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The Financing of Walloon Municipalities

A Financing between Externality and Solidarity

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Abstract

Belgium is a federal state made up of Regions and Communities. 262 Municipalities are situated in the Walloon Region. The aim of this paper is to describe their funding and to analyze the impact of the last reform of the funding of the Walloon municipalities. This reform is characterized by an increase in the overall amount of the funding and a change in the rules of funding. We analyze the impact of this change on municipalities' revenue distribution by using a cluster system which allow us to see that some municipalities benefit more than the others from this new funding rules.

Keywords: Funding of municipalities, endowment, externality, solidarity

1. Introduction

Belgium is a federal state with four levels of power. The Belgian municipalities are the last level of power in this state. They can be under the tutelage of the different federated entities because of their location. In fact, Walloon municipalities are ruled by the Walloon government. Municipalities in Wallonia, in Brussel or in Flanders are not unconcentrated powers, but political institutions whose competences are related to the municipal interest (Note 1). They do not operate on behalf of citizens but for the Walloon government. In order to do this, they have legislative and executive institutions.

Such prerogatives require one or more forms of funding. The main form of external funding comes from the Municipal Fund (*fond des communes*) (24%). The remaining needed finance comes from taxation (additional and municipal taxes) which accounts for 49% of their ordinary revenue, as well as subsidies (15%), profits (8%), financial products (3%) and functional levies (1%). The Municipal Fund has undergone various changes since its inception in 1860. Its last development was in 2008. This update was based on the willingness of the Walloon public authorities to take more account of a special kind of economic effect, called externality.

This research is based on a report by the Walloon administration. Indeed, ten years after the most recent update, the Walloon administration analyzed the effect and the impact of the new Municipal Fund on municipalities (Besnard & Service public de Wallonie, 2017). This detailed report shows the evolution of municipalities' financing and global operations. It also shows that although the finances of the municipalities do not have a balanced account, financial crises have caused economic problems, impacting the fiscal potential of the Walloon municipalities (Besnard & Service public de Wallonie, 2017), the economic externality question no longer seems to be a major problem in municipalities 'operations. If this observation is correct, it seems interesting to review the Walloon administration's own analysis. However, if no municipality really lost during the implementation of this reform, it could also be caused by an overall revaluation of the Fund. To really understand this funding, it is necessary to analyze the situation by extracting the impact of this evolution.

2. The Concept of Externality: Brief Overview

The economic concept of externality in economics is well-known and dates back many years (Marshall, 1890) (Note 2). It has been extensively studied by various authors (Arrow, 1970; Buchanan, 1966; Meade, 1952). The term 'externality' could refer to a wide range of economic impacts, and the use of the term may have multiple significations (Berta, 2010). It is characterized by the fact that an economic agent creates an external effect by procuring a free advantage or disadvantage. In the presence of these effects, market choices are not efficient because the decision makers seek their individual optimum while they could seek the collective optimum. Economic policy proposals seek to restore this efficiency by internalizing or outweighing externalities. In the context of a public economy, these externalities are attributable to the fact that some municipalities provide services or manage equipment for a larger population than their inhabitants (Husson, 2004; Pagano, 2013) Indeed, the production of local public goods affects the well-being of residents, as well as that of non-residents (Husson, 2004; Pagano, 2013; Pagano, Vandernoot, & Van Hove, 2015). This overflow effect has economic and budgetary consequences (Husson, 2004; Pagano, 2013; Pagano et al., 2015).

These externalities present a double problem for municipalities. First of all, a budgetary problem could exist because the public goods provided and maintained by municipalities are paid for by residents ‘taxes. However, these public goods are also used by non-residents (Husson, 2004; Pagano, 2013). Consequently, municipalities which finance these economic activities are not encouraged to use their own resources. This situation could create an under-balanced equilibrium problem, where public production remains below the socially optimal level.

The identification and quantification of these external effects of overflow is difficult, and it seems necessary to distinguish four situations: subsidized competences, revenue sources competences, internalized competences, and other competences (Pagano, 2013; Pagano et al., 2015).

