euros; Hungary can expect 6-10% of this amount.

The amounts of grants are calculated based on the population working in the agricultural sector, the area of agricultural land and the per capita GDP of the country.

The other main channel of EU grants and loans is the European Bank for Reconstruction and Development (EBRD). The EBRD was founded in 1991 for the purpose of improving the economic development of Central and Eastern European countries. The European Community is among its shareholders. It takes part in technical assistance programs, where besides co-financing the project, know-how transfer also plays an important role. Most of EBRD funding is spent on project preparation (34%) and realisation (38%) while the rest is spent on consulting (21%) and training activities (4%), and financing sectoral studies (1%).

Table 4. Total EBRD grant and investment commitments to PHARE[14] and TACIS countries, by sectors.

Sector	European Commission (million euros)	Other resources (million euros	As a percentage of the total Technical Assistance programs (%)	As a percentage of the EBRD's investments (%)

CEALs, CLs and RVFs	62,7	76,0	27,0	1,3
Community/Social Services	19,4	24,0	8,4	1,7
Finance and Business	58,1	109,8	32,6	27,6
Energy	14,9	29,9	8,7	13,6
Manufacturing/Construction	23	19,0	8,2	15,6
Transport and Storage	21,7	25,3	9,1	20,4
Extractive Industries	2,9	6,4	1,8	5,2
Telecommunications	4,5	11,1	3,0	9,1
Agriculture, Forestry and Fishing	1,1	2,6	0,7	2,3
Commerce and Tourism	0,7	1,1	0,4	3,2
Grand Total	209,0	305,1	100,0	100,0

Source: the European Commission and the EBRD [1999]: An evaluation of PHARE and TACIS Co-Financing Programmes with the EBRD. pp 32.

4.3.2 Development sources after accession

After accession the Structural and Cohesion Funds will take part in financing the infrastructural development of the new members. These funds were created with the aim of diminishing the regional, social and economical backwardness of areas in less developed countries.

The Structural Funds take part in financing activities to support the following objectives:

1. Development and structural changes in underdeveloped regions;
2. Social and economic changes in regions with structural problems;
3. Policies for modernising education and employment.

Those regions that are not underdeveloped can nevertheless get financial support under the third objective above. (The Council's 1999. 21. June 1260/1999/EC decree on the Structural Funds.)

Table 5 summarises the available amount of the Structural Funds for 2000 - 2006.

Table 5. The resources of the Structural Funds for the period between 2000-2006.

Million EUROs, in 1999. prices

2000	2001	2002	2003	2004	2005	2006
29 430	28 840	28 250	27 670	27 080	27 080	26 660

Source: Appendix to The Council's 1999. 21. June 1260/1999/EC decree on the Structural Funds

The Structural Funds consist of four funds: the European Regional Development Fund, the European Social Fund, the European Agricultural Guidance and Guarantee Fund, and the Fisheries Fund. These four funds are for financing big infrastructural development projects.

The funds are spent on National and Particular Programs (90% of the funds) Common Initiatives (9%), Technical Assistance programs and pilot projects (1%).

The main goal of the National Program is to develop regions with a per capita GDP less than 75% of the Union's average. All of Hungary would fall into this category after the accession.

The Cohesion Fund helps member states reach the convergence criteria.[15] This fund takes part in financing country-sized projects, and it is shared among environmental projects (50%) and projects on transport (50%), so a considerable

part of its sources are for infrastructure investments.

The Cohesion Fund finances programs in countries with a per capita GDP less than 90% of the Union average. In 2000, the balance of the Cohesion Fund for the period of 2000 - 2006 was 16 billion EUROs. Table 6 illustrates how this amount is spread over the years.

Table 6. The resources of the Cohesion Funds for the period between 2000-2006.

billion EUROs, in 1999. prices

2000	2001	2002	2003	2004	2005	2006
2.615	2.615	2.615	2.615	2.515	2.515	2.510

Source: Appendix to The Council's 1999. 21. June 1260/1999/EC decree on the Structural Funds

Over the next six years the purposes of programs under the Cohesion Fund are creating job opportunities, improving working conditions in the European Union and the development of rural areas.

To apply for these grants, municipalities have to prepare very detailed applications in one of the EU languages. Most of the Hungarian municipalities are not able to do that, and it remains one of the big challenges related to accession for them.

Another "problem" that Hungarian municipalities are facing is that the international grants are matching grants. In the case of bigger investments, municipalities are not able to collect the "matching part" of the grant, in the case of smaller investments, the fixed costs of application writing are so high that smaller municipalities are not able to pre-finance.

A very important problem to be solved is how to help municipalities to

gather the matching financial resources for the grants, and how to enable municipalities to pre-finance feasibility studies, which, in case of a non-successful application, is lost, so bank loans are not available for that purpose.

4.4 Cooperation of the public and private sectors

As we saw, with accession, important European and other international funds will be available for Hungarian municipalities. These will be matching grants, which means that the municipalities have to be able to mobilise other sources too, which, contrary to the past, cannot be state subsidies or privatisation revenue.

The solution seems to be the involvement of the private sector into the financing of municipal projects, and an increasing municipal loan raising activity, which are also consequences of the decentralisation efforts of the central government.

We can easily find reasons to involve the private sector into public services. These reasons include (i) insufficient resources at the municipal level, (ii) better efficiency of service delivery, (iii) positive attitude towards technology innovations and (iv) stricter financial discipline.

It is generally true that the sooner a project will yield a profit and the easier it is to collect fees for a service, the more probable it is that the private sector will want to be a partner in it.

In the following I summarise the main forms of co-operation between the municipal and the private sectors in service provision, including a short description

of the “pure municipal service”. I illustrate what role the private sector can take in these forms of cooperation. Of course, the whole range of the forms of cooperation cannot be shown, as they will vary according to the needs of the partners.

4.4.1 “Pure municipal service”

In this case, the service is provided directly by an office or institution of the municipality, and it is directly financed from the municipal budget. Typical examples for this kind of service provision are tasks that are possible to be completed by the unemployed[16] in the municipality, such as cleaning the public parks.

One advantage of this service provision form is that the supervising cost is low and the sanctions for failing to do the work are based on the internal rules of the municipality and not on the civil law. As most services require the involvement of municipal assets, it is easier to check their use too.

The disadvantage of pure municipal service is that the incentives for doing the work are not as efficient as they are in the public sector, where the service must be continuously adjusted to the requirement of the clients. The solution for this problem could be a well-developed incentive system, which makes it possible to compare the results with the public sector and with other municipalities.

4.4.2 Municipal enterprise

The municipality might create an institution that is independent from the municipal budget and normally receives the right of service provision based on open tender.

The advantage of this form compared to the previous one is that because of competition, the municipal company must be flexible to meet the clients' needs. Another advantage is that the municipality, just by preparing obligatory documentation concerning companies, has a clearer view of the company's performance than it would otherwise have. The advantage of municipal companies compared to private companies is that the supervision of the service provision is much simpler than in the case of contracted services. A special problem is that partnership is often restricted in these companies, which makes it difficult to involve professional investors into the service provision. Furthermore, such companies are often favoured in open tenders, which leads to the worsening of their performance indicators.

4.4.3 Contracting out services

This practice can be used when fully privatising the service provision is not politically or strategically feasible, or it would not be permitted under law, or public opinion would not accept it. In this case the private sector can be involved in the provision of part of the service, such as the fee collection, or cleaning the water or sewage pipes.

It is very important that the interests of the municipality and those of the private partner are the same and that the remuneration depends on the completion of the task regardless of how it is achieved (in which case the provider will look for the most efficient way of providing the service).

This kind of co-operation is also used when the municipality does not have enough experience in contracting out, and it would like to try how it works.

This form of co-operation in provision of services can become transformed

into a financial co-operation (investment) if the contracted company buys part of the assets related to the service provision. If it does not have the necessary resources to do so, or does not want to invest in the service, it can find financial investors.

4.4.4 Management contracts

In this case the whole service is contracted out to the private sector. This form of co-operation does not include the financial contribution of the private sector, but could be the first step towards construction where the private sector is a financial investor too.

4.4.5 Concession contracts

The concession is a form of co-operation where the service is provided by the private sector, which bears the costs of the original investment plus maintenance throughout a certain period of time, but the municipality remains the owner of the assets.

As it must be ensured that the profits of the private company cannot be increased unreasonably, the concession criteria should include a requirement of " equal level of service with the smallest service fee".

4.4.6 Private-public partnerships

One possibility to mobilise private resources for public investment where the public sector often lacks the resources for investments and even for operation is to sell ownership interests to the private sector. The municipality can still keep a majority of the shares without harming the interests of the private owners.

Co-ownership is more easily accepted by the public and local politicians.

In private-public partnerships a special problem arises from the conflicting interests of the municipality. As the owner of the company, it would like to raise its income through raising fees, but as a regulating authority, its interest is to keep fees low for the public.

In each of the cases above, the responsibility of providing the service remains in the hands of the local government, so the public authority has to be ready to change the form of the service if the private partner fails to provide adequate services. Before providing a service, the municipality must build the physical infrastructure for it. The public sector can have different roles in this process, either as an investor or just the operator of the investment. The operator does not finance the investment, it is only responsible for the organization of the work, choosing the sub-contractors and ensuring that the work is done. There might be occasions when the operator has to finance cash flow, so it should have a sound financial base.

In the Hungarian practice, there are three types of “loans” offered by the operator of the investment: (i) the real loan, (ii) the fictional contract for selling an asset, and (iii) late payment for the services it offers to the municipality.

If we examine these “loans”, we notice that the costs associated with them are often much higher then it would be in the case of a normal bank loan.

4.4.7 Impediments against co-operation between the public and private sectors

The previously described forms of co-operation sometimes do not work. The reasons are as follows:

- Many municipalities made contracts in Hungary that were not favourable for them. These contracts influenced public opinion in a negative way.
- Municipalities are afraid that if they contract services out, they lose control over employment, and the subsequent increase in the number of unemployed would have a negative impact on the municipal budget.
- Another concern of local governments is that after "giving the service away", they will not be able to influence the service fees despite their legal powers as the pricing authority. At the same time, the municipality-set fees are often so low that the private sector loses interest in co-operating with municipalities.
- Municipalities are often not familiar with the interests of the private sector.
- The municipality has to be ready to take over the service provision if the private provider fails.
- Municipalities are afraid that in some situations the private provider becomes dominant.

The remedy for these problems is to make good contracts. The municipality could involve contracted experts into the process.

An efficient tool would be collecting model contracts and making them available for the municipalities. (Baar, [2000] pp. 10.).

Fortunately, Hungarian municipalities agree that contracts should be available to the public. Through access to contracts, citizens may have more trust in new service providers and may not automatically think of future job losses and price increases.

Another practice to be followed is to introduce competition for limited concession contracts in place of a free market. In this case, the service provider will have an incentive to perform well because the following year it might lose the right to provide the service. The same result could be reached if the municipality does not privatise the whole service but keeps a part of it under its own supervision, e. g. privatising garbage collection and treatment, but keeping the garbage treatment plant itself under municipal supervision.

4.4.8 The phases of investments

Three phases of the realisation of an investment can be identified. The first phase is the planning phase, when the elaboration of the different studies, e. g. feasibility and financial studies and technical plans, takes place. The municipality finds the investors, sub-contractors and other partners for the project. These roles can be played by one or several actors. Typical for this phase is a sudden increase of costs, which is a consequence of buying materials, hiring workers and elaborating the above mentioned plans. Due to the lack of financial reserves, municipalities can rarely pre-finance these costs, so they have to consider whom to involve into the investment as a financial partner. According to municipal calculations, the costs of elaborating a feasibility study can add up to 5% of the

total investment. If the project will not be realised, this expense is lost. It is understandable, therefore, that banks will not lend money for this purpose, while at the same time state subsidies are also difficult to acquire for pre-financing purposes.

If a municipality applies for investment grants, it has to demonstrate that it owns the required part of the investment. This has major importance in decisions on state grants, as well as on bank loans.

The second phase, when the project is realised, has many risks. This can be due to unexpected increases in the price of materials, inflation, introduction of new technology, or cash-flow problems. Another problem is that municipalities usually do not prepare emergency scenarios for such cases, although it would save the project from long delays. The repayment of loans and interest also starts in the second phase of the project.

The third phase, when the assets already operate, is often not considered to be part of the investment process, although it is only in this phase when questions from the previous phases, such as whether the fees will cover the loans and current expenditures, can be answered. (Nevitt – Fabozzi [1997]. pp. 19-39.)

The following chapter deals with loan financing, because some municipal infrastructure investments in the long term generate revenue directly through service fees (such as water and sewage investments) while others contribute to local development (such as road investments). As a consequence, infrastructure investments should be financed from loans (Bird - Tassonyi [2001]).

5 INVESTMENT FINANCING FROM THE CREDIT MARKET

5.1 The dilemma of financing from loans or a municipality's own sources

When a municipality starts an investment, it has to face the question whether to borrow or to finance from the currently available sources in the budget [17].

The arguments pro and cont becoming indebted have been on the "menu" for years, as municipalities following a conservative fiscal policy try not to get indebted, but there are situations where raising loans proves to be a good investment.

If a municipality uses some resources for a specific purpose, it loses the opportunity of using them in other projects. This represents lost profit, which the municipality would have gained if it had invested in something else.

Of course, the amount of opportunity cost depends on the development of the country, the opportunities of the municipal sector and the growth rate in the country.

5.1.1 Arguments for loan financing

In general, in growing economies, loan financing proves to be a better option (Petersen [1999.]). The reasons are as follows:

- Current revenues are insufficient and too inflexible to fund "lumpy" cash needs on a pay-as-you-go basis. Projects need pre-financing from the beginning, when it does not yield any revenues.

- Future inflation reduces the cost of borrowing. Debt can be repaid with currency that is worth less than the value of that borrowed.

- The investments financed from loans are revenue generating, and based on economic reasons, it is better to divide the expenses during the life of the asset, and not to put such a burden on the municipality at the time of purchasing. This is also considered to be a "fair" division of expenses among the users of the asset.[18] Payment of costs for use of capital can be synchronised with the flow of benefits over the useful life of the asset being financed.

- These investments are usually needed for sustaining growth. Without them growth would slow down.

5.1.2 Arguments against loan financing

Of course, the conservative approach, "pay as you go" financing, also has its own advantages. Some of these are:

- No interest expense is incurred. Money not spent on interest costs can be used to fund additional projects. Municipalities raising loans spend the money of future generations, and decrease the municipality's freedom of decision.

- Debt capacity is reserved for other, possibly more important future projects.

- Future users/taxpayers are not responsible for paying for projects approved by today's government.

- The use of credit is too tempting and will lead to over-commitment of

future resources.

Of course, one can only decide about the financial construction of an investment if all political and economic circumstances are taken into account. Calculations of rate of return, preparing feasibility studies and many discussions among stakeholders in the project must precede the decision. .

As can be seen, both options have advantages and disadvantages, but in growing economies such as Hungary loan financing seems to be more attractive (Petersen, [1999]). The reasons are:

i) These investments are usually needed for sustaining growth. Without them growth would slow down. In order to operate the assets, financing must be secured in advance, which is only possible through banks and other investors. If these investments are deferred, then even greater investments will be required in order to accomplish the same results (spiral effect). Investments financed from loans are revenue generating, and based on economic reasons, it is better to spread the expenses over the life of the asset, and not to put such a burden on the municipality at the time of purchasing. This is also considered to be a “fair” division of expenses among the users of the asset.

ii) Loan financing is the best tool for harmonising the payment of costs with the flow of benefits.

iii) Finally, Hungarian municipalities do not have sufficient resources for financing such investments from current revenues.

5.2 Municipalities and the credit market

The credit market satisfies only those needs where the repayment of equity and interest seems to be secure. A private borrower is creditworthy if it has a stable income, and has a prudent spending behaviour. It is similar in the case of municipalities.

5.2.1 The prerequisites of municipal creditworthiness at the local level

Local governments are considered creditworthy when they meet the following requirements:

1.) a stable revenue

2.) good management skills and an efficient decision making system

3.) local politicians who are able to make decisions

4.) local citizens who are creditworthy as well, and are supporting their politicians

5.) good cash-management, an efficient tax-collection system, and effective actions against non-payers

6.) trust of the lenders (public opinion) in the specific municipality.

In the following, we give a short description about the performance of Hungarian municipalities with respect to the above factors.

5.2.1.1 Income sources of the municipalities

The most important requirement for local creditworthiness is the existence of a stable income, the amount of which depends on the municipality, and not on the will of the central government or economic cycles. When considering creditworthiness the following must be taken into account.

A large part of the income from municipalities' own sources comes from privatisation, which is not sustainable. The other local source of income could be the tax income of the municipality, the proportion in the budget of which varies a lot according to the size of the companies in the settlement.

According to the regulations of 1999, when a municipality applies for a central grant, the matching part from its own resources could be either (i) municipal property, (ii) an approved bank loan, (iii) another approved grant, or (iv) fees and charges on residents. The law states that other state budget resources, regional development resources and donations from abroad cannot be considered as the municipality's own part of a matching grant.

5.2.1.2 Management

The due diligence of local managers should result in their ability to; (i) respond to changes in local market conditions, (ii) recognise problems, (iii) implement alternative solutions to solving problems, (iv) evaluate and compare solutions, and (v) make long-term forecasts. The long-term forecast is crucial in the context of creditworthiness to demonstrate a municipality's ability to pay over the period of the plan and to maintain or increase its creditworthiness. This is of course possible only if the municipality has a long-term strategy and is able to foresee and influence its income.

Furthermore, if a bank finances a municipal project, it must thoroughly analyse the feasibility of the project, its liquidation value and the political stability of local management. The situation in Hungary in this respect is very good, because the local government sector as a whole operates with surpluses, which means that most of them are following a rather conservative fiscal policy.

5.2.1.3 Local politics

Local politicians must often make unpopular decisions (introduction of new taxes, increase of the old taxes), which they must be able to explain. The explanation of why changes are necessary and inevitable could be based on theories of public policy -- e. g. where local taxes are higher, the municipality is able to spend more on public services, increasing the net benefit to the taxpayer.

5.2.1.4 Creditworthiness of citizens

In the literature published in Hungary on this subject, this is a question that has not been adequately dealt with. No matter how brilliant the local government policy may be, if the citizens or local companies are not able to pay the taxes and user fees, the municipality will not be creditworthy.

5.2.1.5 Trust in the municipality

Based on experience, if the market does not trust the municipality, a bond issue becomes practically illiquid. The good news is when there is no news.

5.2.2 The prerequisites of municipal creditworthiness at the national level

The state is responsible for the creditworthiness of the local level, so it has to fulfil the requirements that have great importance when rating municipalities.

