FINANCIAL MANAGEMENT AND LOCAL ECONOMIC DEVELOPMENT – AN ALTERNATIVE FOR NEW FUNDING SOURCES OF THE LOCAL COMMUNITIES

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Abstract: This paper intends to answer mainly the questions: What are the consequences of the taxation base increase? What forms does the taxation base have? What can local authorities do in order to make certain areas attractive? Which are the specific players involved in the local economic development? Also, beyond the rigours imposed by the mathematical presentation of the sustainable economic development, we appreciate that for the financial management, too, knowing the gear determined by the allocation of public resources and generation of additional revenues will be very useful in establishing and underlying the decisions to invest in the public infrastructure and, also, to calculate the time period in which these can be depreciated especially based on the financial flows from supplementary revenues.

Key words: financial management, local economic development, financing local communities

JEL Code: M1, H4, H5,

The budgetary challenges of decentralization
Most of the times after 1990, the political discourse regarding the decentralization of the administrative decision from the central level to the local level focused mainly on the managerial capacity of local public administrations to take over in the direct coordination of some public services which used to be in the direct coordination of the centralised state.

Once this process triggered, it followed the second stage of the decentralization’s opportunity analysis, that is, whether the management of local budgets and the transfer of financial resources from the central level to the local level ensures a superior quality and quantity of public services.

After the 2000s, the approach of superior problems that the local administration faced occurred. It was that of coordinating the local sustainable development strategies with the stimulation of local economic development which should lead in the end to supplementary budgetary resources obtained by local political decisions. But to stimulate an investor to create an economic activity in his/her own community, the public administration must ensure the water, canal, electricity, local transport for the employees, qualified labour force.

Strategies regarding the increase of local budget revenues
Interested in ensuring the supply of public services, the main loan officer will have to permanently identify new funding sources in order to cope with continuously increasing needs of the population, using, as much as the law permits, three financial like levers, which, in my opinion, consist in:

a) Getting fiscal revenues as a result of fiscal policies, in which the tax rate (ri) will harmoniously collocate with the taxation base (Bi), two situations being distinguished:
   1) “ri” has an increasing tendency with a constant “Bi” is specific to a pure fiscal policy which must take into account the tax payers’ financial capacity and also the value of the taxation base;
   2) “ri” constant with “Bi” which records an increasing tendency, is the result of a balanced policy supporting the local economic development;

b) getting revenues from the capitalization of some goods belonging to the public or private field of the cities, towns or villages through Beyond the procedures that have to be applied to obtain these categories of revenues, it is worth mentioning the fact that these will take over from the fiscal burden “instituted” by the assumed
managerial policies, being a good opportunity for the financial manager to reduce “ri” without taking measures that might influence “Bi”;

c) the levies from the state budget, no matter the form they have, their meaning remaining always the same: when the levies increase (sums broken down from some revenues of the state budget or transfers) will register an accentuation of the financial dependence on the state budget, with unfavourable consequences on the local autonomy. On the contrary, the meaning of the diminution of breakdowns is based on the consolidation of the financial state of the local communities.

The mix of the fiscal, non-fiscal or state budget resources will have thus ensured so that the public services of local interest function permanently and at a higher qualitative level.

The local economic development thus becomes a preoccupation of the financial manager interested in permanently increasing the taxation base (Bi) so that the fiscal policies have a marked economic character. A solution for its use as a fiscal level is not recommended having in view Arthur Laffer’s theories, according to which:

- an increase of the tax rate, over a certain level, leads to a decrease of the revenue yield;
- a decrease of the tax rate, over a certain level, will also lead to a decrease of the revenue yield;

![Figure 1](image1.png)

**Figure 1** – The financial manager between the resource mix and the need for public services

![Figure 2](image2.png)

**Figure 2.** – Laffer’s curve, between the tax rate and the revenue yield
But what are the consequences of the increase of the taxation base? Which forms does the taxation base have? What can local authorities do to make certain areas attractive? Which are the players involved in the local economic development?

These are a few important questions that the local administration and the public manager has to answer.

The taxation base, as a consequence of the local economic development, has different forms (lands, buildings, special constructions are just a few examples of investments made by the traders) when the local authorities get involved in stimulating the investor attracting.

A first type of involvement is the ensurance of the access of investors to facilities consisting in supplying utilities like water, electivity, heating etc. and also the supply with social utilities (education, culture, health etc.).

The sum of all these facilities created in a certain area belonging to the administrative-territorial entity (city, town or village) will represent an attraction to the investors interested in immobilizing their capital, usually on as short as possible term, and obtain an as high as possible capital yield, beyond the problems encountered in the allocation of funds at the national level (for the government is facing a double problem, that of spatial and functional allocation).