Two solutions are possible to tackle the problem of the budgetary effects of externalities. The first of which is that a criterion could be introduced into the funding allocation mechanism. However, it is necessary to define which criterion would be best suited to this task. A study was conducted in the Walloon region to identify such a criterion. It seems that the size of the municipalities is appropriate for this task. Indeed, the size of the municipalities explains about 90% of the communal expenses (Pagano, 2007).

The second possible solution could be to set up an outsourcing mechanism. This mechanism could stimulate the municipality to produce the collective optimum and can be considered from different perspectives. A first perspective could imply that a regional authority subsidy the different activities sources of positive effects of overflow. Such a subsidy creates a necessity for municipalities to organize themselves in order to receive and use this subsidy. Another perspective is that overflow effects can also be internalized by the region. It is a question of spreading (over a population larger than that of a single municipality) the costs of a policy that benefits a geographical area beyond the municipality (Leloup, 2010, 2017). This second solution, however, seems unlikely. Indeed, municipal autonomy is considered extremely important from a political point of view (Jurion, 2008).

3. The Funding of Walloon Municipalities

3.1 The First Funds of Municipalities

The funding of Walloon municipalities has evolved with Belgian and Walloon institutional developments. The first municipal fund was created in 1860 to compensate for the abolition of the *droit d’octroi*, a previously collected local tax (Note 3). It was distributed proportionally to the fiscal capacity of the municipalities. The needs of these municipalities was not envisaged by this funding. Therefore, it contained no element of solidarity nor equalization. In fact, the financing of the Belgian municipalities had to be reviewed and, in 1889, a special tax-financed fund was created and distributed according to population criteria

(Husson, 2009; Pagano, 2013). It can be seen as the first integration of an element of solidarity.

The fund subsequently evolved to take the solidarity concept into greater consideration. Thus, if, according to the law of July 19th, 1922, half of the fund is still distributed according to the principle of 'fair return' (Husson, 2004), the distribution becomes, according to the law of December 24th, 1948, more based on the needs of the entities (roads, public education expenditures, professional education and public assistance expenditures, population, etc.) (Husson, 2004; Pagano, 2013).

The funding evolved in 1964. The new laws increased the endowment and distributed it with the objective criteria of distribution related to the needs of the municipalities. The true novelty of this law was linked to the mode of distribution. Indeed, the fund was divided into two funds, fund 'A' and fund 'B'. Fund 'A' was reserved for the four big cities: Antwerp, Brussels, Ghent and Liege, and received 37% of the endowment. The second fund, which received 63% of the endowment was reserved for all other municipalities. It itself was divided into three groups: the non-specified fund 'B' itself, the fiscal compensation fund, and the assistance fund. The non-specified fund 'B' was spread into four categories of municipalities which depended on their size. The fiscal compensation fund aimed to provide additional revenue to municipalities, with a fiscal capacity which was lower than the average capacity of their category. The distribution was based on population size, and the difference between the average household income per municipalities inhabitant (Note 4) and the average household income in all municipalities. Solidarity and equalization were explicitly implemented with this share of the fund (Husson, 2004; Pagano, 2013). Such a process can be explicitly compared with the mechanism adopted by the law of July 15th, 2008. Lastly, the aid fund aimed to help the municipalities on various defined objectives.

3.2 The 1976 and 1989 Reform and Their Challenges

The law of January 5th, 1976, defines the distribution of the municipalities' fund between the regions according to the 'three thirds' rule, which means that three categories exist and are mutually exclusive. The Belgian regions are then autonomous in the distribution of means between municipalities (Husson, 2004; Pagano et al., 2015). However, the true 'game changing' evolution took place in 1988. Since then the management of the Municipal Fund has been done by the Belgian regions, which finance this fund themselves (Pagano et al., 2015).