5.2.2.1 Political stability

In countries in transition, the stability of the political system and legal background mean that governments are following the same policies concerning participation in international markets, willingness to become EU member states, and maintaining legislation regulating government finance and management even through changes in government. If the political system were not stable, it would reduce municipal creditworthiness considerably. Of course, it is also in the interest of the state to be creditworthy itself.

5.2.2.2 Legal stability, property rights

Laws regulating municipal management and finance must be in accordance with each other, and property rights must be clear. The total available amount of central transfers should be predictable, and the factors affecting changes in such amount should be laid down in law.

- **Accounting and audit**

The question of auditing and accounting has high relevance to this subject. The comparability of municipal performance is ensured if the accounting system within the country is comparable and the local governments are audited countrywide.

- **Low inflation rate**

  If the inflation rate is low (this can be achieved by a strict fiscal policy), interests on loans will be predictable, making long term planning and long term lending possible. (Barabás – Hamecz – Néményi [1998]. pp 798.).

- **The state itself is creditworthy**

  According to a general rule the rating of a municipality cannot be higher than that of the state itself. The reason is that the municipal system is a sub-system of the state, and in countries in transition, a high proportion of the local budget comes in the form of subsidies from the central budget.

According to the factors above, the central government has two main tasks related to the creditworthiness of municipalities. First, it has to keep its own creditworthiness as high as possible in order to maintain the creditworthiness of the municipalities and secondly, it has to create the institutional and legal background for municipal credit market participation.

5.3 The regulation of municipal credit market participation

A very important question is to what extent the state intervenes in the relationship between the municipalities and the loan market.

In certain states there is no special limitation on sub-national borrowing; the only limits on issuing bonds and raising loans come from the fiscal conservatism of citizens and representatives.[19]

Ter-Minassian (1996) set forth four requirements that must be met by financial markets, relying on market discipline in facilitating effective and independent sub-national borrowing activity:

(i.) The markets should be free and open and the intermediaries should not place local governments in a privileged position in the market.

(ii.) Information about the borrower's debt and repayment capacity should be accessible.

(iii.) The borrower should be forced to act responsibly in the marketplace.

(iv.) The central government should not guarantee sub-national borrowings. (This would mean that the taxpayers of the whole country would have to bear the costs of borrowing of a particular borrower.)

According to Bird and Tassonyi (2001), if two of the above criteria are met, it is enough to allow municipalities to act on their own in the marketplace. These two criteria concern (i) freedom of information and (ii) the responsible behaviour of borrowers on the market.

Even in countries where municipalities are free to participate in credit market transactions, the central government might set limits for municipal borrowing. This is needed because the market often assumes the existence of central guarantees of local debt, even where not explicit, which might seriously undermine the creditworthiness of the state. Other reasons for central intervention are: (i) local borrowing raises the cost of capital for the private sector; (ii) the state

might compete for the same resources as the municipalities; and (iii) it worsens the balance of the central budget.

On the other hand, to some extent the state might support municipal borrowing. The reasons are:

(i) Local borrowing decreases the financial burden on the central budget.

(ii) Loans are usually more efficient than grants (the efficiency of capital increases).

(iii) Municipalities realise improvements from loans that are closer to the needs of citizens as compared to grants.

(iv) The repayment of the debt can last the whole lifetime of the realised asset.

(v) Local borrowing provides a good investment opportunity for the local financial market, pension funds and insurance funds.

Among the levers of control of the central level one can identify (i) passive tools (when the limits laid down in different laws prohibit over-spending) and (ii) active tools (when the higher levels of government prescribe an approval process before borrowing).

Active tools are used when:

i.) Each loan must be approved by a higher authority (in the case of Hungary this would be the Ministry, the central government).

ii.) The amount and rates of the loans must be approved as well

iii.) The loans must be approved by referendum

iv.) The whole of project must be approved

The main forms of passive control are

i.) The so-called „golden rule", under which municipalities cannot finance their operating costs from loans.

ii.) Setting a certain limit on the annual debt, e. g. the amount of loans compared to the municipality's own revenues, or a certain proportion of the municipality's budget.

In Hungary the central government uses passive control to limit municipal debt.

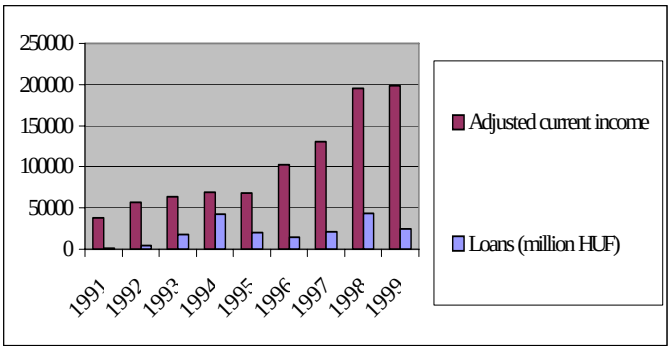
5.4 The Hungarian municipal credit market

Hungarian laws about municipal borrowing leave a great deal of freedom to municipalities, but as Figure 4 illustrates, they do not take advantage of this opportunity.

The limit on municipal borrowing is 70% of the municipality's own adjusted current income, which means that a municipality cannot have loans in an amount more than 70% of the difference between its short term income and short term obligations (in a given year).

The following figure compares actual municipal borrowing to the limit on municipal borrowing.

Figure 4. Municipal borrowing and the municipality's own adjusted current income [20]



Source: Ministry of Interior, Department of Municipal Finance, 2000.

The answer to the question "Why municipalities do not use their borrowing opportunities?" is very simple.

One reason is that other municipal revenues such as central grants and income from privatisation proved to be enough in the last ten years and the fiscal behaviour of the typical municipal financial officer could be characterised by conservatism. (Barati [1999]). The other reason is that in case there is no state guarantee on municipal debt, then there is a strong market control on borrowing. In Hungary, the state does not repay municipal debt, so municipalities can raise loans if they meet the criteria set by the lender.

5.5 Tools for enhancing municipal credit market participation

5.5.1 State guarantees

The simplest form of enhancing municipal credit market participation is to offer state guarantees on municipal loans.

A state guarantee occurs when the state, instead of subsidising an investment directly, guarantees the loans raised for the investment. These guarantees can be direct, as in the practice in most Central and Eastern European countries, but in most cases they are indirect, i. e. the project for which the loan is needed must be approved by a state agency in order for the municipality to be able to raise the loan.

In the case of indirect guarantees, lenders assume that the state, after approving a project and the raising of the loan, also guarantees the necessary loans. This involves the risk of "moral hazard", meaning the situation where municipalities, because they can easily get access to loans, will borrow much over the limits, and the state will be responsible for repayment. If this happens, it has a negative effect on future borrowing conditions, as lenders in such circumstances will ask for even greater insurance (Darche [1997]).

The most common form of direct guarantee is the guarantee of loan repayment, but guarantees can take other forms too, such as guaranteeing the exchange rate or a certain level of income.

Another tool for enhancing municipal loan raising activity is the establishment of special banks, financial institutions that represent the borrowing needs of more that one municipality, therefore decreasing the costs of borrowing.

Various funds that subsidise infrastructure development, and credit rating agencies that rate municipalities and municipal projects are also institutions with the purpose of helping municipalities in their credit raising activities.

In the following section I briefly introduce these institutions.

5.5.2 Special banks

Special banks are banks that collect private savings and lend this money to local governments. They are more traditional in Europe, where the savings of citizens was kept in the local savings banks that collected the citizens' money in order to finance local investments from it. A typical example is the German practice where one owner of the local bank is the municipality, which takes out long-term loans from it. Other examples of special banks are the Credit Communal de Belgique, the Credit Communal de France (DEXIA) and the Dutch Municipal Bank, which today have an increasing international role in municipal financing.

5.5.3 Bond banks

The Municipal bond bank (MBB) is an institution that issues bonds in its own name, and then relends the money to municipalities (buys municipal bonds). The main advantage of the MBB's approach is that it increases economies of scales in issuing bonds and reduces the risk premium by pooling the risks, making bond issuance an affordable business even for small municipalities.

A further advantage is that its professional staff possesses the knowledge required for bond financing, so an individual municipality does not have to hire expensive bond specialists. Moreover, the prices of several of its services, such as consultation, normally rather expensive, are considerably reduced or free for

investors. Other services an MBB may offer are as follows:

- Guaranteeing an interest rate -- in this case the state guarantees the interest payment on the loans, but not the repayment of capital;
- management of a state guarantee fund (this does not include replenishment of the fund or the repayment of loans);
- offering total guarantees
- in case of bankrupt municipalities, assessment, management of the bankruptcy process, and assistance to the municipality (Peterson [2000]).

5.5.4 State Revolving Fund

The State Revolving Fund is a special form of MBB. This fund is extra budgetary, and the management of the money is regulated according to special laws. The fund offers low interest loans to local governments, and then re-lends the incoming interest payments to other local governments, making the fund "revolving" (Peterson, [1996]). The purposes for which State Revolving Funds are created can be varied. Examples include the Sewage State Revolving Fund, Drinking Water State Revolving Fund, etc.

Although the most typical examples of State Revolving Funds are US Funds that offer loans with an interest rate 2-4% lower than market rates, they can also be found among the transition countries. In Poland and the Czech Republic, the Environmental Bank and the Environmental Funds are such funds.

5.5.4.1 State Revolving Fund Revenue bonds

State Revolving Funds issue revenue bonds that are exempt from federal taxes. These bonds are backed by the income deriving from the repayment by municipalities of local revenue bonds or general obligation bonds, and a reserve fund.

The advantage of this construction is that the State Revolving Fund is able to raise funds at a reasonable price because it has a high credit rating, which it can re-lend to municipalities under more favourable conditions than the credit market can offer. The margin covers the expenses of the Fund.

5.5.4.2 State Revolving Fund Interest subsidy

The most common form of subsidy given by Sewage and Water State Revolving Funds is the interest subsidy.

The fund, because it is subsidised by the state, is able to offer loans below market rates, sometimes at even zero percent. But a disadvantage is that, without interest income, the capital of the fund constantly decreases, so it requires continuous state support.

5.5.5 Municipal Development Funds

MDFs work basically the same way as the Special Municipal Banks. Among its shareholders we find municipalities and sometimes bodies at other levels of government, so besides loans, it is also a channel for various forms of government subsidies. Instead of giving loans directly to the municipal sector, MDFs sometimes give loans to banks with municipal clients in order to enhance the municipal credit market from the “supply” side. Their main objective is to

“push” banks into a situation when their interest is to develop loan products for municipalities, and therefore to indirectly promote co-operation between banks and municipalities.

The “mission” of MDFs is more complicated than that of the special banks. It involves improving the efficiency of local investments. According to their mission, among their lending activities they offer services such as elaborating business and technical plans and assistance in seeking additional funds for the investment.

6 TYPES OF MUNICIPAL LOANS - THE MUNICIPAL DEBT

Municipal debt means the financial obligation of the municipality itself, or of a specific municipal project. It is almost impossible to sort out all debt types -- they can be differentiated according to their terms, their backing, their currencies, their term, or the identity of the lender or the borrower.

The main characteristics of current borrowing practices are as follows (Amborski, [1998] pp. 15.):

- a municipality can raise loans if it has the ability to repay it,
- cumulative debt burden may not be excessive[21],
- the term for loan repayment should not exceed the economic life of the asset.

6.1 The Different Debt Types Classified According to Their Backing

In order to project the future trends in the development of the Hungarian municipal credit market, I introduce some loan constructions that are widespread in the countries with highly developed credit markets.

6.1.1 General Obligation Bonds (GO Bonds)

GO bonds are issued by municipalities. The backing of this type of bond

consists of general revenues of the municipality, e. g. local taxes, service fees, state subsidies, and the tax- and fee-raising potential of the municipality, although it may be difficult to raise future revenues. Of course, issuing revenue bonds is only possible if the municipality has income, and/or central revenues are predictable.

In developed countries there are special districts that can issue general obligation bonds because they have a basis for backing these loans through their tax levying authority [22]. Investments that serve the needs of more than one municipality, .i .e. of a district, are financed from taxes levied by the district.

As municipal associations cannot levy taxes in Hungary, the backing of such a loan could consist of a dedicated revenue stream or other income of the partner municipalities.

In some countries, if the borrower is not able to meet its obligations, the lender may force it to raise the level of taxes. This is of course only possible in countries where the maximum level of municipal taxes is not limited by law. In such cases, the concept of GO bonds can be used in only a limited way, or its use requires other guarantees (Peterson [1998] pp 20.).

Special Purpose District

…Special Purpose Districts are political subdivisions created to provide economic development or related services to residential, commercial or industrial areas. These can be both within an incorporated municipality or outside its limits, in "developing areas". These districts can represent viable arrangements for effective delivery of public utility services such as water, sewers, hospitals, fire protection and roads, when demand overflows the administrative boundaries of individual local governments. Special district obligations are generally tax-backed although the ability of special districts to raise taxes may often be restricted, by tax ceilings for instance. "Tax Increment Districts" can be established for

local governments to levy taxes on the growth of property value, and these have been used to fund the re-development of neglected downtown areas. They have been viewed as viable and safe instruments when a project area is of a significant size and represents a diverse taxpayer base. Some special districts may be speculative in nature. (El Daher, [1997]) pp. 5.)

6.1.2 Dedicated Revenue Bonds

Municipalities undertaking specific municipal projects may issue Revenue bonds. In this case the municipality raises funds against specific (named) revenue flows. Usually the subject revenue flow is the revenue generated by the service that is financed from the loan, but it also could consist of state transfers or subsidies if they periodically and foreseeably arrive to the municipality's account.

However, this financing method, despite its positive side, has some disadvantages as well.

The positive effects are, for example, that it permits a relationship between the service and the fee for it, and if in the past the service was "overpriced" and produced extra income, the extra burden on the consumers becomes obvious.

The disadvantages are supported by economic theories. The limited reliability may hinder redistribution of infrastructure and services among population groups (say, from rich sections to poor ones) by keeping potentially redistributable revenues for the benefit of an already privileged area. The disadvantage concerns the effect on prior loans. The expressions "asset stripping" or "security dilution" concern the situation when prior lenders have looked to overall revenues as a source of repayment, and a subsequent sequestering or stripping away of revenue streams

weakens the credit.

6.1.3 Double-barrelled bonds

Double-barrelled loans are secured both ways. They are a mixture of GO bonds and Revenue bonds. A first guaranty consists of specific revenues of the municipality or of the project, and if that is insufficient, the second guaranty consists of the general revenues of the municipality[23].

6.1.4 Project financing

In this case, the guaranty for the repayment of the loan is the revenue generated by the particular project and the assets of the project. The issuer is the municipality or its project. A big advantage of this form is that small municipalities with lower tax and fee income also can start bigger investments, because the rating applies to the project itself instead of the municipality (except where the law provides that the debts of a project unable to repay a loan automatically becomes a debt of the municipality, as in Canada).

6.2 Financing investments with short term debt

While long-term debts are normally used to finance investments, short-term loans are usually used to finance current expenditures and to solve temporary cash-flow problems. Short-term municipal debts are debts that expire within one year.

Nevertheless, short-term debts can be use other ways too. If municipalities issue short-term commercial paper that rolls over for several years, this can be considered a long-term debt such as the CP Program. In this case the municipality calculates the financing needs of the investment for each year, and borrows a sum that covers this need plus the interest payment of the previously raised funds every year.

Of course, a municipality following this practice has to take into account the risk of refinancing, that is the risk of not being able to borrow at the same cost every year (the cost of borrowing may be higher). This can occur due to changes in the macro-economic situation and changes in the credit rating of the municipality.

An important question is: who are potential lenders to a municipality? Financial officers must know potential lenders well in order to create bond constructions that fit their municipality's requirements best and to reach better loan conditions.

The following section summarises the circle of potential municipal lenders.

6.3 Potential lenders

6.3.1 Banks

When one talks about municipal loans, in Hungary one automatically thinks of the banks first. The market can be characterised by competition among banks. They consider municipalities as possible clients, so they prepare different loan constructions satisfying the special needs of the local sector. In international practice, one can see various forms of co-operation between municipalities and banks. In Hungary, bank loans, which previously have had a limited role in

municipal financing, will become more important because:

1. Municipalities have few resources to pre-finance, plan and realise projects.

2. The environmental requirements of accession to the European Union and the matching feature of grants require municipalities to have their a own revenues.

3. Central subsidies are no longer available for providing the matching part of EU grants.

4. In 2001, the inflation rate in Hungary was 6,8% (Hungarian National Bank), which allows loan financing with fixed interest rates.

Municipal loans are dealt with in detail in Appendix. II.

6.3.2 The private sector

The role of the private sector as a partner in service provision as well as an investor in the public sector was discussed in chapter IV. When a municipality chooses a private partner for co-operation, one criterion is the financial strength of the investor. The investor has to have enough resources to finance possible cash-flow problems due to the insufficient flow of revenues at the start of the project.

6.3.3 Pension, Investment, Social Security and other Funds

Although these funds do not have a long history in Hungary, it is very likely that they will soon become a source of investment in public development. The main obstacle until now has been that the Law on Securities made public offerings

too complicated and costly compared to closed offerings.[24]

6.3.4 Another municipality

When a municipality has savings, it can invest in another municipality's investment, or it can buy bonds issued by another municipality or by one of its projects.

6.3.5 The citizens

Citizens are also important players in the scene of local finance. First, they can directly buy municipal bonds, and second, through paying service fees, they provide the basis for paying back loans raised for municipal infrastructure development.

6.4 How to attract investors

Another important question concerning the Hungarian situation is how municipalities and possible investors meet on the marketplace.

Attracting investors requires thorough preparation. It is part of a development strategy that requires elaborate plans and actions.

- One situation occurs when a municipality looks for an investor on its own, independently from any others. A typical Hungarian example for this situation is when a municipality finds a company on its territory that is also interested in the realisation of the municipal plan, e. g. sewage or garbage treatment. The company will be willing to invest in the plan if it

is cheaper than building its own plant. In this case, the municipality has to be careful in planning the capacity of the plant, because in case the company would close down, the plant still has to operate efficiently.

- Another possibility is if the municipality issues bonds through an intermediary. In this case, the intermediary has to find investors for the project. The advantage of working with intermediaries is that they know the market very well, so that the bond issue might be less risky for the municipality

7 DATA ANALYSIS

In the autumn of 1999 (the first phase of research) and 2000 (the second phase of research), TARKI continued its series of questionnaires sent to all of the mayors in Hungary, except the capital, Budapest[25].

The questionnaire of 1999 addressed plans for 2000, while the questionnaire of 2000 addressed plans for 2001. The fist phase was answered by 747 municipalities, while the second was answered by 939, which means an answering rate of approximately 30%. The data was weighed by the research staff of TARKI based on the Central Statistical Office's data on municipalities.