It is interesting to study the behaviour of the local authorities in ensuring facilities for the companies (investors).

Be $\prod_{i,t}^{f, al}$ - the level of prospective facilities provided by the local authority in the region (area) “i” over the period t, and $X_{f, j, t}$ - the size of the facilities “f” over the period “t” due to the local authority, in the region (area “j”). If it is noted the level of general shipment costs between “i” and “j” in the period “t”, by using the means of transport m, anticipated by the local authority, with $C_{m, ij}^{al}$ and the mobility coefficient for the facility f with $\delta_f$, we will have the relation: $\prod_{i,t}^{f, al} = \sum_j X_{f, j, t} \cdot e^{-\delta_f C_{m, ij}^{al}}$, which will describe the spatial behaviour of the local authorities in supplying facilities.

But what would be the level of facility $X_f$ provided by the local authorities?

To answer this question, the following relation is taken into consideration:

$$X_{f, j, t} = K_{f, j, t} \cdot p_{j, t}$$

Where

- $X_{f, j, t}$ - the offer of the facility f ensured by the local authority (al) in period t
- $p_{j, t}$ - the population in the region (area) j in period t
- $K_{f, j, t}$ - the criterion or the standard applied by the local authority in period t, to the offer of facilities f (for example a school for 100 students or a hospital for 40,000 people).

The offer of facilities $X_f$ is a function proportional with the number of population, directly proportional varying with it, yet it must be taken into consideration the offer of facilities outside the administrative-territorial entity.

In these conditions, the offer of facilities depend on the offer desired by the local authorities (al) and on that exiting outside the cities, towns and villages according to the relation:

$$X_{f, j, t} = K_{f, j, t} \sum_j p_{j, t} \cdot e^{-\delta_m C_{m, ij}^{al}} - \sum_{j \neq 1} X_{f, j} \cdot e^{-\delta_m C_{m, ij}^{al}}$$

The spatial behaviour of the local authorities in the offer of facilities $X_f$ becomes in these conditions:

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896 Van den Berg – Sisteme urbane într-o societate în continuă schimbare, 1982a
Beyond the complexity given by the mathematical form of the spatial behaviour of the local authorities in the offer of facilities, it can be seen that it depends on a series of factors out of which we mention:

- the number of population requiring the facility \( X^f \) in the region (area) \( i \) or \( j \);
- the standard applied by the local authority \( a_l \), in period \( t \), to the offer of facilities \( X^f \);
- the shipment costs determined by the mobility of the population between the areas \( i \) and \( j \).

The financial manager will have to pay increased attention to the problem regarding the facility in order to make certain areas favourable to investments and to expand, also, the taxation base, as a result of the implementation of the local economic development.

A second type of implication, in the local economic development, is represented by the stimulation of the creation of jobs and houses for the population. The spatial behaviour of the local communities can be studied starting with the equation describing the offer desired by employment opportunities like:

\[
X^e_{j,t} = K^e_{j,t} \cdot p_j \cdot t
\]

Where:

\( X^e_{j,t} \) - the offer of employment opportunities in the region \( j \) in the period of time desired by the local authority
\( K^e_{j,t} \) - the criterion applied by the local authority (\( a_l \)) in period \( t \) regarding the level desired of the job offer

Taking into consideration the employment opportunities in the neighbouring areas, the spatial behaviour of the local authorities can be described according to the relation:

\[
X^e_{j,t} = K^e_{j,t} \sum_j p_{i,t} \cdot e^{-\theta C^m_{ij,t}} - \sum_{j \neq i} X^e_{j,t} \cdot e^{-\theta C^m_{ij,t}}
\]

Where:

\( C^m_{ij,t} \) - the shipment cost on the distance \( ij \), over the period \( t \), using a means of transport \( m \)
\( p_{i,t} \) - the population of the area (region) \( j \), in period \( t \)
\( \theta \) - the mobility of the people on the distance \( ij \), having in view the shipment costs expressed by \( C^m_{ij,t} \)

It is obvious that the financial manager will be interested in the spatial behaviour concerning the employment opportunities, because one of the immediate gains of the local authorities will be to attract revenues from the quotas broken down from the revenue tax, but we will approach this aspect in what follows.

The third type of implication, to support the local economic development, is to ensure, especially by the local authorities, the road infrastructure with an impact on the shipment costs, travel times between the areas \( ij \) etc.