In addition to the management of this funding, the Walloon Region defines its distribution. The distinction is, therefore, always made between the two biggest cities, Liege and Charleroi, and the other municipalities. Various corrective mechanisms, such as those applied in 1964 are in fact, found in the law of 1989. A distinction is made according to the size of the municipality, but other criteria are included, such as the diversity of services provided. The mechanism retains an element of accountability, with a fiscal coefficient applied to the general allocation of municipalities from categories II and III (Pagano, 2013).

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Graph 1. The Municipalities Funding Structure in 1989

<table>
<tr><td rowspan="4">Category I
Liege and Charleroi
32.5%</td><td colspan="6">Categories II and III
67.5%</td></tr>
<tr><td colspan="3">Main endowment
85%</td><td colspan="3">Specific endowment
15%</td></tr>
<tr><td rowspan="2">Prorate population
15%</td><td colspan="2">Prorate population & tax
70%</td><td rowspan="2">Tranche A
Road, Fire and Finances
4.5%</td><td rowspan="2">Tranche B
Security, Education and Youth
3.5%</td><td rowspan="2">Tranche C
Poverty and Employment
7%</td></tr>
<tr><td>2 category
26%</td><td>3 category
44%</td></tr>
</table>

Adapted from Husson, 2004 ; Pagano, 2013

As shown in the previous diagram, the endowment of the biggest municipalities of Liege and Charleroi represents a special case. Indeed, this mechanism was based on the classification of the municipalities into three categories. After deducting the 32.5% divided between Liège and Charleroi, the difference was distributed between the 260 other Walloon municipalities. The fund was itself shared and 85% was distributed according to the main endowment and 15% according to the specific endowment (Husson, 2004; Pagano, 2013).

The municipalities of Liege and Charleroi operate in a specific way. On the other hand, the 260 remaining municipalities, despite a distinction between the municipalities of second and third categories, have common management principles. The distinction between these categories is related to the number of inhabitants. The second category includes municipalities with more than 50,000 inhabitants while the third category includes the rest (Pagano, 2013). Municipal funding is based on a double endowment, a main endowment and a specific endowment. The specific allocation is designed to meet the specific needs of some municipalities, while the main endowment spreads the funding with a size criterion.

3.3 The Externalities and the Walloon Municipal Fund Reform

Although the 1989 system appears to be based on weighted criteria, this weighting is eminently criticized. Many appeals have been introduced since the application of this reform (Husson, 2004, 2009; Pagano, 2013; Pagano et al., 2015). Consequently, a series of corrective measures have been implemented, as early as 1992 (Husson, 2004, 2009; Pagano, 2013; Pagano et al., 2015). Despite these minor reforms, a more global thinking about the operation of the Municipal Fund appears to be necessary, and various suggestions about further reforming this policy have been put forward.

An evaluation took place at the end of the 1990s. The Walloon Parliament's Committee on Internal Affairs held several hearings concerning the Municipalities Fund. Willy Burgeon, president of the Union of Towns and Municipalities of Wallonia, underlined several problems, such as the disregard of externalities, the lack of predictability, the complexity of the funding system, and the variation of the specific endowment (Husson, 2004). Thus, the question of externalities is an issue that has been widely considered by the union of Walloon cities and towns.

If the 2008 reform gives some answers to externalities, some contingencies have been put in place to promote the internalization of overflow effects. An example is the establishment of police and fire zones in recent years. These zones have the aims to prevent these effects. Nevertheless, there are differences between the real delimitation, in some areas, and the optimal delimitation of these areas which could offset overflow effects related to the local police function. Indeed, some "unicommunal" zones, often in large municipalities, are the origin of overflow effects. In the same way, some inter-municipalities exist and are active in particular themes. However, it is important to note that supra-communality as a solution to all overflow phenomena would require too many decentralized jurisdictions. Indeed, each public good can cover a field of different beneficiaries. In addition, the establishment of a supra-communal structure carries costs that could be higher than those of overflows. Nevertheless, a region could encourage the creation of supra-communal structures to cover the effects of proven overflowing or to create economies of scale. Greater cooperation between municipalities would promote budget efficiency, since some policies are applicable over a wider area than that of a single municipality.