The municipalities were grouped based on their income and their investment rate.

The income groups:

1. Low budget (poor) municipalities are those with a per capita income less then 80% of the median.
2. Medium municipalities are ones with a per capita municipal income between 80% and 120% of the median.
3. Large budget (rich) municipalities are those with a per capita income that is higher than 120% of the median.

The groups based on the investment rate:

1. Operating municipalities are those with an investment rate of less than 50% of the median[26]

2. Average investors are municipalities with an investment rate between 50% and 200% of the median.
3. Investors are municipalities with an investment rate higher than 200% of the median.

7.1 Municipal expectations

Municipalities were asked what they thought about the economy of Hungary and that of their local area, and whether they expected the situation to be better or worse in the future. TARKI was interested in what municipalities thought about their chances of acquiring financial resources, and – due to financial difficulties – whether they planned to decrease the number of their institutions.

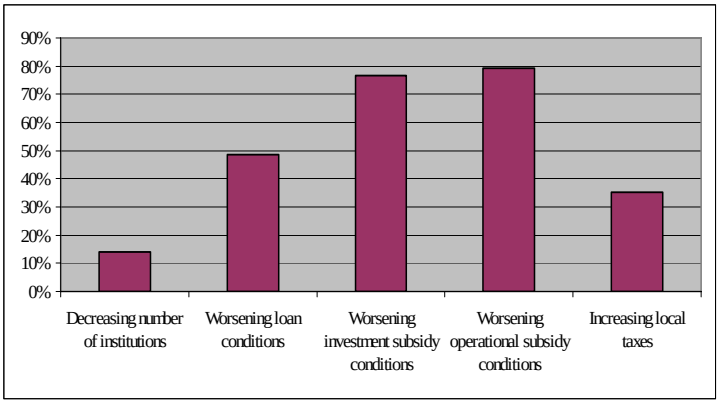
The answers given to the questions helped the researchers to understand how municipalities see their environment, what kinds of plans they have and what steps they intend to take in the future in order to address their situation, and how they behave in the credit market.

As both questionnaires included these questions, it was possible to compare the data in both years and to draw conclusions.

In 2000, municipalities seemed to be more pessimistic based on their answers than in 1999. More municipalities (4-5 percentage points) expected that getting access to central resources, as well as being successful with loan applications, would be more difficult. Accordingly, more municipalities expected to raise their level of taxes. The biggest difference between the data of the two years concerned the decrease in the number of municipal institutions. While in

1999 18% of municipalities expected to close down some of their institutions, in 2000 this number was 12%.

Figure 5. Municipal expectations in 2000 as a percentage of all municipalities



Source: Calculations of the author based on the TARKI municipal database of 2000

The following section examines how these data differ according to the different municipal groups. The detailed data can be found in Appendix III.

Regional data

Decreasing the number of municipal institutions was more common in North-Eastern Hungary and South-Transdanubia compared to the average of the whole database. The reason is that these are the regions of poor municipalities (this is especially true for Northern-Hungary, where more than 20% of the poor municipalities in Hungary are located).

61 and 67% of municipalities from South-Transdanubia and Northern-Hungary respectively expected the worsening of their loan conditions, which is higher than the average in the sample.

Municipal opinions in the different regions did not differ about the chances

for acquiring central grants. In every region, about 80% of municipalities expected that it would become more difficult.

Thirty five percent of Hungarian municipalities planned to raise their tax level, but this amount was surpassed by municipalities from Central Hungary, and Central- and Southern- Transdanubia.

Municipal groups based on investment activity

Municipalities' opinions did not differ according to their investment activity. Expectations in the categories of operating, average investor and investor municipalities were very similar.

Municipal groups based on the size of the budget

About 20% of poor municipalities expected to reduce the number of their institutions, twice the average of the whole sample. 69% of the municipalities of the same category expected loan conditions to become more difficult, which is higher than in the whole sample, where this rate was 48%.

Expectations about central grants were very similar in the three groups (80% expected them to become more difficult). As compared to 35% of the whole sample, 45% of the richest municipalities had plans to raise their tax level.

7.1.1 Expectations about the situation of the economy

In 2000, on a scale from 1 to 10 the economic situation of the country received a score of 4,99, while the municipalities' assessment of their own economic situation was worse, getting a score of 3,86 on the same scale.

The relevant data for the year before respectively were 4,5 and 4,2, which means that municipalities became optimistic concerning the changes in the country's economic situation, but did not notice the changes in their own situation.

This is also reflected in the scores given to the change perceived in their lives. The score concerning changes in the country's economy in 2000 was 5,14 (the previous year it was 4,8). It is important that municipalities were optimistic despite the fact that they expected the acquisition of central resources to become more difficult – they started to accept the necessity of alternative financial sources, and assessed their own situation in the light of their chances to make use of them.

Categories based on investment activity and municipal budget

The investor municipalities were more optimistic concerning the economic situation. In both years of the research the score of this group concerning the economic situation of the country was above 5,2, and concerning the municipality's economic situation it was above 4.

The results were similar in the groups based on the budget size. The richest municipalities were more optimistic than the poorer ones.

Municipalities in the different regions

The opinion of municipalities in Central-Hungary about the national and local economic situation, and their expectations on how this situation would change, was better than the sample average opinion.

Municipalities in Central- and Western- Transdanubia, Northern and Southern-Great Plain, and in Northern Hungary were more optimistic about the national economic situation, but had a pessimistic opinion about their local conditions.

Municipalities according to their size

These are the categories where the answers differed most from the sample average. The bigger a municipality was, more optimistic it was concerning economic expectations.

7.2 Municipal budget data

Based on the answers the average per capita municipal income in 2000 was 69,000 HUF. This is less than municipalities planned a year before for the same period of time (83,6 thousand HUF).

In 2001, the income of 26% of municipalities stayed below 80% of the median, falling therefore into the category of “poor” municipalities, and the income of 36% of municipalities surpassed 120% of the median. The latter are the “rich” municipalities. Eighty percent of poor municipalities have a population of fewer than 2000 inhabitants.

A year earlier, 21% of municipalities were poor, while 34% of them were rich. The broadening of the two extreme categories means that differences among municipalities grew.

The questionnaires contained questions about local current income, the normatives, the PIT, the municipality’s own current revenues, and investment activity.

7.2.1 Current income

Based on the answers to the questionnaires, the municipalities' current income in 2000 was 33700 HUF per capita. 62,3% of municipalities expected this amount to grow, 14,4% that it would decrease and 23,3% of municipalities expected that the amount of current income would not change. Those municipalities that expected a decrease in the per capita current income were mainly from the Western- and Central Transdanubia regions and the "rich" municipalities.

The detailed data can be found in Appendix IV.

The results concerning the change in the amount of normatives and income from PIT were very similar to the above.

The results were similar to the above in the case of revenues from the central government, i. e. the PIT income and the normatives. (The detailed data can be found in Appendix V.)

Two thirds of municipalities expected that their PIT income would increase, 10% expected it to decrease, and 23% did not expect any change. The data in the case of the normatives were 78,5%, 7,3% and 14,2% respectively.

Municipalities expecting the decrease of central subsidies were from the group of rich municipalities.

7.2.2 Revenues from municipal sources

Among the revenues from a municipality's own resources, the questionnaire in 2000 had detailed questions about property taxes and taxes on tourism.

29% of municipalities expected their property tax income to grow, 8% that it would decrease, and 63% did not expect any change in the amount. Municipalities expecting the growth of property tax were from South and North Great Plain, and from the group of rich and investing municipalities.

34% of municipalities expected that their income from the tax on tourism and from the turnover tax would grow (mainly the rich and the average investors), 19% that it would decrease, and 47% did not expect any change. (The detailed data can be found in Appendix VI.)

7.3 The investment practice of municipalities

The median of investment expenditures as a percentage of the municipal budget in 1999 was 5,7% based on the answers, while in 2000, it reached 11,8%.

The research examined the investment activity of municipalities in the different per capita budget groups. In 2000, 85% of “poor” municipalities were average investors or operators.

For 2001, 47% of municipalities, mainly from South – and Middle Trans Danubia and from Northern Hungary expected a decrease in the investment expenditure rate in their budgets, and among the budget size groups, only the “poor” municipalities expected a rise in this rate. This was to be expected because these municipalities lag far behind the Hungarian and EU infrastructure standard.

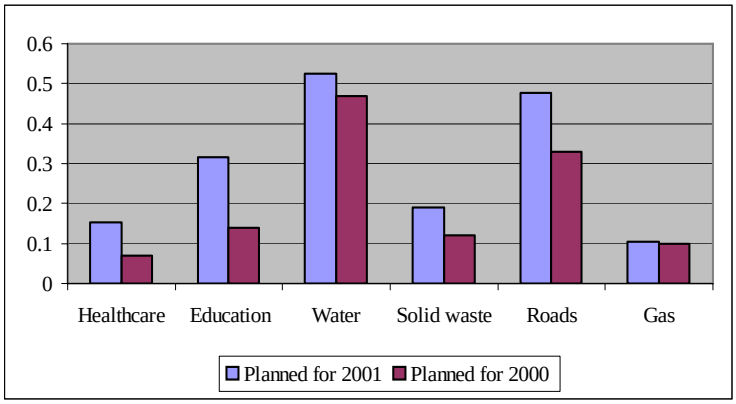
(The detailed data can be found in Appendix VII.)

7.3.1 Investment types

The most common types of municipal investments are water, sewage and road improvements. Less money is spent on healthcare and gas investments.

The following figure compares the municipal investment plans of the two examined years.

Figure 6. Municipal investment plans for years 2000 and 2001



Source: The author's calculation based on data from the TARKI database

We can see that the number of planned investments increased in the case of every investment type, which corresponds with the increase of the median of the investment rate.

Investment data in the different regions are not significantly different from the data for the country as a whole. Plans for water and sewage investments outnumber other types, and the planners of such investments are mostly municipal associations.

The investment data according to the per capita budget of the municipality

differs from the national average data.

Forty-five percent of poor municipalities planned water improvements, and this figure was higher (65-70%) for municipalities in the other two categories. (The detailed data can be found in Appendix VIII.)

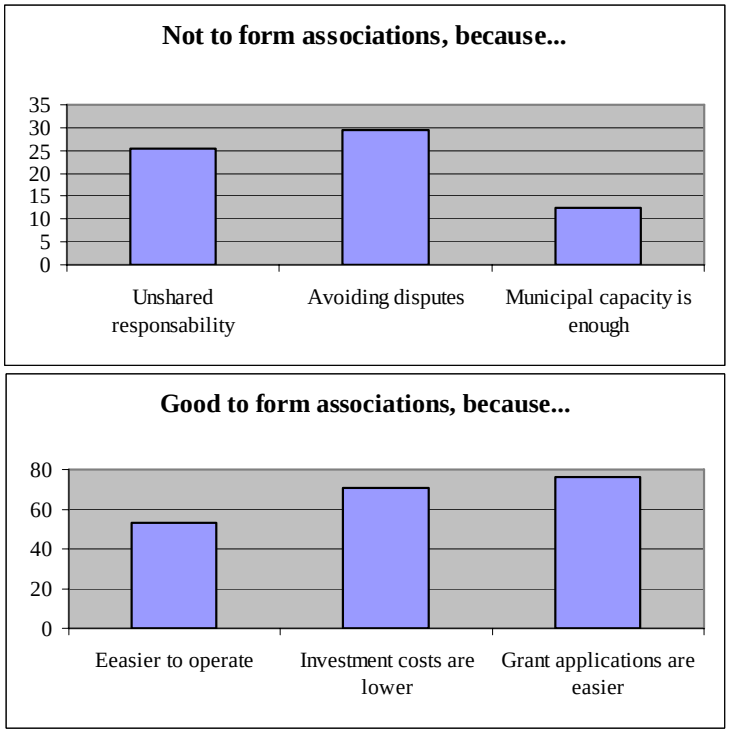
7.3.2 To form an association or not?

Municipalities were asked why they form associations and why they remain outside associations.

While 52% of municipalities agreed that assets are easier to operate through associations because the continuous financial burden is lower, more than 70 % of them agreed that associations are more successful at grant applications than single municipalities and that the starting costs of the investments are lower.

The considerations offered in the questionnaire for not forming associations did not prove to be real impediments. These included avoiding financing disputes, the ability of the municipality to use the capacity of the asset, and unshared responsibility.

Figure 7. Municipal arguments for and against associations (%)



Source: The author's calculation based on data from the TARKI database

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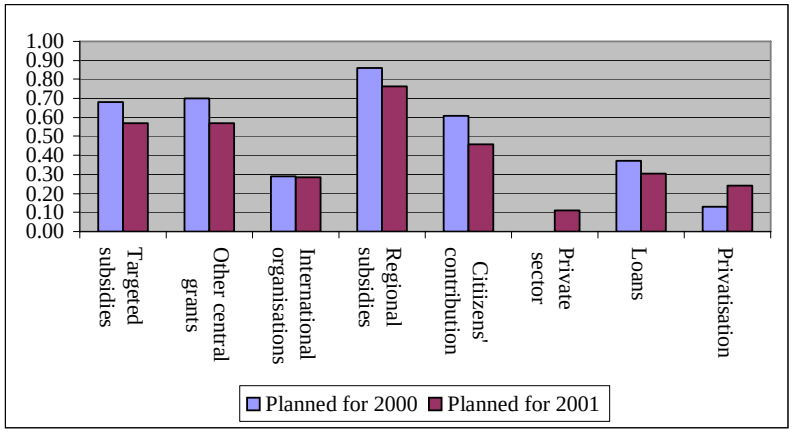
7.3.3 The financial sources of investments

Figure 8 illustrates the financial sources of municipal investments. The most common sources are regional grants, targeted grants and other centrally allocated grants. Other sources, such as privatisation revenues, international grants, involvement of the private sector or loans do not play an important role in municipal financing. This can be explained by the following facts. Municipal co-operation with the private sector is not widespread, although it is getting more frequent. Municipalities are not able to raise funds on the credit market and, furthermore, they do not have experience in developing successful applications for international grants – and they are not able to provide the necessary matching part

of these grants either. At this point it is worth referring back to the municipalities' expectations about acquiring financing. The resources that municipalities plan to use more are the ones that they expect will be more difficult to gain access to.

Figure 8. Financing sources of municipal investments for 2000 and 2001.



Source: The author's calculation based on data from the TARKI database

7.3.4 Planned sources of financing for the different categories of municipalities

The data for the regions and for the different categories based on the investment rates did not differ from the national data.

The situation is different if we examine the planned financing sources according to the per capita budget groups. While only 23% of poor municipalities expected targeted grants for their investments, 40% of the rich municipalities did. The results are similar for the other centrally and regionally distributed grants.

The difference can be explained by the conditions attached to the grants, e. g., matching funds and minimum number of residents served, which small

municipalities are not able to meet (as shown above, these are the poor municipalities).

The differences are even greater in the case of international grants and the involvement of the private sector (21%- 43% and 12%-48% respectively in the two extreme categories). The reasons for the differences are the same as above. (Appendix IX. contains the detailed data.)

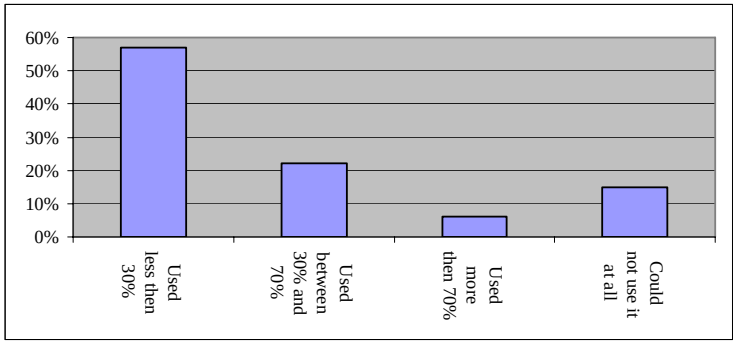
7.4 The use of targeted grants in 2000

In 2000, only 221 municipalities from the sample received targeted grants. Due to this small number, the results can only be used as ”soft data”.

More than two thirds of municipalities were able to make use of less than 30% of their grants. The proportion of municipalities that were able to use more than 30% but less than 70%, is 21%, and only 6% of municipalities could use almost the whole amount of the grant.

Ninety percent of municipalities not applying for targeted grants have fewer than 200 inhabitants.

Figure 9. The use of targeted grants as percentages of municipalities



Source: The author's calculation based on data from the TARKI database

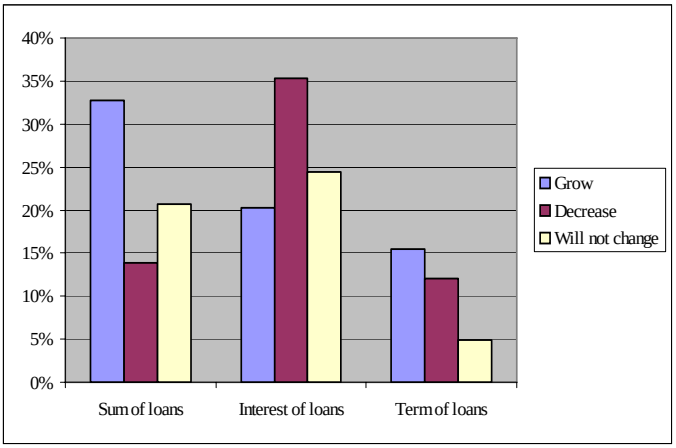
7.5 Loans

7.5.1 General conditions of loans

Municipalities were asked about the amount, term and interest of their loans in 2000. Despite the fact that many municipalities did not answer because they did not take out any loans, the answers received still make it possible to draw some conclusions.

Municipalities said that the amount of loans increased, the interest rate became lower and the term got longer. This indicates that two processes in Hungary are taking place. First, the Hungarian municipal credit market offers credit products that meet the special requirements of municipalities, so the market recognises the municipalities as potential clients. Second, the Hungarian economy is stabilising, which makes it possible for banks to offer loans with lower interest rates and longer terms. (Appendix X. contains the detailed data)

Figure 10. Changes in the terms and interest of municipal loans in 2000



Source: The author's calculation based on data from the TARKI database

This data cannot be examined for the different municipality categories due to the small sample size of the groups.

7.5.2 Guarantee of loans

Figure 11. shows that the guarantees of municipal loans in most cases are immobile assets.

This is a highly criticised practice of the Hungarian municipal credit market. On the one hand, the value of the asset often surpasses many times the amount of the loan, and on the other hand, involving an asset into the financing of a project, to which it is not otherwise related, is not economically efficient.

Figure 11. Guarantees of municipal loans in 2000.