An equation like the following describes this dependence:

\[
\prod_{i,t}^f a_l = \sum_j X^f_{j,t} \cdot e^{-\theta C^m_{ij,t}}
\]
Where: \( C_{ij,m}^m = C_{ij,m}^m \left( \frac{V_{ij,m}^m}{S_{ij,m}^m} \right)^k \) is a function dependent on the demand and supply of infrastructure, that is \( V_{ij,m}^m \) and \( S_{ij,m}^m \), and \( C_{ij,m}^m \) is the shipment cost on the distance \( ij \), using the means of transport \( m \).

It is worth mentioning the fact that the local authorities, by the opportunities created as a result of the access to facilities \( \prod_i f_{i,t} \), of the creation of new jobs \( \prod_i e_{i,t} \) but also of the providing the investors with an appropriate infrastructure \( \prod_i f_{i,t} \) have a decisive role in supporting the local economic development.

The three types of implication of local authorities describe the latter’s spatial behaviour according to the relation:

\[
\omega_{i,t}^{al} = \left( \frac{\prod_i f_{i,t}}{\prod_i f_{i,t}^{al}} \right)^{\alpha_{al}} \cdot \left( \frac{\prod_i e_{i,t}}{\prod_i e_{i,t}^{al}} \right)^{\beta_{al}} \cdot \left( \frac{\prod_i f_{i,t}^{al}}{\prod_i f_{i,t}^{al}} \right)^{\theta_{al}}
\]

\( \prod_i f_{i,t} \) - the level of the facilities desired (expected) by the population or companies

\( \prod_i f_{i,t}^{al} \) - the level of facilities provided by the local authorities

The spatial behaviour function, described above, can be interpreted as such:

a) if \( \omega_{i,t}^{al} > 1 \) the level of facilities, employment opportunities or road infrastructure is shifted off from the offer possibilities of the local communities;

b) if \( \omega_{i,t}^{al} < 1 \) the situation is appreciated as being favourable, the level provided by the local authorities for facilities, employment or road infrastructure exceeds the expectations of the companies or the beneficiary population.

In these conditions, the financial manager, with the help of the mathematical instruments given, will have to identify that combination of facilities, employment opportunities or road infrastructure that would make the area “i” or the region “j” within a place attractive.

It is interesting to study for the financial manager the effect that public expenses have on investments, but also the additional revenues generated by investing one leu by the companies in the area “i” or region “j”.

The ways to use the public resources in order to increase the local “welfare” elements are described by the equation:

\[
\Pi_i = \sum_j Q_j \cdot S_j \cdot e^{-\delta C_{ij}} = \sum_j X_j \cdot e^{-\delta C_{ij}}
\]

Where

- \( Q_j \) – represents the physical quantity from facility \( j \)
- \( S_j \) – the quality of facility \( j \)
- \( C_{ij} \) – shipment costs on the distance \( ij \)

An increase of a welfare elements \( \Pi_i \) (facilities, employment opportunities or road infrastructure) will be determined by a physical expansion of facilities, which will implicitly imply an increase of the governmental expenses, according to the relation:

\[
\Delta \Pi_i^f = \sum_j \Delta X_j^f \cdot e^{-\delta C_{ij}}
\]

\[
\Delta X_j^f = K_j^f \cdot I_j^f
\]

\( K_j^f \) and \( I_j^f \) are functions dependent on the demand and supply of infrastructure, that is \( V_{ij,m}^m \) and \( S_{ij,m}^m \), and \( C_{ij,m}^m \) is the shipment cost on the distance \( ij \), using the means of transport \( m \).
Where $K_j^f$ represents the additional size of the facilities $f$ that an investment entity can make in the region (area) $j$:

In these conditions, the potential element of local welfare will be established based on the relation:

$$\Delta \Pi_i^f = \sum_j \Delta K_j^f \cdot I_j^f \cdot e^{-\delta C_{ij}}$$

The financial manager will also be interested in the supplementary revenues generated by the investments made, a ratio known in the speciality literature as the investment multiplier\(^{897}\) established according to the relation:

$$\text{mil} = \frac{\Delta V_{k,t}}{\Delta I_{i,t}}$$

Where:

- $\Delta V_{k,t}$ - the revenue growth made in period $t$ and area $i$
- $\Delta I_{k,t}$ - the investment unit made by companies in the area $j$ or $i$

To underlie this not very easy approach, it is necessary to take into consideration an investment like a building, which, during its useful life can generate supplementary revenues\(^{898}\), which may consist in:
- the building tax;
- the land tax;
- the income tax as a broken down quota as shared tax.

Referring to the building tax, the flows of supplementary revenues will be determined by the way in which this type of tax is calculated, in accordance to the legislation in force, according to which:

$$I_c = r_i \cdot B_i$$

Where:

- $r_i$ – is the tax rate between 0.5 – 1% for natural persons and 0.1 – 0.2% for legal persons/entities;
- $B_i$ – the tax rate is made by the inventory value for the legal persons and the taxable value obtained by multiplying the usable area with the taxable value expressed in lei/sm.