3.4 The 2008 reform

The law fixing the funding of the municipalities was revised by the law of July 15th, 2008, to take into account the question of externality. As described by Husson, this model was considered as revolutionary because, while it did not explain the said externalities, it did grasp them through a mathematical expression derived from a preliminary statistical analysis linking certain municipal expenditures of the population workforce (Husson, 2009). The operation of the funding mechanism is linked to a base amount (928.37 million euros in 2008), indexed in 2009, which will be increased by 1% each year beyond the indexation from 2010. As shown in graph 2, five endowments are to be distributed among municipalities. Among these endowments, we will focus on tax equalization and externality endowments, that is the equivalent of 83% of the Fund. This allocation corresponds to an equalization mechanism and a compensation of various externalities (Pagano et al., 2015).

Graph 2. Distribution Criteria of the 2008 Municipal Funding Mechanism after Deduction of the Minimal Endowment

Tax equalization endowment	*Externalities endowment*	*Downed or publicly subsidized housing endowment*	*Population density endowment*	*Arrondissement or province capital endowment*
(1)	(2)	(3)	(4)	(5)
30%	53%	7%	5.50%	4.50 %

Adapted from Pagano, Vandernoot & Van Hove, 2015

More than half of the municipalities fund is distributed according to externalities endowments (2). As said by Pagano himself, who designed this reform, its purpose is to consider a situation where a municipality provides non-residents with goods or services that it finances solely from its own budgets and, thus, from its resident taxpayers (Pagano, 2013). The pivotal role played by some densely populated cities, where per capita ordinary expenditures are also higher, is considered by the externality endowment. These expenses include general operations, police, fire services, social policies, culture and hygiene. However, taking these situations into account, also known as externalities, is not easy.

As an econometric study led by Pagano showed, the number of inhabitants is quite efficient as a variable capturing these externalities (Pagano, 2013). In fact, the size of the community is an important factor in estimating the number of services provided, as a large municipality provides the broadest variety of services for its own inhabitants. However, these services may benefit from neighboring communities (Pagano et al., 2015). This situation implies that municipalities expenditures increase more than proportionally to the increase of the size of the community. A standard expenditure level may be calculated for each municipality according to the formula:

$$NE = [-243\,985{,}9 + (794{,}5123 * MP) + (0{,}00560 * (MP)^2) * \left(\frac{Rt\ PIT}{Rt\ PIT\ mean}\right) * \left(\frac{Rt\ PT}{Rt\ PT\ mean}\right)$$

Where

- NE, normalized expenditure level;
- MP, municipalities population;
- Rt PIT., the ratio of additional municipal taxes to personal income tax and Rt PIT mean, the regional average of the ratio of additional municipal taxes personal income tax;
- Rt PT, the ratio of additional municipal taxes to property taxes and Rt PT mean, the regional average of the ratio of additional municipal taxes to property taxes (Note 5).

Municipalities with the most inhabitants receive more financial resources with this endowment. A coefficient relating to the fiscal effort of the municipality is incorporated into the formula, in order to prevent the municipalities reducing the 'additional tax' to attract new inhabitants and increase the share they receive from the Fund (Pagano et al., 2015). Externality endowment restores a form of economic optimum, meaning that it was not created to introduce solidarity between the entities.

In addition to this externality endowment, municipalities receive a tax equalization endowment, which is equivalent to 30% of the Municipalities Fund. This equalization endowment aims to bring fiscal potential closer between municipalities. It is distributed among municipalities whose tax potential is lower than the regional fiscal potential. It can be seen as a solidarity mechanism since it derogates from the principles of 'just return'.

4. Method

Our aim is to analyze the impact of this legislative evolution on municipality's revenue distribution. Data provided by the Walloon regional administration of 2007 and 2008 fiscal years allow us to draw some comparisons between the different municipalities. However, due to privacy concerns, this administration does not allow these data to be used by individual municipalities. A way to understand the difference between these municipalities has been researched to circumvent this prohibition. First of all, a province division according the five provinces of Wallonia could be used to see this evolution. However, municipalities which are a share of these provinces seem too different from an economic point of view. The other way is to use a cluster system to see the difference between these municipalities. This system is already used and seems relatively stable. The system seems to show the difference between municipalities quite well.