Source: The author's calculation based on data from the TARKI database

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Other options for backing municipal loans include the tax or service fee

income of the municipality. Using taxes for guaranteeing loans is more frequent than the use of fees, although the latter would be ideal for that purpose. First, they are directly related to the project and second, their flow can be synchronised with the repayment structure of the loan. Moreover, in case a municipality would need to increase the financial resources for loan repayment, raising fees is normally easier than raising the level of municipal taxes.

8 USING MULTI-VARIABLE DATA-ANALYSIS FOR ASSESSING MUNICIPAL INVESTMENT RATES

As noted before, I use the data from 2000 for the multi-variable data analysis.

8.1 Common factor analysis

There are two types of factor analysis, principal component analysis and common factor analysis.

Common factor analysis is generally used to reveal the structure of inter-dependence among variables, while the main purpose of the principal component analysis is to reduce the number of variables. As my goal was to reveal the interdependence structure of the variables, I used common factor analysis.

The steps of the analysis

1. Selecting the variables for the analysis from the database.
2. Generation of the correlation matrix.
3. Creating the factors and checking the correspondence of the model.

The whole database contains the characteristics of every Hungarian municipality according to 155 variables and covers areas that are not relevant for the current research. (The Questionnaire, as mentioned above, can be found in Appendix I.)

I included into the analysis those variables that are related to the municipal budget and to investments (abbreviations in brackets)

1. What do the citizens think about the performance of the municipality? (citizens1)
2. What do the citizens think about the future performance of the municipality? (citizens2)
3. The economic situation of the municipality (economy)
4. What will the economic situation of the municipality be in the future? (econ change)
5. The national economic situation (Nat economy)
6. What will the national economic situation be in the future? (Nat econ change)
7. Does the municipality plan to raise funds through loans? (Loans)
8. Expectations about inflation (Inflation)
9. The number of unemployed (Unemployed)
10. The number of people on social allowances (Allowances)
11. Does the municipality plan to decrease the number of municipal institutions? (Institutions)
12. Whether it will be more difficult to get loans (Loans difficult)
13. Whether it will be more difficult to get central subsidies (Subsidies difficult)

14. Whether the amount of central subsidies will decrease (Subsidy decrease)
15. The status of the municipality. (Status)
16. The region the municipality is in (Region)
17. The investment rate of the municipality (Investment)
18. The long term loans of the municipality (long term loans)
19. The investments financed from loans (Loans/investments)

As a first step in the analysis I created a correlation matrix of the variables from which it immediately became obvious that there is a correlation among them. The correlation matrix can be found in Appendix XI.

The aim of the common factor analysis is to create factors that contribute to the communalities of the variables as much as possible.

The analysis created the following factors.

Table 7. The factor matrix

Factor	1	2	3	4	5	6	7	8
Citizens1	0.5	0.44	0.39	0.14	-0.44	-0.18	-0.15	0.09
Citizens2	0.59	0.42	0.36	0.14	-0.36	-0.16	-0.12	0.03
Economy	0.68	0.25	0.11	0.11	0.39	-0.17	0.1	-0.14
Econ change	0.77	0.2	0.04	0.06	0.33	-0.11	0.09	-0.12
Nat economy	0.62	-0.1	0.1	-0.14	0.28	0.3	-0.01	0.32
Nat econ change	0.74	-0.13	0.1	-0.12	0.17	0.28	-0.04	0.21
Loans	-0.07	-0.36	0.18	-0.09	0.18	-0.12	-0.25	0.64
Inflation	-0.38	0.08	-0.04	0.17	-0.04	-0.4	-0.14	0.41
Unemployed	-0.43	0.5	0.28	-0.38	0.05	0.13	0.08	0.07

Allowances	-0.43	0.35	0.44	-0.34	0.15	0.18	0.03	0.03
Institutions	-0.15	-0.3	0.29	-0.23	0.02	-0.38	-0.32	-0.12
Loans difficult	-0.43	0.25	0.23	0.22	0.14	0.21	-0.07	0.07
Subsidies difficult	-0.41	0.19	0.2	0.48	0.41	-0.02	0	-0.06
Subsidy decrease	-0.4	0.16	0.27	0.38	0.27	-0.07	0.05	-0.04
Status	-0.08	0.57	-0.44	0.14	-0.14	0.27	0.01	0.3
Region	-0.15	0.06	0.31	-0.51	-0.12	-0.01	0.4	-0.01
Investment	0.02	-0.15	0.05	0.26	-0.13	-0.2	0.76	0.32
long term loans	0.03	-0.61	0.5	0.22	-0.12	0.11	0.15	-0.09
Loans/investments	-0.05	-0.23	0.26	0.37	-0.3	0.55	-0.13	-0.03

We see from the above table that behind some of the variables we can suspect the same underlying factors, but if we perform a Varimax transformation, this interdependence becomes even clearer, and the results will be easier to interpret.

After thirteen rotations we receive the following rotated factor matrix.

Table 8. Rotated factor matrix

Factor	1	2	3	4	5	6	7	8
Citizens1	0.01	0.91	-0.08	0.02	-0.05	0.04	-0.01	0
Citizens2	0.22	0.89	-0.08	-0.02	-0.04	0.01	-0.07	0
Economy	0.65	0.32	0.13	-0.18	0.07	-0.35	-0.24	0.04
Econ change	0.7	0.31	-0.01	-0.21	0.03	-0.31	-0.25	0.03
Nat economy	0.78	0.03	-0.22	-0.02	-0.06	0.11	0.19	0
Nat econ change	0.77	0.13	-0.3	-0.1	-0.01	0.14	0.08	-0.03
Loans	0.14	-0.12	0	0.01	0.18	0.05	0.8	0.02
Inflation	-0.39	0.08	0.23	-0.05	-0.08	-0.2	0.51	0.09
Unemployed	-0.15	0.03	0.18	0.76	-0.16	-0.1	0.02	-0.11
Allowances	-0.06	-0.03	0.27	0.75	0.01	0.01	0.05	-0.14
Institutions	-0.18	0.02	-0.04	0.05	0.61	-0.1	0.21	-0.22
Loans difficult	-0.13	-0.03	0.51	0.25	-0.16	0.19	0.08	-0.1
Subsidies difficult	-0.08	-0.09	0.8	0	-0.01	0	0.01	0
Subsidy decrease	-0.13	-0.02	0.67	0.08	0.05	0.01	0.03	0.08

Status	-0.1	0.08	0.03	0.02	-0.84	-0.06	0.02	-0.05
Region	-0.05	-0.02	-0.2	0.63	0.18	-0.06	-0.09	0.26
Investment	-0.02	0.01	0.03	-0.04	-0.05	0	0.06	0.9
Long term loans	0.07	-0.03	0.05	-0.08	0.55	0.56	0.02	0.3
Loans/investments	-0.02	0.06	0.1	-0.09	-0.02	0.8	-0.04	-0.05

8.1.1 Explaining the factors

The factors are as follows:

1. Factor – the economy factor

- The economic situation of the municipality (economy)
- What will the economic situation of the municipality be in the future? (econ change)
- The national economic situation (Nat economy)
- What will the national economic situation be in the future? (Nat econ change)

If the municipality expects a change in the national economy, it hopes for a change in its own economic situation too. They evaluate their own situation as it is reflected in the national situation.

2. Factor – municipal performance factor

- What do the citizens think about the performance of the municipality? (citizens1)

- What do the citizens think about the performance of the municipality in the future? (citizens2)

3. Factor – the factor of market conditions

- Whether it will be more difficult to get loans (Loans difficult)
- Whether it will be more difficult to get central subsidies (Subsidies difficult)
- Whether the amount of central subsidies will decrease (Subsidy decrease)

According to the municipal decision makers, acquiring financing– either through loans or central subsidies - will be more difficult in the future, as the conditions for winning loan or subsidy applications become similar. Municipalities recognised that economic efficiency is a crucial criterion not only in the private, but also in the public sector.

4. Factor – The factor of social conditions

- The number of unemployed (Unemployed)
- The number of people on social allowances (Allowances)
- The region the municipality is in (Region)

The number of unemployed and the number of people on allowances depend on the job opportunities the municipality can offer. The fact that the third variable in this factor is the region instead of, for example, the status or the size of

the municipality, tells us that a small municipality in a “better-off” region is still in a better economic situation than a bigger municipality in a less favoured region. This proves that economic development programs work best on the regional level.

5. Factor – The factor of rationalisation

- Does the municipality plan to decrease the number of municipal institutions? (Institutions)
- The status of the municipality (Status)

The population of a municipality is in close correlation with the status of the municipality (Village, Town, City with county rights). The rationalisation of the administration is related to the size of the settlement -- the bigger the municipality, the more probable it will want to decrease the number of institutions. The reason is probably that smaller municipalities already did that.

6. Factor – The factor of the external sources

- The long term loans of the municipality (long term loans)
- The investments financed from loans (Loans/investments)

Use of loans and the proportion of investments financed from loans should be dependent on each other in a developed economy.

7. Factor – The tactic players factor

- Expectations about inflation (Inflation)

- Whether the municipality plans to raise funds through loans (Loans)

When municipalities decide on whether to raise funds through loans or not, they take inflation into account.

8.factor – The factor of loan financing

- The investments financed from loans (Loans/investments)
- The long term loans of the municipality (long term loans)

If the investment rate is high in a particular municipality's budget, then the amount of long term loans will be high too. This is related to the fact that, although in Hungary municipalities still take out loans for financing current expenditures, the main purpose of long-term loans is investment financing. This supports the idea to create an institution for enhancing municipal credit market activity in Hungary.

The maximum number of factors is 13 based on the following formula

$$M=1/2*((2n+1)+8n+1),$$

but because the Eigenvalues of factors are above 1 only in the case of 8 factors, the final number will be 8 (Kaiser criterion).

The following table summarises the Eigenvalues and communalities of the factors. It also shows that the factors explain 67,7% of the total variance of the variables.

Table 9. The Eigenvalues and communalities of the factors

Communality	Factor	Eigenvalue	Explained variance	Accumulated variance
0.86	1	3.67	19.3	19.3
0.85	2	2.00	10.5	29.9
0.76	3	1.49	7.8	37.7
0.79	4	1.39	7.3	45.0
0.70	5	1.18	6.2	51.2
0.74	6	1.11	5.8	57.0
0.71	7	1.03	5.4	62.4
0.53	8	1.01	5.3	67.7

8.1.2 Examining the correspondence of the factor models

In order to check if the factor model is working or not, I reproduced the correlation matrix, the communalities and the residual correlation matrix, which can be found in Appendix XII.

Below the diagonal is the reproduced correlation matrix, in the diagonal the communalities, and above the diagonal, the residuals.

As can be seen, the model reproduced the correlation matrix, meaning that it works well.

8.2 Multivariable regression analysis

With the help of multivariable regression analysis what kind of relationship exists between dependent and independent variables can be defined.

In the model the independent variable is the investment rate of the

municipality.

The steps of analysis:

1. Choose the grouping variable in order to create municipal groups for which groups the regression equations will be defined.
2. Choose the independent variables and create the correlation matrix. (The independent variables must be non-correlated.)
3. Determine the regression coefficients.

8.2.1 The unit of the research

First, I grouped the municipalities in order to create the appropriate sized units for the analysis. Choices for the grouping variable were the region (or other smaller territorial unit) or the size of the municipality.

"One specific characteristic of regional development policy – as opposed to the macro-level policy - is that it emphasises the advantages of the different levels of intervention. Different needs can be articulated at macro- and mezo-regional levels, at county and micro-regional levels. This means that for the implementation of regional development programs or policies we have to find the adequate regional level from the above possibilities." (Csatári, [1996] (translated by the author))

As a basis for research, the level of settlements is not adequate due to the fragmentation of the settlement system. At the other end of the scale, research at the national level would not allow an examination of regional differences.

What is left is the level of micro-regions, the counties and the regions,

which are examined in the following sections.

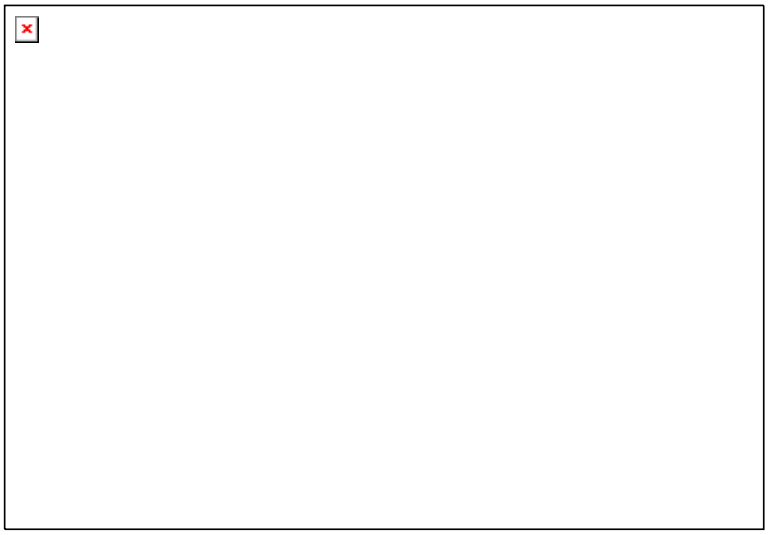
The level of micro-regions

„The micro-regions can be considered …such planning and development units that mainly satisfy the everyday needs of rural areas related to …their economic, social, and infrastructural relationships. ...Their main objectives are regional development that is tied to the local identity, and to enhance co-operation among municipalities. They elaborate development plans, raise and co-ordinate financing, help achieve co-operation between villages and towns. They realise regional improvements while ensuring local and regional identity..." (Csatári, [1996] (translated by the author))

In Hungary, there are 150 micro-regions, which form 5 groups according to their development level: (1) dynamic developers, (2) developers, (3) catching-up regions, (4) stagnating regions and (5) falling behind regions (Faluvégi [2000]). If the level of micro regions is chosen as the level of research, municipalities may be grouped according to which of the above five categories they belong to.

The micro regions in Hungary are illustrated in Figure 12.

Figure 12. The micro regions in Hungary



Source: Albert Faluvégi. [2000.] www.ksh.hu

The level of the county and the regions

It is not by any chance that these two levels are discussed together, as it is often said that creating regions would diminish the power of the counties.

„No one argues that the regional structure works more efficiently when fulfilling administrative tasks than the county structure. If functional and statistical regions will be created in Hungary, then devising local administration and central administrative tasks will be the easiest at the regional level. Accordingly, in the future the ministerial regional offices should be set up at the regional level, while the local, decentralized administrative tasks should be carried out by county government, which supposes the division of administrative tasks and power in this aspect too." (Szegvári [1997], pp. 4. (Translated by the author)).

One reason for creating the regions was to create territorial units that are comparable with the EU structure (NUTS II level, which would cover three to five Hungarian counties). Another reason for their creation was that the appropriate level of intervention to achieve change in the economic structure of the country is above the county level, because the co-ordination of resources needed for any change is easier at the regional level, and because the co-ordination of medium- and long-term programs requires a bigger unit than a county.

After examining the possibilities, I decided to create models for (i) the regions, (ii) the groups created based on the size of the municipalities, and (iii) the development groups of micro regions.

8.2.2 Choosing the variables of the regression equation

I wanted to analyse the effects on the investment rate of the following variables:

In 2000

- The sum of current revenues;
- The amount of normatives;
- The amount of the business turnover tax and the tax on tourism;
- The amount of the communal tax and property tax;
- The investment revenues;
- The privatisation revenues;

- The revenue from financial investments;
- The amount of state investment subsidies;
- The amount of current expenditures;
- The amount of investment expenditures;
- The long term loans;
- The sum of loans.

These are numeric variables, the basic requirement of regression analysis. The other requirement of the analysis is that the variables should not correlate (or the correlation should be as small as possible, as zero correlation is very rare in reality). After examining whether the variables correlated (the correlation table is in Appendix XIII), I decided to leave out several of the variables from the analysis because of the level of correlation.

The variables remaining after the correlation test are as follows:

In 2000

- The revenue from the tax on tourism and from the business turnover tax (the local tax revenues);
- Central investment subsidies (state subsidies);
- The amount of long term loans (loans).

Table 10. illustrates that although there is some correlation among these variables as well, it is so small that performing the analysis is still possible.

Table 10. The correlation table of the independent variables. (p=0,05)

	Local taxes	State subsidies	Loans
Local taxes	1 N=2280	0,06 N=1602	0,059 N=1494
State subsidies	0,007 N=1602	1 N=1875	0,008 N=1303
Loans	0,09 N=1494	0,006 N=1303	1 N=1690

8.3 Defining the determinants of the regression equations and analysing the results

The equations for the municipal groups are based on the population, the region and the development level of the micro region the municipality belongs to.