In these conditions, if useful life is noted DVU and these flows are updated with a rate established at the level of the interest average rate in economy ($rd$), we will obtain:

$$I_c = \sum_{i=1}^{DVU} \frac{0.2\% \times Sui \times Vi}{(1+rd)^i} + \sum_{j=1}^{DVU} \frac{1\% \times Vci}{(1+rd)^i} + 0.2\% \times \sum_{i=1}^{DVU} \frac{Sui \times Vi}{(1+rd)^i} + 1\% \times \sum_{j=1}^{DVU} \frac{Vci}{(1+rd)^i}$$

The land tax, the second component of the source of additional revenues, in accordance to the legislation in force, has a relatively simple form of establishment, being obtained as a product between the land surface and the land tax determined according to the area where the land is located, based on a mathematic model like:

$$It = St \times It \text{ (lei / mp)}$$

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\(^{897}\) *The investment multiplier was underlied by J. M. Keynes, in 1920*

\(^{898}\) *Law 571/2003 concerning the Fiscal Code published in the Romanian Official Gazette no 927 of 23 December 2003, with subsequent changes and completions*
Where:

It – the land tax expressed in lei/sm
St – the land surface

The flow of revenues during the same period of time DVU of the building generated by the collection to
the local budget of this type of tax will be established according to the relation:

\[ \text{It} = \sum_{i=1}^{n} \frac{\text{Sti} \times \text{Iti}}{(1 + \text{rd})^i} \]

The last form of additional revenues studied is that of shred taxes, being known the fact that a quota of
47% of the total tax collected at the level of an administrative-territorial entity is monthly transferred, as
own revenues, to the local budget.

Given the situation, noting with \( N_s \) – the number of employees, with \( S_m \) – the average wage made in
the production unit generated (the building) and with \( T_v \) – the income tax quota regulated by law, the
flow of additional revenues generated by the income tax can be determined with the relation:

\[ \text{Iv} = \sum_{i=1}^{n} \frac{0.47 \times 0.16 \times N_s x \bar{S}_m}{(1 + \text{rd})^i} = 0.0752 \times \sum_{i=1}^{n} \frac{N_s x \bar{S}_m}{(1 + \text{rd})^i} \]

Based on those mentioned above, the additional revenues generated by an investment (accepting the
variant of a building execution) will be obtained by adding \( I_c, \text{It}, \text{Iv} \) so that the local investment
multiplier will be appreciated using the relation:

\[ \text{mil} = \frac{\Delta (I_c + \text{It} + \text{Iv})_{i,t}}{\Delta \text{Ii},t} \]

Knowing the value of the fiscal multiplier, but also that of the efficiency of using public resources,
when the local authority will have to allow the access to facilities, becomes a priority for the financial
manager, interested in supporting the local economic development due to its multiple advantages.

Practically, the public manager is urged to know as well as possible the gear determined by the access
to facilities \( (\prod_{i,t}^{f \text{al}}) \) the access to employment opportunities \( (\prod_{i,t}^{e \text{al}}) \) but also to the road infrastructure \( (\prod_{i,t}^{r \text{al}}) \) so that the final result to be \( \Delta V_{i,t} \) with the forms mentioned \( \Delta I_{ci},t; \Delta I_{ti},t; \Delta I_{vi},t \)
as high as possible.

The gear, working according to the systems theory, can be illustrated in accordance to the figure below:

**Figure 3.** – The gear of resource allocation and making additional revenues in the conditions of a
given volume of investments
Conclusions
It is important for the financial manager to know the value of the ratio between the resources invested in order to allow the access to facilities, employment or road infrastructures noted with Chal and additional revenues noted with Vsinv, a ratio interpreted, in my opinion, as a capitalization indicator of the public investments, established with the formula: \[ r_{ip} = \frac{Vs_{inv}}{Chal}. \]

Practically, there are two situations:
1. when \( r_{ip} > 1 \), the additional revenues generated by the investment exceed the level of the resources allotted, a situation appreciated as being favourable;
2. when \( r_{ip} < 1 \), the additional revenues generated by the investment do not exceed the value of the resources allotted, the situation being appreciated a unfavourable and unprofitable.

Beyond the rigours imposed by the mathematical presentation of the sustainable economic development, I appreciate that for the financial management, too, knowing the gear determined by the allocation of public resources and the generation of additional revenues will be very useful in establishing and capitalizing the decisions to invest in the public infrastructure, but also to calculate the period of time these resources need to be depreciated based on the financial flows of additional revenues.

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