8.3.1 Regression based on the population of the municipalities

The categories are as follows:

- Population below one thousand
- Population between one and two thousand
- Population between two and five thousand
- Population between five and ten thousand
- Population between ten and twenty thousand
- Population between twenty and fifty thousand
- Population between fifty and one hundred thousand

- Population above one hundred thousand

The variables in each case are the same:

X_1 = business turnover tax and tax on tourism

X_2 = central investment subsidy

X_3 = loans

I. Municipalities with a population below 1000 (N= 513)

Regression equation:

$$Y = 0,17 - 0,0021*X_1 + 1.89837E-04* X_2 + 0,007 * X_3$$

R^2 =18,88

F = 39,53 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-3,18	-5	0,00
Central investment subsidy	0,38	9,47	0,00
Loans	3,25	5,11	0,00
Constant		20,8	0,00

II. Municipalities with a population between 1000 and 2000 (N= 248)

Regression equation:

$$Y = 0,156 – 9,16E-06*X_1 – 4,995E-05*X_2 + 0,003*X_3$$

R^2 =0,06

F = 5,22 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,1	-1,55	0,12
Central investment subsidy	-5,86	-1,88	0,06
Loans	6,04	1,95	0,05
Constant		11,79	0,00

III. Municipalities with a population between 2000 and 5000 (N=173)

Regression equation:

$$Y = 0,15 + 8,3E\text{-}04*X_1 + 0,001*X_2 – 0,002*X_3$$

R^2 =0,18

F = 12,62 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	0,33	4,62	0,00
Central investment subsidy	6,16	4,28	0,00
Loans	-6,24	-4,34	0,00
Constant		13,533	0,00

IV. Municipalities with a population between 5000 and 10000 (N=93)

Regression equation:

$$Y= 0,22 – 9.94E\text{-}04*X_1 + 4.06E\text{-}04*X_2 + 0,001*X_3$$

R^2 =0,5

F = 28.62 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,33	-3,74	0,00
Central investment subsidy	0,8	9,01	0,00

Loans	0,15	1,96	0,05
Constant		9,248	0,00

V. Municipalities with a population between 10000 and 20000 (N=32)

Regression equation:

$$Y = 0.13 – 8{,}71E\text{-}05*X_1 + 7{,}12E\text{-}04*X_2 – 1{,}77E\text{-}06*X_3$$

$R^2 = 0{,}2$

F = 2.42 Signif F = 0,09

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,1	-0,5	0,6
Central investment subsidy	0,47	2,5	0,01
Loans	0,06	-0,33	0,7
Constant		2,73	0,74

VI. Municipalities with a population between 20000 and 50000 (N=19)

Regression equation:

$$Y = 2{,}29 – 4{,}83\ E\text{-}05*X_1 – 3{,}17\ E\text{-}04*X_2 + 2{,}29*X_3$$

$R^2 = 0{,}8$

F = 25,9 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,5	-4,5	0,00
Central investment subsidy	-0,61	-5,5	0,00
Loans	0,64	6	0,00
Constant		16,31	0,00

VII. Municipalities with a population between 50000 and 100000 (N=11)

Regression equation:

$$Y= 0,23 + 5,77\ E\text{-}05*X_1 – 0,001*X_2 – 4,24E\ \text{-}04*X_3$$

R^2 =0,97

F = 72,4 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	0,98	6,38	0,00
Central investment subsidy	-0,81	-9,37	0,00
Loans	-1,73	-11,2	0,00
Constant		36,93	0,00

VIII. Municipalities with a population above 100000 (N=10)

Regression equation:

$$Y= - 0,13 + 8,35\ E\text{-}05*X_1 + 6,18\ E\text{-}05*X_2 – 1,74\ E\text{-}05*X_3$$

R^2 =0,27

F = 0.75 Signif F = 0,56

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	0,69	1,38	0,22
Central investment subsidy	0,42	1,06	0,33
Loans	-0,28	-0,64	0,56
Constant		-0,72	0,5

8.3.2 Regression in the groups based on developmental levels of the micro regions

The groups are as follows (Faluvégi, 1998)

- Micro regions that are falling behind
- Stagnating micro regions
- Catching up micro regions
- Developing micro regions
- Dynamically developing micro regions

I. Falling behind micro regions (N= 184)

Regression equation:

$$Y = 0,14 – 7,93\ E\text{-}06*X_2 + 0,001*X_3 – 2,48\ E\text{-}06*X_3$$

$R^2 = 0,33$

F = 29,3 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,07	-1,17	0,24
Central investment subsidy	0,56	9,22	0,00
Loans	-0,03	-0,46	0,65
Constant		9,8	0,00

II. Stagnating micro regions (N= 189)

Regression equation:

$$Y= 0,2 – 1,09\ E\text{-}05*X_1 + 2,82\ E\text{-}06*X_2 – 5,55\ E\text{-}05*X_3$$

R^2 =0,05

F = 3,46 Signif F = 0,02

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,08	-1,13	0,26
Central investment subsidy	0,35	2,88	0,00
Loans	-0,19	-1,61	0,1
Constant		12,66	0,00

III. Catching up micro regions (N= 329)

Regression equation:

$$Y= 0,16 – 3,81\ E\text{-}04*X_1 + 0,001* X_2 – 3,442\ E\text{-}04*X_3$$

R^2 =0,05

F = 6,90 Signif F =0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,13	-1,78	0,07
Central investment subsidy	0,35	3,68	0,00
Loans	-0,04	-0,53	0,6
Constant		15,95	0,00

IV. Developing micro regions (N= 168)

Regression equation:

$$Y= 0,17 – 1,66\ E\text{-}04*X_1 + 4,8\ E\text{-}04*X_2 + 2,23\ E\text{-}04*X_3$$

R^2 =0,03

F = 1,95 Signif F = 0,12

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,59	-2,36	0,01
Central investment subsidy	0,29	2,15	0,03
Loans	0,43	2,03	0,04
Constant		12,66	0,00

V. Dynamically developing micro regions (N= 230)

Regression equation:

$$Y= 0,18 – 5,31\ E\text{-}05*X_1 + 7,59\ E\text{-}04*X_2 + 2,85\ E\text{-}07*X_3$$

R^2 =0,09

F = 7,46 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,16	-2,19	0,02
Central investment subsidy	0,32	4,63	0,00
Loans	0,09	1,37	0,17
Constant		14,34	0,00

8.3.3 Regression in the different regions

The results are as follows:

I. Central Hungary (N= 68)

Regression equation:

$$Y= 0,18 – 0,002*X_1 + 0,001*\ X_2 + 0,003*X_3$$

R^2 =0,45

F = 17,55 Signif F = .00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,81	-5,43	0,00
Central investment subsidy	0,73	6,75	0,00
Loans	0,47	3,5	0,00
Constant		6,97	0,00

II. Central Trans-Danubia (N= 176)

Regression equation:

$$Y= 0,166 + 1,68\ E\text{-}04*X_1 + 1,92\ E\text{-}04*\ X_2 – 3,56\ E\text{-}04*X_3$$

R^2 =0,02

F = 1,44 Signif F = 0,22

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	0,33	1,66	0,1
Central investment subsidy	0,93	1,66	0,1
Loans	-1,07	-1,82	0,07
Constant		12,38	0,00

III. Western Trans-Danubia (N= 189)

Regression equation:

$$Y= 0,14 – 3,62\ E\text{-}05*X_1 + 0,002*\ X_2 + 8,811\ E\text{-}04*X_3$$

R^2 =0,52

F = 3,39 Signif F = 0,02

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,11	-1,13	0,26
Central investment subsidy	0,13	1,63	0,1
Loans	0,2	1,78	0,07
Constant		13,82	0,00

IV. Southern Trans-Danubia (N= 214)

Regression equation:

$$Y= 0,17 – 4,15\ E\text{-}05*X_1 + 0,0011*X_2 – 3,63\ E\text{-}05*X_3$$

R^2 =0,04

F = 3,53 Signif F = 0,02

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,32	-3,05	0,00
Central investment subsidy	0,31	2,99	0,00
Loans	0,01	0,19	0,85
Constant		11,94	0,00

V. Northern Hungary (N= 202)

Regression equation:

$$Y= 0,24 – 1,61\ E\text{-}05*X_1 + 1,37*X_2 + 1,28\ E\text{-}07*X_3$$

R^2 =0,03

F = 2,02 Signif F = 0,11

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,11	-1,61	0,1
Central investment subsidy	0,14	1,93	0,06

Loans	0,03	0,45	0,6
Constant		12,99	0,00

VI. Northern -Great Plain (N= 133)

Regression equation:

$$Y= 0,08 – 5,03\ E\text{-}05*X_1 + 0,002*X_2 – 6,46\ E\text{-}07*X_3$$

R^2 =0,69

F = 98,9 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,14	-2,92	0,00
Central investment subsidy	0,84	17,2	0,00
Loans	-0,12	-0,24	0,81
Constant		9,62	0,00

VII. Southern -Great Plain (N=117)

Regression equation:

$$Y= 0,12 – 6,8\ E\text{-}05*X_1 + 5,24\ E\text{-}04*X_2 – 1,38\ E\text{-}05*X_3$$

R^2 =0,11

F = 4.78 Signif F = 0,00

Variable	Beta	T	Sig T
Business turnover tax and tax on tourism	-0,28	-0,68	0,5
Central investment subsidy	0,48	3	0,00
Loans	0,17	0,36	0,97
Constant		11,57	0,00

8.3.4 Evaluating the results and examining the parameters of the equations

When evaluating the results, we take into account the values of the F-test that serves for checking the correspondence the model, and the values of the T-test, that is for checking the parameters of the equations. If these values are below 0,05, we can say that the regression model is working well. Another important element of the examination of the model is checking the R^2, which is the explained deviation.

In the five micro regions' groups and in the seven regions the significance level of the F- and T-tests are above 0,05 in several cases, and the value of the R^2 is too low.

In the groups based on the population of the municipalities the model works well in most cases. The results are questionable in the case of the bigger municipalities, possibly due to the small sample. However, the population of 95% of Hungarian municipalities is below 10000.

The significance levels are below 0,05 (even 0,01) in most cases, so the zero hypothesis of the regression analysis, according to which there is no relationship between the independent variables and the dependent variable, does not apply.

This mans that if the government wanted to raise the investment level in the smaller municipalities, it can do so by changing one or more of the independent variables (the local tax policy, central subsidies, and loan activity).

The effects of the change of the variables are different in the different groups. In municipalities smaller than 10000 inhabitants, the independent variables explain 25-50% of the deviations of the dependent variable, while in the bigger

municipalities, they explain as much as 80-90%.

As a consequence, when the extent and the direction of the effect of the independent variables are examined, we can see that municipalities below and above 10000 inhabitants should be distinguished.

The rise in the amount of local taxes and central subsidies usually means a rise in the investment rate in both groups.

The loan activity has different effects in the case of smaller municipalities and in the case of bigger municipalities. While in the smaller municipalities the rise in the amount of loans means a rise in the investment activity, in the bigger municipalities the result is just the opposite. If a municipality has more loans, it is more likely that it will have a lower investment rate.

The reasons are (i) the difference among the financial resources available to the two groups, (ii) the preferences of the central subsidy policy and (iii) the expenditure structure of investments.

- Bigger municipalities usually have more income from the business turnover tax than smaller ones and they also have the opportunity to co-operate with private companies in infrastructure projects. These options are not available for small municipalities, meaning that smaller municipalities have to take out loans in order to substitute for these sources of financing.
- A minimum requirement for receiving state subsidies for investments is a population served by the asset of a minimum of 10000 people. The big municipalities easily meet this requirement, while the smaller ones have to form municipal

associations, which takes time and energy. (As the population of 65% of municipalities is below 3000, many municipalities have to co-operate with at least two other partners.)

- Big investments have high fixed costs, which put a bigger burden on the budget of a smaller municipality. Thus, when smaller municipalities start investments, they are more likely to have cash-flow problems, and may have to take out loans later in the project for financing other municipal tasks.

9 THE INSTITUTION FOR ENHANCING MUNICIPAL CREDIT MARKET PARTICIPATION

Based on the conclusions of the previous chapter, municipal investment behaviour depends mostly on the size of the municipality, and in 95% of municipalities there is a positive relationship between the long-term loans of the municipality and its investment rate. This means that the creation of an institution enhancing municipal credit market activity would also have a positive effect on municipal investments.

The institution could operate as a guarantee fund, bank, or development agency. The setting up of this institution is in the interest of municipalities, banks with municipal clients (the local government sector represents potential bank customers, which, although higher risk, could provide good returns if market tools reducing risks are used in municipal lending), and the state itself (this would broaden the possibilities for financing local investments, and would decrease the pressure on the central budget).

Municipalities would be free to participate in the guarantee fund. The most important characteristic of the guarantee institution is mutuality. Co-operation between municipalities creates stronger actors in the market than they would comprise separately, if they acted individually in the marketplace. As a consequence they could negotiate better loan conditions.

A highly criticised element of lending activity is the fact that collateral for loans may consist of immobile assets not directly related to the purpose of the

loans. One advantage of creating the municipal guarantee institution is that these municipal assets could be used for other purposes or could be sold. Although in the past one trend was to create entrepreneur municipalities, this has lately been criticised, because municipal enterprises are often too risky, and they take away the municipality's capacity from obligatory tasks, making its operation less efficient.

With this kind of guarantee, the administrative costs of the loans would decrease, as the risks would be spread out among several actors on the market. As the municipalities are responsible for each other's debt (mutuality), they would force each other to be more diligent, which would lead to more secure municipal debt and better financial management.

9.1 The two-level system

Based on international experience a two-level system would best serve the enhancement of municipal credit market participation. The first level would consist of the guarantee institutions of municipalities, while the second level would be a state counter-guarantee fund.

9.1.1 The guarantee institutions

The task of the guarantee institutions would be to guarantee the loans of member municipalities. According to Act CXII (1996) on financial institutions, offering guarantees as a business activity can only be done by financial institutions. The same law says that the form of financial institutions can only be a shared company or a co-operative. The Act I (1992) on co-operatives provides that among the members of a co-operative the number of legal persons cannot surpass the

number of natural persons. As a consequence, the co-operative is not feasible as a form of the institution because of the municipal owners.

An important question related to the guarantee institutions is their number. It may be useful to create several institutions based on the special requirements of the municipal groups. Institutions would be created for fulfilling the needs of the smaller municipalities, others for the bigger investments of bigger municipalities, and another for investments that involve foreign financing, such as PHARE or other EU funds. The minimum equity of each institution must be 50 million HUF according to law[27]. (Apatini – Barati – Koncz in Barati [2001] pp. 113.)

9.1.2 The guarantee fund

The state guarantee fund would stand behind the guarantee institutions. This is in accordance with the international practice, and Hungary also provides a positive example, as the Small Entrepreneurs' Guarantee Fund functioned this way. This is also in accordance with EU rules, as it is possible to get financing from the Structural Funds for the purpose of establishing and replenishing guarantee funds of the member states.

According to Hungarian legislation, funds can only be created by passing a law regulating the management and operation of the fund and determining its relationship to the central budget.

The assets of the fund would not be divided among the guarantee institutions, but its balance would be calculated based on the accumulated need of the member institutions.

9.1.3 Funding, financial requirements

The state counter-guarantee fund would be owned by the state.

The guarantee institutions would be owned by the municipalities and others, such as the state and representatives of the banking sector. In order to enhance municipal ownership, the guarantee service would be offered only to the member (owner) municipalities. At the beginning of its operation, municipalities would represent about 50% of the ownership shares, while the banking sector and the state would each hold 25% of the shares. Later, these proportions would change in favour of the municipalities.

The advantage to municipalities to participate in the institution is a high level guarantee on their loans. The banks' interest is to enforce safe lending and guarantee rules that harmonise with their business policy, and the state's interest is to manage risk and minimise the losses of the guarantee fund.

In order to decide the equity needs of the system, one must assess the maximum level of loans the institutions can guarantee and for that one must assess the planned rate of failure.

In Hungary, the latter would be 12,5% at the beginning (normally, it is lower, but when starting a new business a cautious approach is needed).

Using the multiplier known from economic literature (1 / rate of failure) if the planned failure rate is 12,5%, then the maximum loans guaranteed can not be higher than the equity of the institutions multiplied by eight. This means that if we suppose a 100 billion HUF loan demand on the municipalities' side, then the resources needed to start the system is 10 billion HUF, 7 billion in the state

counter-guarantee fund and 3 billion in the guarantee institutions. (Apatini –Barati – Koncz in Barati [2001] pp. 129-130.)

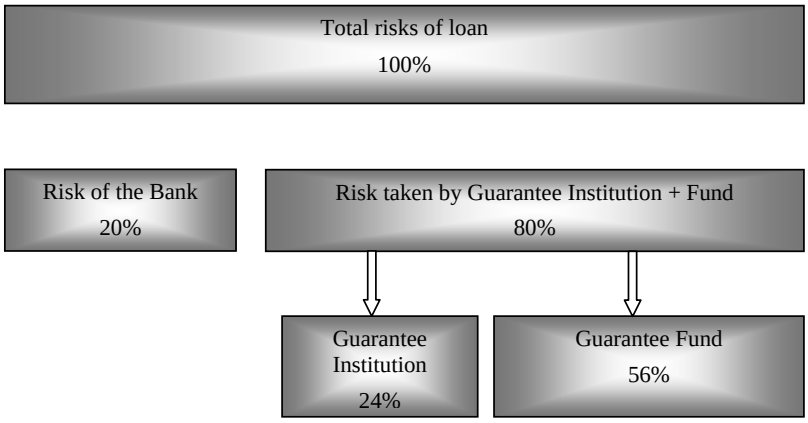
9.2 The services offered by the guarantee institutions

The basic service offered by the institutions would be guarantees on municipal loans, but with time other services could be added. The state guarantee fund would only offer guarantee services.

When sharing risk, it is important to decide how much risk one actor should bear. Of course, every actor has to bear some part of the total risk. Since in Hungary guarantee institutions offer 80% guarantees and the state counter-guarantee fund offers a 70% counter-guarantee, and this model works well, it is worth considering continuing this tradition.

The risk sharing among the actors is as follows:

Figure 13. Risk sharing in the guarantee system



Source: Apatini – Barati – Koncz. [2001]. The Municipal Guarantee Program. In: Barati. pp. 121.

The institutions would invest municipal payments, and would create a reserve fund (similar to the Holland Municipal Bank) which would only be used if a municipality were not able to meet its obligations. Of course, this municipality would have to pay the "loan" back into the reserve fund based on an emergency scenario developed for the municipality. This is the guarantee that the interests of other member municipalities will not be hurt.

The possible services offered by the institutions are as follows:

9.2.1 Consulting

In this aspect the Hungarian guarantee institutions would not be different from the international examples, as their services include a wide range of banking and consulting services. Municipalities have to hire costly experts in different areas in order to plan and realise a project, for which it might not have the necessary capacities.

The employees of the institutions could take part in elaborating contracts for the municipalities, ensuring that the „vis major" (when it is not possible to determine who is responsible for the failure of the project) cases in the contracts are minimised. [28]

The employees of the fund could also help the municipality when applying for international funding, ensuring that the applications meet the formal requirements of the international funds.

The guarantee fund could also take part in finding investors for the project, as through its other partners it would have a broad knowledge of the market.

9.2.2 Credit rating

Credit rating agencies are important institutions for developing municipal credit markets. The availability of municipal budget data, strategic plans, and economic and social data is essential for rating municipalities. The services of international rating agencies are very expensive, and municipalities do not understand their importance yet. The guarantee institution would have to make a credit assessment of the risks it is taking when providing the guarantee. This could be an initial step for the general rating of the municipalities.

9.2.3 International loans

International organisations would probably prefer to allocate their money to a municipality that was rated by the guarantee institution and that was secured by it. They would also have more confidence if the staff of the guarantee institution would have given their opinion on the project previously, and would monitor the realisation of the development project to its completion.

The guarantee institution could also be a channel for international (and national) subsidies and would make it possible to rationalise the cash flow of the project.

9.2.4 Offering loans and issuing bonds

If the institution would work as a bank, it would also be possible for it to issue bonds, and its function would be similar to that of a bond bank. It would buy bonds issued by municipalities, and would issue its own bonds, covered by the income flow from the repayment of the municipal bonds.

9.2.5 Fees for services

If the institutions would offer such services, the income from fees could cover a substantial part of its financing needs. The fees would be differentiated for member municipalities and for non-members.

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SUMMARY

Among the Central European transition economies, Hungary was one of the firsts to reform its municipal system, to introduce rules accelerating the decentralisation process. The reforms concerned the relationship between the public and the private sectors, the service provision and the financing mechanisms of municipalities. But despite the changes, there are still many problems to be solved.

There is a big gap between the environmental and infrastructural situations of the current and future member countries of the European Union. In order to reduce this gap, according to the co-operation agreement with the EU, Hungary has to improve its infrastructural and environmental situation. According to conservative calculations, in the environmental sector alone some 6,8-7,6 billion euros will have to be spent in order to solve the problems (Kerekes – Kiss [1998] pp 23.).

On the other hand, it is not only the EU that urges these improvements. They are necessary in order to avoid future environmental problems, and the level of services is not sustainable with the current physical infrastructure. The decentralisation process also pushes local governments to make these developments.

In an investment process an important question concerns the financial sources. When talking about investment financing sources, the first one that financial officers usually think of is the “cheapest” one -- the central or regional

subsidy. Next is the municipality's own revenues that are available in the budget (income from privatisation), then subsidised loans, and finally, market loans. The involvement of the public sector as partners in financing is also more frequent.

Some municipal infrastructure investments in the long term generate revenue directly through service fees (such as water and sewage investments) while others contribute to local development (such as road investments). As a consequence, infrastructure investments should be financed from loans (Bird - Tassonyi [2001]).

Municipalities and the loan market

Even in countries where municipalities are free to participate in credit market transactions, the central government might set limits for municipal borrowing. This is needed because the market often assumes the existence of central guarantees of local debt, even where not explicit, which might seriously undermine the creditworthiness of the state. Other reasons for central intervention are: (i) local borrowing raises the cost of capital for the private sector; (ii) the state might compete for the same resources as the municipalities and (iii) it worsens the balance of the central budget.

On the other hand, to some extent the state might support municipal borrowing. The reasons are:

Local borrowing decreases the financial burden on the central budget.

(i) Local borrowing decreases the financial burden on the central budget.

(ii) Loans are usually more efficient than grants (the efficiency of capital increases).

(iii) Municipalities realise improvements from loans that are closer to the needs of citizens as compared to grants.

(iv) The repayment of the debt can last the whole lifetime of the realised asset.

(v) Local borrowing provides a good investment opportunity for the local financial market, pension funds and insurance funds.

Hungarian laws about municipal borrowing leave a great deal of freedom to municipalities, but they do not take advantage of this opportunity.

One reason is that other municipal revenues such as central grants and income from privatisation proved to be enough in the last ten years and the fiscal behaviour of the typical municipal financial officer could be characterised by conservatism. (Barati [1999]). The other reason is that in case there is no state guarantee on municipal debt, then there is a strong market control on borrowing. In Hungary, the state does not repay municipal debt, so municipalities can raise loans if they meet the criteria set by the lender.

As Hungarian municipalities do not meet the market criteria, they are in a very difficult situation, as the due to the lack of traditional financial sources, but also based on economic rationality, they will have to use loans for their investments.

Municipalities need the assistance of the state to become creditworthy. The

central government has two main tasks related to the creditworthiness of municipalities. First, it has to keep its own creditworthiness as high as possible in order to maintain the creditworthiness of the municipalities and secondly, it has to create the institutional and legal background for municipal credit market participation.

Based on international experiences, if we decrease the risks associated with municipal lending, we can help the development of credit markets and as a consequence, the local investments.

Based on the data from 1999-2000 in the TÁRKI database, the investment activity of municipalities changes according to the geographical situation, the economic situation and the size of the municipality. The availability of the data made it possible to perform factor and regression analysis, and to define what kind of relation exists between the investment rate of a municipality and the independent variables, such as state subsidies, the amount of long term loans and local taxes.

The descriptive analysis

Investments

The most common types of municipal investments are water, sewage and road improvements. Less money is spent on healthcare and gas investments. The planners of water and sewage treatment plants are mostly municipal associations.

Municipalities were asked why they form associations and why they remain outside associations.

While 52% of municipalities agreed that assets are easier to operate through associations because the continuous financial burden is lower, more than 70 % of them agreed that associations are more successful at grant applications than single municipalities and that the starting costs of the investments are lower.

Consequently, municipalities appreciate associations more for their ease of receiving investment money than for the lower operating costs of investments made through them.

The sources of investments

The most common sources are regional grants, targeted grants and other centrally allocated grants. Other sources, such as privatisation revenues, international grants, involvement of the private sector or loans do not play an important role in municipal financing. This can be explained by the following facts. Municipal co-operation with the private sector is not widespread, although it is getting more frequent. Municipalities are not able to raise funds on the credit market and, furthermore, they do not have experience in developing successful applications for international grants – and they are not able to provide the necessary matching part of these grants either.

Conditions of loans

Municipalities were asked about the amount, term and interest of their loans in 2000. They said that the amount of loans increased, the interest rate became lower and the term got longer. This indicates that two processes in Hungary are taking place. First, the Hungarian municipal credit market offers credit products that meet the special requirements of municipalities, so the market recognises the

municipalities as potential clients. Second, the Hungarian economy is stabilising, which makes it possible for banks to offer loans with lower interest rates and longer terms.

The guarantees of municipal loans in most cases are immobile assets. This is a highly criticised practice of the Hungarian municipal credit market. On the one hand, the value of the asset often surpasses many times the amount of the loan, and on the other hand, involving an asset into the financing of a project, to which it is not otherwise related, is not economically efficient.

Other options for backing municipal loans include the tax or service fee income of the municipality. Using taxes for guaranteeing loans is more frequent than the use of fees, although the latter would be ideal for that purpose. First, they are directly related to the project and second, their flow can be synchronised with the repayment structure of the loan. Moreover, in case a municipality would need to increase the financial resources for loan repayment, raising fees is normally easier than raising the level of municipal taxes.

Multi-variable data analysis

With the help of factor and multivariable regression analysis my goal was to reveal the interdependence structure of the variables, and to reveal what kind of relationship exists between dependent and independent variables.

The regression equation provides an efficient tool in investment policy, as its determinants show which variable has a greater effect on the value of investments. As a consequence, investment-enhancing programs can be customised for specific regions, taking into account those areas for which the central subsidies

would not produce results. In the latter areas, the state will have to develop special programs to enable those regions to use the grants effectively.

Regression analysis

I used the data from 2000 for the analysis.

First, I grouped the municipalities in order to create the appropriate sized units for the analysis. Choices for the grouping variable were the region (or other smaller territorial unit) or the size of the municipality. After examining the possibilities, I decided to create models for (i) the regions, (ii) the groups created based on the size of the municipalities, and (iii) the development groups of micro regions.

The result is that the model works best in the groups based on the population of the municipalities.

When evaluating the results, we take into account the values of the F-test that serves for checking the correspondence the model, and the values of the T-test, that is for checking the parameters of the equations. Another important element of the examination of the model is checking the R^2, which is the explained deviation.

In the groups based on the population of the municipalities the significance levels are below 0,05 (even 0,01) in most cases, so the zero hypothesis of the regression analysis, according to which there is no relationship between the independent variables and the dependent variable, does not apply.

The effects of the change of the variables are different in the different groups. In municipalities smaller than 10000 inhabitants, the independent variables

explain 25-50% of the deviations of the dependent variable, while in the bigger municipalities, they explain as much as 80-90%.

This result leads to the conclusion that the interdependence structure of the variables is more complicated in the case of smaller municipalities than in the case of bigger municipalities. If the state would want to raise the investment level of municipalities, it could do so by changing one or more of the independent variables (the local tax policy, central subsidies, loans).

As a consequence, when the extent and the direction of the effect of the independent variables are examined, we can see that municipalities below and above 10000 inhabitants should be distinguished.

The rise in the amount of local taxes and central subsidies usually means a rise in the investment rate in both groups.

The loan activity has different effects in the case of smaller municipalities and in the case of bigger municipalities. While in the smaller municipalities the rise in the amount of loans means a rise in the investment activity, in the bigger municipalities the result is just the opposite. If a municipality has more loans, it is more likely that it will have a lower investment rate.

The reasons are (i) the difference among the financial resources available to the two groups, (ii) the preferences of the central subsidy policy and (iii) the expenditure structure of investments.

- Bigger municipalities usually have more income from the business turnover tax than smaller ones and they also have the

opportunity to co-operate with private companies in infrastructure projects. These options are not available for small municipalities, meaning that smaller municipalities have to take out loans in order to substitute for these sources of financing.

- A minimum requirement for receiving state subsidies for investments is a population served by the asset of a minimum of 10000 people. The big municipalities easily meet this requirement, while the smaller ones have to form municipal associations, which takes time and energy. (As the population of 65% of municipalities is below 3000, many municipalities have to co-operate with at least two other partners.)
- Big investments have high fixed costs, which put a bigger burden on the budget of a smaller municipality. Thus, when smaller municipalities start investments, they are more likely to have cash-flow problems, and may have to take out loans later in the project for financing other municipal tasks.

The municipal loan guarantee institutions

Based on the conclusions of the reserch, municipal investment behaviour depends mostly on the size of the municipality, and in 95% of municipalities there is a positive relationship between the long-term loans of the municipality and its investment rate. This means that the creation of an institution enhancing municipal credit market activity would also have a positive effect on municipal investments.

The setting up of this institution is in the interest of municipalities, banks with municipal clients and the state itself.

The most important characteristic of the guarantee institution is mutuality. Co-operation between municipalities creates stronger actors in the market than they would comprise separately, if they acted individually in the marketplace. As a consequence they could negotiate better loan conditions.

A highly criticised element of lending activity is the fact that collateral for loans may consist of immobile assets not directly related to the purpose of the loans. One advantage of creating the municipal guarantee institution is that these municipal assets could be used for other purposes or could be sold. Although in the past one trend was to create entrepreneur municipalities, this has lately been criticised, because municipal enterprises are often too risky, and they take away the municipality's capacity from obligatory tasks, making its operation less efficient.

With this kind of guarantee, the administrative costs of the loans would decrease, as the risks would be spread out among several actors on the market. As the municipalities are responsible for each other's debt (mutuality), they would force each other to be more diligent, which would lead to more secure municipal debt and better financial management.

Based on international experience a two-level system would best serve the enhancement of municipal credit market participation. The first level would consist of the guarantee institutions of municipalities, while the second level would be a state counter-guarantee fund.

The task of the guarantee institutions would be to guarantee the loans of member municipalities.

The state guarantee fund would stand behind the guarantee institutions. This is in accordance with the international practice, and Hungary also provides a positive example, as the Small Entrepreneurs' Guarantee Fund functioned this way. This is also in accordance with EU rules, as it is possible to get financing from the Structural Funds for the purpose of establishing and replenishing guarantee funds of the member states.

The assets of the fund would not be divided among the guarantee institutions, but its balance would be calculated based on the accumulated need of the member institutions.

The state counter-guarantee fund would be owned by the state.

The guarantee institutions would be owned by the municipalities and others, such as the state and representatives of the banking sector. The advantage to municipalities to participate in the institution is a high level guarantee on their loans. The banks' interest is to enforce safe lending and guarantee rules that harmonise with their business policy, and the state's interest is to manage risk and minimise the losses of the guarantee fund.

In order to enhance municipal ownership, the guarantee service would be offered only to the member (owner) municipalities.

No matter what form this institution will take, it will only be a tool for mobilizing the Hungarian municipal credit market. It will not be able solve the investment financing problems of small municipalities by itself.

In order to solve the infrastructure development problems of small municipalities, the state needs to make complex projects that involve the improvement of the revenue raising capacity of municipalities, that help in pre-

financing of municipal infrastructure projects and that provide an incentive for enhanced municipal co-operation. The municipal guarantee institution could only be a step, an important tool in the realisation of this state program.

APPENDICES

Appendix I.

Appendix I. / A.

TARKI questionnaire, 1999 autumn (Translated by the staff of TÁRKI)

The data of the municipality

1.) The name of the municipality (in the capital the number of the district):

.....

2.) County

1 - Bács-Kiskun	8 - Hajdu-Bihar	15 - Szabolcs-Szatmár
2 - Baranya	9 - Heves	16 - Tolna
3 - Békés	10 - Jász-Nagykun-Szolnok	17 - Vas
4 - Borsod-Abaúj-Zemplén	11 - Komárom-Esztergom	18 - Veszprém
5 - Csongrád	12 - Nógrád	19 - Zala
6 - Fejér	13 - Pest	
7 - Győr-Moson-Sopron	14 - Somogy	20 - Budapest

Budget questions

3.) Please assess the next year's

	Million (local currency)
Total income of the municipality	
Borrowing for longer than one year (both for operating and investment purposes)	
The expenses on maintenance and developing of the assets	

4.) Is the municipality planning new investments in the following sector?

	Not Planned
Healthcare	0
Education	0
Water, sewage, pipe system	0
Disposal sites	0
Building roads	0
Gas provision	0

5.) Which of the following sources do you plan to involve into the financing of the above investments?

	Yes	No
Targeted subsidies	1	0
Other central subsidies	1	0
International sources (for example Phare)	1	0
Regional, county subsidy	1	0
Fees	1	0
Private sector (concession)	1	0
Loan (investment loan, bonds, mortgage)	1	0

6.) Please assess, what is going to be the inflation rate in 1999?

..... %

6.) a. Please assess what is going to be the inflation rate in 2000?

..... %

7. Please assess, the next year in your municipality

	Will grow	Will not change	Will increase
...the number of inhabitants	0	1	2
... the umber of unemployed	0	1	2
... the number of people on allowances	0	1	2
... the number of public employees	0	1	2

8.) During the next year…

		Will be easier	Will not change	Will be more difficult
1.	... Borrowing (terms, coverage, etc.)	0	1	2

2.	... getting investment subsidies from the state (including funds)	0	1	2

Attitudes, opinions

Please, give your appreciation...
9.) ... on the situation of Hungarian economy using the ten grades scale below:
Vary bad 1 2 3 4 5 6 7 8 9 10 Very good

10.) ... on the future situation of Hungarian economy during the next year
will be far worse 1 2 3 4 5 6 7 8 9 10 will be much better

11.) ... on the economic situation of your local government
very bad 1 2 3 4 5 6 7 8 9 10 very good

12.) ... on the future economic situation of your L. G. during next year
will be far worse 1 2 3 4 5 6 7 8 9 10 will be much better

13.) What do you think on the opinion of locals on the local government's activity?
Very bad 1 2 3 4 5 6 7 8 9 10 Very good

14.) In your opinion, in which direction the local opinion will change on the local government's activity?
will be far worse 1 2 3 4 5 6 7 8 9 10 will be much better

15.) What percentage of the PIT do you think should be redistributed to the local level?

….....……%

Public Service Delivery

16.)
The range of the public service which will be analysed:
1. water, sewer
2. waste management (disposal and collection)
3. local public finance
4. district heating

17.) WHAT IS THE SERVISE PROVISION METHOD IN YOUR MUNICIPALITIES?
a. municipality
b. municipal company (majority is on the hand of municipality)
c. company or other organisation owned by other municipality (majority is on the hand of other municipality)
d. state owned company (majority is on the hand of state)
e. private company (majority is on the hand of private company)
f. other form

18.). IS THERE A CONTRACT WITH THE SERVICE PROVIDER?
a. yes
b. no

WHEN WAS IT SIGNED: _____ year
WHENT WILL IT BE EXPIRED: _____year, or INDEFINED

19.) WHO OWNS THE EQUIPMENT AND REAL PROPERTIES REQUIRED FOR THE SERVICE PROVISION?

a. most assets is on the hand of the municipality
b. most assets is on the hand of the provider

WHO MANAGES THE ASSET OF THE MUNICIPALITY

a. municipality
b. the service provide within management contract or concession WITHOUT INVESTMENT REQUIREMENT
c. the service provide within management contract or concession WITH INVESTMENT REQUIREMENT
d. other

IS THERE SERVICE CHARGE?

a. no (e.g. if it is financed through communal tax)
b. yes, the municipality collects the fees
c. yes, the provider collects the fees

ON WHAT METHOD IS THE CHARGE REGULATED?

a. the municipality sets the price based on detailed budget analysis, annually
b. the municipality adjusts the former year price with a defined formula (formula based finance)
c. other

LOGIN QUESTIONS

20.) Do you have at your local government...

... computer?

... computer network?

... e-mail address?

... informatic expert in part or full time job?

21.) Is there on the territory of your municipality an open-air market? (Any daily or weekly market or fair, with or without license on which at least 10-20 trader sell their goods.)

IF YES: 21.1) How many such places are there? .....
0 – none

If there are more than one open-air market on the territory of the municipality, think of the largest one!

22) On an average day, usually how many stalls, tables, tents are there on the open-air market?

About. .....

23.) How many months is this open-air market open annually?

..... months

24.) On which days is this open-air market open?

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7

25.) At what time does the open-air market open and close?

Opens at ..... o'clock
Closes at ..... o'clock

26.) Are there at the municipality jobs in which black labour is common?

26.1) – yes, such as:
.....

.....
1 - no

26.2) IF YES: Where are the black workers usually recruited?

	Yes	No
In pubs	2	1
In espressos	2	1
On certain squares or streets	2	1
Close to the Railway or bus stations	2	1
At the outskirts or fringes of the municipality	2	1
On the open-air market	2	1
Other, through personal networks	2	1

27) What are the highest and lowest wages?

	HOURLY		OR DAILY WAGE	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Mason	.....Ft/hour	.....Ft/hour	.....Ft/day	.....Ft/day
Agricultural day labourer	.....Ft/hour	.....Ft/hour	.....Ft/day	.....Ft/day
Unskilled labourer in construction	.....Ft/hour	.....Ft/hour	.....Ft/day	.....Ft/day

28.) How many active inhabitants are live in the municipality?

..... persons

29.) Among them approximately how many work

- in an other municipality (commuters) ..... persons
- abroad? ..... persons

Thank you!

The distribution of the answers based on the size of the municipality

	N	%
– 1.000	599	61
1.000 – 2.000	190	19
2.000 – 5.000	120	12
5.000 – 10.000	33	3
10.000 –	34	3
	976	100

The distribution of the answers based on the per capita budget of the municipality

	N	%
Operating municipalities	298	31
Medium investors	342	36
Big investors	309	33
	949	100

The distribution of the answers based on the investment activity of the municipality

	N	%
Poor municipalities	204	21,5
Average municipalities	400	42,1
Rich municipalities	345	36,4
	949	100

Appendix I. / B.

The questions about the municipal expectations and municipal budget in the TARKI questionnaire, 2000 autumn (Translated by the staff of TÁRKI)

1.) The name of the municipality (in the capital the number of the district):

.....

2.) County

1 - Bács-Kiskun	8 - Hajdu-Bihar	15 - Szabolcs-Szatmár
2 - Baranya	9 - Heves	16 - Tolna
3 - Békés	10 - Jász-Nagykun-Szolnok	17 - Vas
4 - Borsod-Abaúj-Zemplén	11 - Komárom-Esztergom	18 - Veszprém
5 - Csongrád	12 - Nógrád	19 - Zala
6 - Fejér	13 - Pest	
7 - Győr-Moson-Sopron	14 - Somogy	20 - Budapest

3. Please assess the inflation in 2000? ..... %

4. Please, give your appreciation...
... on the situation of Hungarian economy using the ten grades scale below:
Very bad 1 2 3 4 5 6 7 8 9 10 Very good
... on the economic situation of your local government
Very bad 1 2 3 4 5 6 7 8 9 10 Very good

5. Please, give your appreciation...

... on the future situation of Hungarian economy during the next year
will be far worse 1 2 3 4 5 6 7 8 9 10 will be much better

... on the future economic situation of your L. G. during next year
will be far worse 1 2 3 4 5 6 7 8 9 10 will be much better

6. In your municipality in 2000 the expenses in the following sectors will be (Million HUF)

Sector	Salaries	Buying assets	Giving subsidies to other service provider
Education			
Healthcare			
Social sector			
Administration			

7. Please assess next year's.

Municipal income and expenditures	In 2000 (million HUF)	In 2001 (please sign with and X)		
		Will increase	Will decrease	Will not change
Current income				
• PIT income				
• Normatives				
• Tax on tourism and tax on business turnover				
• Communal and property tax				
Investment revenues				
• Privatization income				
• Income from financial investments				
• State grants				
Current expenditures				
Investment expenditures				
• Renovations				
Longer than one –year term loans				
Total loans				

8. if you plan the following investment, do you plan it as part of an association or individually?

	Association	Individually	Not planned
Healthcare	2	1	0
Education	2	1	0
Water and sewage	2	1	0
Garbage treatment	2	1	0
Roads	2	1	0
Gas service	2	1	0

9. Do you agree with the following?

	Yes	No
Associations are better because …		
… operation is easier		
… starting the investment is easier		
… grants are easily accessible		
Associations are not good because …		
… responsibility is not shared		
… no arguing with other municipalities		
… the municipality itself is big enough to use the whole capacity of a plant		

10. Do you plan to involve the following sources?

	Yes	No
Targeted subsidy	1	0
Other central subsidy	1	0
International grant	1	0
Regional grant	1	0
Citizen's participation	1	0
Involving private partners	1	0
Loans	1	0
Privatizing assets	1	0

11. What is the guarantee of municipal loans?

immobile assets
service fee
tax income

12. Did the municipality have targeted grants in 1999?

1 – yes 0 – no

If yes, than …	(please, sign with an X)
… could use much more half of it	
… could use about half of it	
… could use much less than half of it	

13. Do you agree with the following?

The next year	Yes	No
... the municipality will decrease the number of its institutions	1	0
... will be more difficult to get loans	1	0
... will be more difficult to get	1	0
…the amount of central subsidies will decrease	1	0
	1	0

14. Do you agree introducing value based property tax if…?

	Yes	No
… the PIT would decrease	1	0
… the obligatory tasks of municipalities would increase	1	0
… the quality of service provision would increase	1	0

15. Do you agree with the following?

	incr ease	decrease	Will not change	Did not have loans

…the amount of loans in 2000 compared to the previous years'	1	2	3	0
… the interest on loans in 2000 compared to the previous years'	1	2	3	0
… the term of loans in 2000 compared to the previous years'	1	2	3	0

16. If in 1999 you had targeted grants in the budget, the municipality could use …

1 – did not have any targeted grants.
2 – could use more than 70% of it.
3 – could use between 30 and 70% of it.
4 – could use less then 30% of it.
5 – could not use it at all.

The distribution of answers according to the size of the municipality

	N	%
Below 1 000	408	54
Between 1 and 2 000	162	22
Between 2 and 10 000	128	17
Above 10 000	49	7
	747	100

The distribution of answers according to the per capita budget of the municipality

	N	%
Poor municipalities	425	63
Average municipalities	126	19
Rich municipalities	119	18
	670	100

The distribution of answers according to the investment activity of the municipality

	N	%
Operating municipalities	171	29
Medium investors	279	47
Big investors	141	24
	591	100

Appendix II.

THE MAIN CHARACTERISTICS OF MUNICIPAL LOANS

Borrowing from banks has been developed in Europe, where the relationship between local Savings Banks and municipalities has a long tradition. Because of this tradition, some of these banks specialised for offering a wide range of municipal services, such as planning, capital and cash management, and are able to do that at a lower price than its new competitors.

There is another reason, why borrowing from the local bank seems to be an obvious solution. Because it has most information about the financial strength of the municipality, in case of late payment, the bank is in an easy situation to foreclose upon the municipal assets or garnish payments coming from the central budget.

Despite the positive side, this practice has at least one disadvantage too. If the municipality does not have the opportunity to change to other service provider, the bank, relying on its monopol status without competition, can charge higher interest rates and fees.

This can be avoided by enabling the municipalities to tender financial services. Municipalities must be able to compare the different offers, must be able to choose among them. They should not choose financing forms that are too expensive, and have to follow cash management policies that stop the overspending.

The following list contains the information based on which municipalities can differentiate among the numerous bank offers.

The interest rate

The calculation method usually contains a formula based on interest rates of international banks (BUBOR, LIBOR, and EURIBOR) or the interest rate of the

national bank. Loans with longer term have higher interest rates, which can be explained by the higher risk the investor is taking. While the money is being used by the municipality (or by its company) the investor cannot have access to it. Long term fixed interest rates are rare in the Hungarian market.

Costs and fees

Different banks work with different fees. These cover contracting fees, writing official statements, transfer fees, fee of line of credit, which, above the capital and interest payments are the obligation of the borrower, so they should be treated as part of the debt service. These fees can sum up to 1-1,5% of the loan.

Term of the loan

The maximum maturity of loans in Hungary is 8-10 years. The short-term loans finance temporary disbalances due the operational deficits or finance the start up costs of a project. If a municipality wants to finance an investment with a series of short-term loans, it has to face with the risk that the interest rates will increase.

Grace period

The start up of the project is the most expensive phase of the investments, while it is not able to generate revenue yet. The grace period means that the repayment of the capital is postponed for a specific amount of time, until the investment generates revenues. It is usually a basis for negotiation and can be a criteria for setting priorities among the offers. The long grace period, on the other hand, can be harmful for the municipal creditworthiness as delays the repayment of the loan, thus making the conditions of the subsequent loans less favourable. We can say that in generally, the first quarter of the maturity can be the grace period.

Guarantees

The question of guarantees discussed many times by the literature of this topic. In Hungary, the backing of loans is generally municipal asset, which is rarely related to the investment financed from the loan. This practice is criticised for many reasons. First, municipal assets that are not serving municipal tasks should be sold, so that their management does not decreases the municipal capacity. If other municipal income e.g. taxes or fees arrive to account of the lender bank, and the tax-abatement is possible, it is a safer transaction for the bank and burdening the assets is not necessary. Municipal assets that are directly tied to the provision of an obligatory service cannot be burdened in Hungary under any circumstances.

The cash flow of the loan

The cash flow of the loan means the money movements related to the loan (see above), the structure of capital and interest repayments. The repayment structure influences significantly the real value of the debt service. Loans with the different cash flows can be are very similar to the bonds. Hungarian bonds are really bank loans, as normally, this is the bank that buys the bonds, and the conditions are very similar to that of the bank loans.[1]

Possibilities of subsidized interests

Some banks work together with the government sector to provide subsidized loans, e. g. the interest subsidy on loans for investment in the tourism. In this case, the government, instead of subsidizing the municipality (the municipal loan) directly, subsidizes the bank. It is worth asking for information about subsidised loan programs at the different banks.

Other information

Any information containing the bank's special terms and conditions.

[1] This situation will change when the secondary market of the bonds will exist, and anyone will be able to buy municipal bonds. Since the new act on Securities is in force, no open municipal bond issues has happened.

Appendix III.

Table III-1. Municipal expectations in the regions *

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern-Great Plain
Decrease the number of institutions (N)	5	13	21	13	28	8
%	13,2	14,4	14,9	9,2	21,7	10
It will be more difficult to raise loans (N)	14	47	63	82	84	42
%	47,2	52,2	49,2	61,2	67,2	56
It will be more difficult to acquire central investment subsidies (N)	35	75	113	121	110	71
%	89,7	81,5	80,1	84	85,3	81,6
It will be more difficult to acquire central operating subsidies (N)	34	80	113	125	114	76
%	85	86	76,9	85,6	85,7	83,5
The level of local taxes will increase (N)	20	42	55	49	41	25
%	51,3	45,2	37,4	33,1	30,8	28,1

* The percentage data means the percentages within the groups

Table III-2. Municipal expectations in the groups based on the investment activity *

	Operating	Medium investors	Big investors
Decrease the number of institutions (N)	22	38	23
%	14	14,7	28
It will be more difficult to raise loans (N)	97	131	57
%	64,2	53	50
It will be more difficult to acquire central investment subsidies (N)	136	214	103
%	84,5	82	80,5
It will be more difficult to acquire central operating subsidies (N)	141	222	109
%	86,5	83,5	82
The level of local taxes will increase (N)	50	109	51
%	30,7	40,2	38,9

* The percentage data means the percentages within the groups

Table III-3. Municipal expectations in the groups based on the per capita budget *

	Poor	Average	Rich
Decrease the number of institutions (N)	15	17	18
%	19	14,3	16,2
It will be more difficult to raise loans (N)	49	60	57
%	62	52,2	54,3
It will be more difficult to acquire central investment subsidies (N)	73	95	87
%	86,9	79,8	79,1
It will be more difficult to acquire central operating subsidies (N)	79	101	93
%	92,9	82,1	83,8
The level of local taxes will increase (N)	33	46	51
%	38,4	37,4	44,7

* The percentage data means the percentages within the groups

Table III-4. Municipal expectations in the groups based on the number of inhabitants *

	- 1000	1-2,000	2-5,000	5-10,000	10-20,000	20-50,000	50-100,000	100,000-
Decrease the number of institutions (N)	63	15	15	4	3	3	1	1
%	15	11	17	14	26	44	36	60
It will be more difficult to raise loans (N)	245	63	41	9	4	1	1	-
%	62	50	51	39	41	23	18	-
It will be more difficult to acquire central investment subsidies (N)	355	114	67	19	9	6	2	0
%	83	84	84	81	77	84	66	20
It will be more difficult to acquire central operating subsidies (N)	355	121	73	22	11	6	3	1
%	81	87	83	90	88	84	100	54
The level of local taxes will increase (N)	138	55	46	15	3	4	1	1
%	31,8	41,4	54	56,6	25	52	30	43

* The percentage data means the percentages within the groups

Table III-5. Municipal expectations in the groups based on the investment activity *

	Operating	Medium investors	Big investors
The situation of the national economy	4.95	4.95	5.21
The local economic situation	3.88	3.9	4.04
The change of the situations of the national economy	5.21	5.16	5.17
The change of the situations of the local economy	3.9	3.82	4.14

* The percentage data means the percentages within the groups

Table III-6. Municipal expectations in the groups based on the per capita budget*

	Poor	Average	Rich
The situation of the national economy	5.16	5.13	5.05
The local economic situation	3.82	3.83	3.89
The change of the situations of the national economy	5.23	5.37	5.45
The change of the situations of the local economy	3.84	3.82	3.92

* The percentage data means the percentages within the groups

Table III-7. Municipal expectations in the regions*

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern Great Plain	Southern Great Plain
The situation of the national economy	5.34	5.21	5.12	4.76	4.47	5.14	5.02
The local economic situation	4.15	3.93	3.97	4.04	3.42	3.86	3.73
The change of the situations of the national economy	5.51	5.41	5.12	4.84	4.87	5.35	5.33
The change of the situations of the local economy	4.19	3.88	3.82	3.96	3.43	3.92	3.79

* The percentage data means the percentages within the groups

Table III-8. Municipal expectations in the groups based on the number of inhabitants *

	-1,000	1-2,000	2-5,000	5-10,000	10-20,000	20-50,000	50-100,000	100,000-
The situation of the national economy	4.86	4.12	5.11	5.66	5.47	5.63	6.28	5.66
The local economic situation	3.74	4.08	3.96	4.04	4.22	3.67	4.81	4.08
The change of the situations of the national economy	5.02	5.27	5.29	5.77	5.48	5.44	6.72	5.25
The change of the situations of the local economy	3.43	3.91	3.9	4.15	4.34	4.08	4.43	3.71

* The percentage data means the percentages within the groups

Appendix VI.

Table IV-1. The expected change of the current revenues in the regions

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern Great Plain	Southern Great Plain	
Increase	23	37	65	68	59	49	31	332
Coloumn %	0,79	0,56	0,59	0,61	0,58	0,71	0,67	
Row %	0,07	0,11	0,2	0,20	0,18	0,15	0,09	
Decrease	3	15	19	10	14	9	7	77
Coloumn %	0,11	0,23	0,17	0,09	0,14	0,13	0,15	
Row %	0,04	0,19	0,25	0,13	0,18	0,12	0,09	
Will not change	3	14	26	34	28	11	8	124
Coloumn %	0,11	0,21	0,24	0,30	0,28	0,16	0,17	
Row %	0,02	0,11	0,21	0,27	0,23	0,09	0,06	
	29	66	110	112	101	69	46	533

Table IV-2. The expected change of the current revenues in the groups based on the per capita budget

	Poor	Average	Rich	
Increase	43	80	65	188
Coloumn %	0,52	0,73	0,6	
Row %	0,23	0,43	0,35	
Decrease	11	12	19	42
Coloumn %	0,13	0,11	0,17	
Row %	0,26	0,29	0,45	
Will not change	28	18	25	71
Coloumn %	0,34	0,16	0,23	
Row %	0,39	0,25	0,35	
	82	110	109	301

Table IV-3. The expected change of the current revenues in the groups based on the investment activity

	Operating	Medium investors	Big investors	
Increase	75	149	73	297
Coloumn %	0,56	0,67	0,65	
Row %	0,23	0,50	0,25	
Decrease	19	29	16	64
Coloumn %	0,14	0,13	0,14	
Row %	0,3	0,45	0,25	
Will not change	41	46	23	110
Coloumn %	0,30	0,21	0,21	
Row %	0,37	0,42	0,21	
	135	224	112	471

Appendix V.

Table V-1. The expected change of the PIT revenue in the regions

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern Great Plain	Southern Great Plain	
Increase	29	63	68	85	73	60	43	421
Coloumn %	0,78	0,74	0,56	0,63	0,66	0,72	0,78	
Row %	0,09	0,19	0,20	0,25	0,22	0,18	0,13	
Decrease	2	7	20	11	7	11	3	61
Coloumn %	0,05	0,08	0,17	0,08	0,06	0,13	0,05	
Row %	0,03	0,09	0,26	0,14	0,09	0,14	0,04	
Will not change	6	15	33	38	30	12	9	143
Coloumn %	0,16	0,18	0,27	0,28	0,27	0,14	0,16	
Row %	0,05	0,12	0,27	0,31	0,24	0,1	0,07	
	37	85	121	134	110	83	55	625

Table V-2. The expected change of the PIT revenue in the groups based on the per capita budget

	Poor	Average	Rich	
Increase	55	86	87	228
Coloumn %	0,63	0,74	0,77	
Row %	0,24	0,38	0,38	
Decrease	11	12	5	28
Coloumn %	0,13	0,10	0,04	
Row %	0,39	0,43	0,18	
Will not change	21	18	21	60
Coloumn %	0,24	0,16	0,19	
Row %	0,35	0,3	0,35	
	87	116	113	316

Table V-3. The expected change of the PIT revenue in the groups based on the investment activity

	Operating	Medium investors	Big investors	
Increase	105	188	84	377
Coloumn %	0,67	0,73	0,66	
Row %	0,28	0,5	0,23	
Decrease	14	21	15	50
Coloumn %	0,09	0,08	0,12	
Row %	0,28	0,42	0,3	
Will not change	37	49	29	115
Coloumn %	0,24	0,19	0,23	
Row %	0,32	0,43	0,25	
	156	258	128	542

Appendix VI.

Table VI-1. The expected change of the revenue from the business turnover tax in the regions

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern Great Plaain	Southern Great Plain	
Increase	45	22	32	30	31	26	22	208
Coloumn %	0,68	0,26	0,31	0,31	0,32	0,4	0,45	
Row %	0,22	0,11	0,15	0,14	0,15	0,135	0,11	
Decrease	8	27	18	11	25	10	7	106
Coloumn %	0,12	0,32	0,17	0,11	0,26	0,16	0,14	
Row %	0,08	0,25	0,17	0,10	0,24	0,09	0,07	
Will not change	13	36	53	56	40	29	20	247
Coloumn %	0,2	0,42	0,51	0,58	0,42	0,45	0,41	
Row %	0,06	0,15	0,21	0,23	0,16	0,12	0,08	
	66	85	103	97	96	65	49	561

Table VI-2. The expected change of the revenue from the business turnover tax in the groups based on the per capita budget

	Poor	Average	Rich	
Increase	24	37	42	103
Coloumn %	0,31	0,34	0,43	
Row %	0,23	0,36	0,41	
Decrease	15	18	18	51
Coloumn %	0,19	0,17	0,19	
Row %	0,29	0,36	0,35	
Will not change	39	54	38	131
Coloumn %	0,5	0,5	0,39	
Row %	0,3	0,41	0,29	
	78	109	98	285

Table VI-2. The expected change of the revenue from the business turnover tax in the groups based on the investment activity

	Operating	Medium investors	Big investors	
Increase	45	77	37	159
Coloumn %	0,33	0,36	0,33	
Row %	0,28	0,48	0,23	
Decrease	24	34	29	87
Coloumn %	0,18	0,16	0,26	
Row %	0,28	0,39	0,33	
Will not change	66	103	47	216
Coloumn %	0,49	0,48	0,42	
Row %	0,31	0,48	0,22	
	135	214	113	462

Appendix VII.

Table VII-1. The expected change of investment expenditures in the regions

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern Great Plain	Southern Great Plain	
Increase	12	23	42	34	28	30	19	188
Coloumn %	0,36	0,29	0,4	0,29	0,27	0,4	0,36	
Row %	0,06	0,12	0,22	0,18	0,15	0,16	0,10	
Decrease	18	42	40	65	50	30	23	268
Coloumn %	0,55	0,54	0,38	0,55	0,49	0,4	0,43	
Row %	0,07	0,16	0,15	0,24	0,19	0,11	0,09	
Will not change	3	13	23	20	25	15	12	111
Coloumn %	0,09	0,17	0,22	0,17	0,24	0,2	0,22	
Row %	0,03	0,12	0,21	0,18	0,23	0,14	0,11	
	33	78	105	119	103	75	54	567

Table VII-2. The expected change of investment expenditures in the groups based on the per capita budget

	Poor	Average	Rich	
Increase	30	33	30	93
Coloumn %	0,41	0,29	0,28	
Row %	0,32	0,35	0,32	
Decrease	26	54	62	142
Coloumn %	0,35	0,47	0,57	
Row %	0,18	0,38	0,44	
Will not change	18	28	17	63
Coloumn %	0,24	0,24	0,16	
Row %	0,29	0,44	0,27	
	74	115	109	298

Table VII-3. The expected change of investment expenditures in the groups based on the investment activity

	Operating	Medium investors	Big investors	
Increase	65	74	34	173
Coloumn %	0,45	0,29	0,26	
Row %	0,38	0,43	0,2	
Decrease	44	132	79	255
Coloumn %	0,30	0,51	0,61	
Row %	0,17	0,52	0,31	
Will not change	37	51	17	105
Coloumn %	0,26	0,2	0,13	
Row %	0,35	0,49	0,16	
	146	257	130	533

Appendix VIII.

Figure VIII-1. Municipal investment plans in 2000

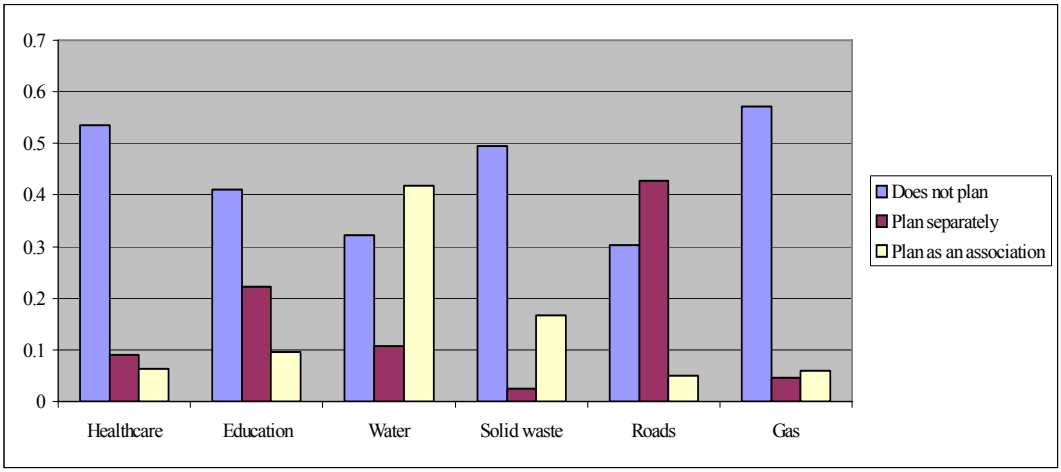
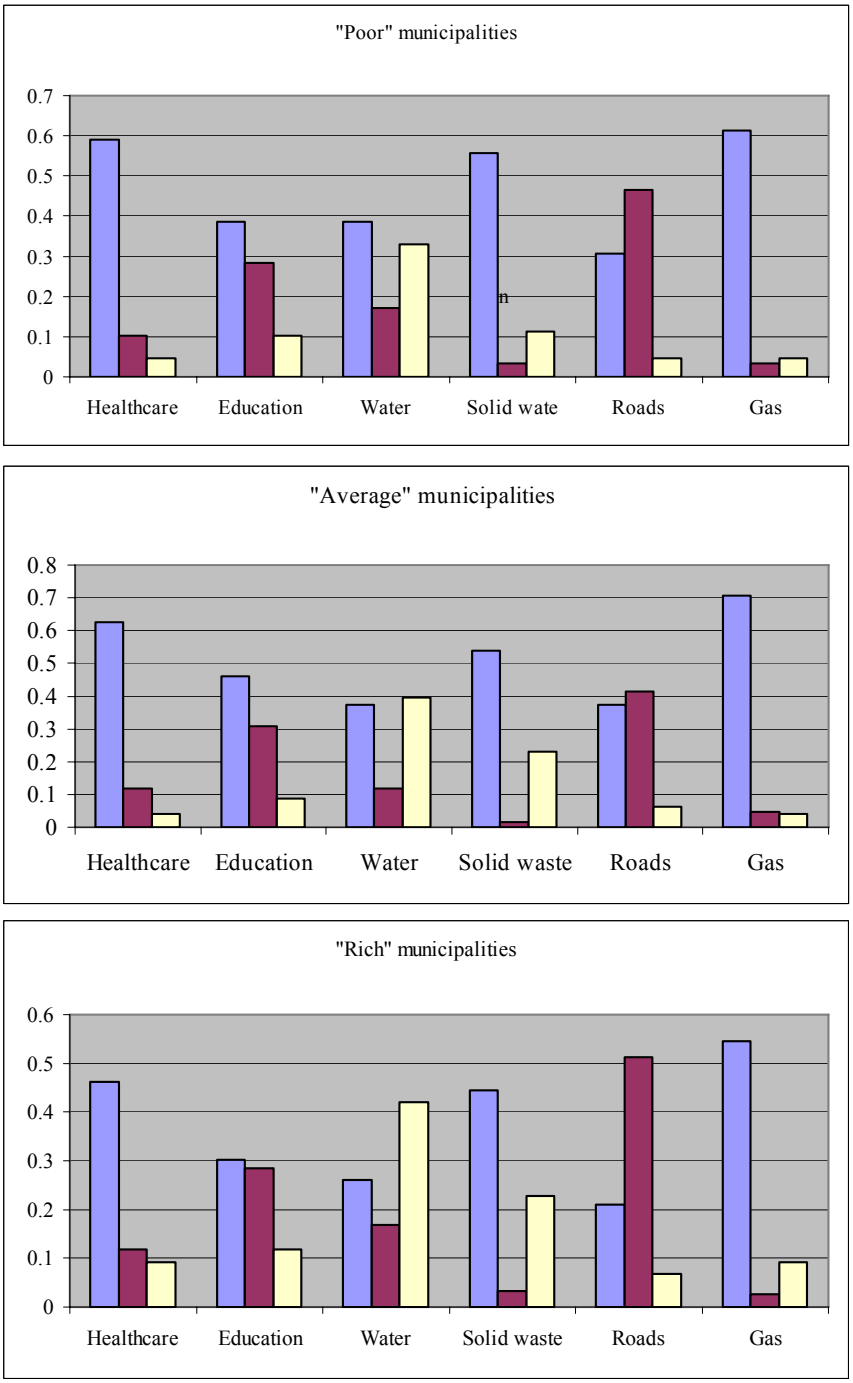


Figure VIII-2. Municipal investment plans in 2000 in the groups based on the per capita budget.



Appendix IX.

Table IX-1. The sources of municipal investments in the municipal categories based on the per capita budget.

	Poor	Average	Rich
Targeted subsidies	45	70	79
%	23	36	41
Other central subsidies	54	76	86
%	25	35	39
International organizations	22	37	46
%	21	35	43
Regional subsidies	66	98	104
%	25	37	39
Citizens' participation	38	55	64
%	24	35	41
Private sector	5	16	20
%	12	39	49
Loans	29	44	51
%	23	35	41
Privatization revenues	22	41	36
%	22	41	36

Table IX-2. The sources of municipal investments in the municipal categories based on the number of inhabitants*

	Targeted subsidies	Other central subsidies	International organizations	Regional subsidies	Citizens' participation	Private sector	Loans	Privatization revenues
- 1000	239	241	123	343	182	43	116	87
1-2,000	83	87	42	114	72	14	52	37
2-5,000	56	60	23	69	50	12	28	28
5-10,000	19	16	6	21	18	3	12	14
10-20,000	11	10	8	11	10	5	7	7
20-50,000	7	7	7	7	5	4	6	4
50-100,000	3	3	3	3	3	2	3	3
100,000-	2	2	2	2	2	2	2	2

*Due to the small number of cases we do not show the percentages, the numbers mean the number of cases.

Appendix X.

Table X-1. Municipal expectations about the long term loans in the regions

	Central-Hungary	Central-Transdanubia	Western-Transdanubia	Southern-Transdanubia	Northern-Hungary	Northern Great Plain	Southern Great Plain	
Increase	4	17	10	19	24	16	8	98
Coloumn %	0,15	0,30	0,19	0,30	0,39	0,30	0,28	
Row %	0,04	0,17	0,10	0,2	0,24	0,16	0,08	
Decrease	11	14	19	12	13	17	8	94
Coloumn %	0,41	0,25	0,37	0,19	0,21	0,32	0,28	
Row %	0,11	0,15	0,20	0,13	0,14	0,18	0,09	
Will not change	12	25	23	32	25	20	13	150
Coloumn %	0,44	0,47	0,44	0,51	0,40	0,38	0,45	
Row %	0,08	0,167	0,15	0,21	0,17	0,13	0,09	
	27	56	52	63	62	53	29	342

Table X-2. Municipal expectations about the long-term loans in the groups based on the per capita budget

	Poor	Average	Rich	
Increase	20	18	23	61
Coloumn %	0,29	0,2	0,29	
Row %	0,33	0,3	0,38	
Decrease	12	31	25	68
Coloumn %	0,17	0,34	0,32	
Row %	0,18	0,46	0,37	
Will not change	38	43	31	112
Coloumn %	0,54	0,47	0,39	
Row %	0,34	0,38	0,28	
	70	92	79	241

Table X-3. Municipal expectations about the long-term loans in the groups based on the investment activity

	Operating	Medium investors	Big investors	
Increase	28	43	16	87
Coloumn %	0,34	0,29	0,22	
Row %	0,32	0,49	0,18	
Decrease	16	47	22	85
Coloumn %	0,19	0,31	0,3	
Row %	0,19	0,55	0,26	
Will not change	39	60	36	135
Coloumn %	0,47	0,4	0,49	
Row %	0,29	0,44	0,27	
	83	150	74	307

Appendix XI.

The correlation matrix of the factor analysis

	Citizens1	Citizens2	Economy	Econ change	Nat economy	Nat econ change	Loans	Inflation	Unemployed	Allowances	Institutions	Loans difficult	Subsidies difficult	Subsidy decrease	Status	Region	Investment	long term loans	Loans/investments
Citizens1	1																		
Citizens2	0.76	1																	
Economy	0.29	0.36	1																
Econ change	0.28	0.41	0.83	1															
Nat economy	0.17	0.22	0.29	0.37	1														
Nat econ change	0.25	0.3	0.36	0.47	0.67	1													
Loans	-0.09	-0.11	-0.07	-0.1	0.06	0.04	1												
Inflation	-0.09	-0.14	-0.14	-0.19	-0.22	-0.3	0.1	1											
Unemployed	-0.04	-0.05	-0.13	-0.19	-0.18	-0.28	-0.05	0.15	1										
Allowances	-0.05	-0.1	-0.15	-0.21	-0.15	-0.21	0.02	0.08	0.55	1									
Institutions	-0.06	-0.1	-0.12	-0.12	-0.06	-0.04	0.1	0.06	0	0.06	1								
Loans difficult	-0.07	-0.11	-0.17	-0.23	-0.16	-0.24	-0.03	0.13	0.26	0.21	0.04	1							
Subsidies difficult	-0.12	-0.12	-0.08	-0.17	-0.21	-0.26	0.02	0.13	0.1	0.2	-0.01	0.31	1						
Subsidy decrease	-0.05	-0.1	-0.12	-0.23	-0.16	-0.24	0	0.13	0.13	0.18	0.01	0.2	0.39	1					
Status	0.08	0.04	-0.03	-0.01	-0.07	-0.07	-0.14	0.08	0.16	0	-0.24	0.13	0.05	0.01	1				
Region	0	-0.04	-0.08	-0.1	-0.06	-0.06	0.03	-0.02	0.21	0.19	0.05	0.02	-0.05	0.03	-0.06	1			
Investment	0	0	-0.01	0	0.02	0	0	0.04	-0.08	-0.07	-0.02	-0.02	0.02	0.02	0	0.02	1		
Long term loans	-0.05	-0.05	-0.05	-0.05	0.04	0.07	0.16	-0.05	-0.14	-0.09	0.11	0	-0.01	0.01	-0.44	0.02	0.16	1	
Loans/investments	-0.01	-0.01	-0.07	-0.07	-0.03	0.02	0.02	0.01	-0.07	0.02	-0.01	0.05	0.03	0.02	0.01	-0.06	-0.01	0.31	1

Appendix XII.

The reproduced correlation matrix of the factor analysis

	Citizens1	Citizens2	Economy	Econ change	Nat economy	Nat econ change	Loans	Inflation	Unemployed	Allowances	Institutions	Loans difficult	Subsidies difficult	Subsidy decrease	Status	Region	Investment	Long term loans	Loans/investments
Citizens1	0.86	-0.08	-0.04	-0.07	0.03	0.01	0.01	-0.09	-0.05	0	-0.03	0	0.04	0.04	-0.02	0	0	-0.01	-0.08
Citizens2	0.84	0.84	-0.07	-0.04	0.02	0	0.03	-0.07	-0.01	-0.01	-0.04	0	0.05	0	-0.04	-0.01	0	-0.02	-0.07
Economy	0.33	0.43	0.76	0.07	-0.11	-0.1	0.07	0.1	0.05	0.01	0	0	-0.1	-0.1	0.05	0.03	-0.03	0.04	0.17
Econ change	0.35	0.45	0.76	0.78	-0.11	-0.07	0.05	0.11	0.05	0.02	0.02	0.02	-0.07	-0.1	0.05	0.02	-0.01	0.04	0.14
Nat economy	0.14	0.2	0.4	0.s48	0.7	-0.03	-0.19	0.04	-0.02	-0.04	0.09	0.01	0.03	0.09	-0.04	-0.02	0.02	-0.03	-0.08
Nat econ change	0.23	0.3	0.46	0.54	0.7	0.74	-0.13	0.04	-0.03	-0.01	0.09	0.01	0.05	0.07	0	0.01	0.03	-0.04	-0.06
Loans	-0.1	-0.14	-0.15	-0.15	0.25	0.17	0.7	-0.22	-0.01	-0.02	-0.15	-0.05	0.01	0	0.02	0.06	-0.05	-0.01	0.02
Inflation	0	-0.07	-0.24	-0.3	-0.27	-0.34	0.32	0.53	0.06	0.03	-0.06	-0.03	-0.08	-0.08	-0.06	0.06	-0.09	0.09	0.16
Unemployed	0.01	-0.04	-0.18	-0.24	-0.16	-0.25	-0.04	0.09	0.68	-0.09	0	-0.06	-0.06	-0.05	-0.03	-0.19	0.03	0.1	0.04
Allowances	-0.04	-0.08	-0.17	-0.23	-0.11	-0.2	0.04	0.05	0.64	0.67	-0.02	-0.06	-0.03	-0.07	-0.24	-0.19	0.08	-0.11	0.04
Institutions	-0.03	-0.05	-0.11	-0.15	-0.14	-0.13	0.24	0.12	0	0.09	0.51	-0.15	0.02	-0.01	0.22	-0.03	0.19	-0.09	0.09
Loans difficult	-0.07	-0.1	-0.18	-0.25	-0.18	-0.25	0.03	0.16	0.32	0.36	-0.06	0.1	-0.12	-0.17	-0.03	0.03	0.05	0.01	-0.13
Subsidies difficult	-0.16	-0.16	0.15	-0.1	-0.23	-0.31	0	0.21	0.16	0.23	-0.02	0.42	0.66	-0.16	0.02	0.1	0	-0.04	-0.04
Subsidy decrease	-0.09	-0.1	-0.03	-0.13	-0.25	-0.31	0.01	0.21	0.19	0.25	0.02	0.43	0.55	0.19	0.03	0.08	-0.06	-0.07	-0.04
Status	0.1	0.07	-0.09	-0.06	-0.33	-0.08	-0.17	0.14	0.19	0.03	-0.47	0.37	0.04	-0.02	0.73	0.08	0	0.08	0.03
Region	0	-0.03	-0.11	-0.12	-0.04	-0.07	-0.04	-0.09	0.4	0.38	0.09	0.16	-0.16	-0.05	-0.14	0.56	-0.18	-0.06	0.08
Investment	0	0	0.02	0.01	0	-0.03	-0.05	0.13	-0.11	-0.15	-0.21	0	0.02	0.08	0	0.19	0.82	-0.09	0.02
Long term loans	-0.03	-0.03	-0.09	-0.09	-0.07	0.11	0.16	-0.14	-0.24	-0.07	0.2	-0.07	0.03	0.08	-0.52	0.07	0.26	0.73	-0.12
Loans/investments	0.07	0.06	-0.23	-0.21	0.05	0.08	0	-0.15	-0.12	-0.03	-0.1	-0.01	0.07	0.06	-0.02	-0.14	-0.03	0.43	0.67

Below the diagonal is the reproduced correlation matrix, in the diagonal the communalities and above the diagonal the residuals.

Appendix XIII.

The correlation matrix of the regression analysis

	Current revenues	Normatives	Business turnover tax and the tax on	Communal tax and property tax	Investment revenues	Privatization revenues	Revenue from financial investments	State investment subsidies	Current expenditures	Investment expenditures	Expenditures on renovtions	Long term loans	Sum of total loans
Current revenues	1	0.7	0.26	0.72	0.79	0.63	0.02	0.8	0.9	0.8	0.8	0.01	0.72
Normatives	0.7	1	0.54	0.77	0.55	0.52	0.06	0.67	0.77	0.57	0.53	0.02	0.47
Business turnover tax and the tax on tourism	0.25	0.54	1	0.37	0.07	0.09	0.5	0.06	0.3	0.07	0.07	0.05	0.1
Communal tax and property tax	0.72	0.77	0.37	1	0.71	0.65	0.25	0.76	0.76	0.71	0.68	0.04	0.58
Investment revenues	0.79	0.55	0.07	0.71	1	0.73	0	0.89	0.85	0.9	0.98	0	0.68
Privatization revenues	0.63	0.52	0.1	0.65	0.73	1	0	0.9	0.7	0.78	0.66	0.01	0.75
Revenue from financial investments	0.02	0.07	0.5	0.24	0	0	1	0	0.03	0	0	0	0
State investment subsidies	0.89	0.68	0.07	0.76	0.89	0.9	0	1	0.9	0.9	0.9	0	0.74
Current expenditures	0.9	0.7	0.31	0.76	0.85	0.69	0.03	0.9	1	0.92	0.86	0.01	0.71
Investment expenditures	0.86	0.58	0.08	0.7	0.9	0.78	0	0.98	0.92	1	0.92	0.01	0.76
Expenditures on renovations	0.8	0.5	0.07	0.68	0.9	0.6	0	0.9	0.86	0.92	1	0	0.7
Long term loans	0.01	0.02	0.05	0.04	0	0.01	0	0	0.01	0.01	0	1	0.6
Sum of total loans	0.72	0.4	0.1	0.57	0.68	0.75	0	0.74	0.71	0.76	0.7	0.6	1

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