Table 1. Distribution of Municipalities by Cluster (Note 6)

Cluster	Naming Cluster
W01	Residential municipalities (where income is lower than the regional average and the centrality* is low) situated in suburban areas, on the outskirts of a town.
W02	Central municipalities (where centrality is higher than the regional average), small sized towns.
W03	Residential municipalities (where income is higher than the regional average and centrality is low) situated in rural areas.
W04	Rural or semi-rural municipalities (where the degree of urbanization is lower than the average regional degree of urbanization and centrality is low) with considerable agricultural activity and low touristic activity.
W05	Municipalities with economic activity (where economic activity is higher than the regional average) situated in rural, semi-rural or semi-urban areas.
W06	Rural or semi-rural municipalities (where the degree of urbanization is lower than the average regional degree of urbanization and centrality is low) with forestry and touristic activity.
W07	Central municipalities (where centrality is higher than the regional average) with a touristic center.
W08	Semi-urban and agglomeration municipalities (where income is lower than the regional average and the centrality is low).
W09	Semi-urban and agglomeration municipalities (where income is lower than the regional average and the centrality is low), urban peripheral division
W10	Central municipalities (where centrality is higher than the regional average), large and regional cities.
W11	Municipalities with economic activity (where economic activity is higher than the regional average) situated in urban or agglomeration area
W12	Central municipalities – central town in rural area
W13	Central municipalities – average town and income is high
W14	Residential municipalities (where income is higher than the regional average and the centrality is low).

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** In this table, centrality is defined as the character of what is central, the municipalities with a high level of centrality are more attractive for citizens (i.e. more economic services, more hospital by inhabitants, more …).*
Methodology and data from the Belfius local research center

In order to compare municipal finances, an intermediate step seemed necessary. The Municipal Fund must be converted to be comparable. Indeed, a refinancing of this fund was done during the implementation of the law. The comparison will be made between the 'true' 2007 endowment (a) and the '2007 bis' endowment (b), which takes into account this refinancing. The 2008 endowment (c) has been included in order to see the impact of the refinancing. The following tables show the impact of this adaptation by provinces.

Table 2. Mean of the Funding Endowment Distribution by Provinces (€)

Province	2007 (a)	2007 bis (b)	2008 (c)
Brabant Wallon	1343510.77	1587658.60	1754150.85
Hainaut	4888588,47	5776961.15	6018566.65
Liège	3859738.06	4561144.17	4004158.56
Luxembourg	1475553.13	1743696.19	1838056.92
Namur	1882322.26	2224384.94	2653518.89

Data from the Belfius local research center, own methodology

The following tables show the impact of this adaptation by clusters.

Table 3. Mean of the Funding Endowment Distribution by Clusters (in €)

Cluster	2007 (a)	2007' (b)	2008 (c)
W01	1343510.77	1781438.731	1754150.85
W02	3053197.29	4048411.098	4023454.02
W03	1668143.52	2211888.093	2233857.54
W04	1475553.13	1956521.347	1838056.92
W05	1882322.26	2495880.092	2653518.89
W06	9422726.96	12494139.36	12503038.2
W07	1343510.77	1781438.731	1754150.85
W08	3053197.29	4048411.098	4023454.02
W09	1668143.52	2211888.093	2233857.54
W10	1475553.13	1956521.347	1838056.92
W11	1882322.26	2495880.092	2653518.89
W12	9422726.96	12494139.36	12503038.2
W13	1343510.77	1781438.731	1754150.85
W14	3053197.29	4048411.098	4023454.02

Data from the Belfius local research center, own methodology

5. Results

The following tables show the difference before and after the implementation of this reform. While globally, the Walloon municipalities have not complained about these developments, it seems that some rebalancing has taken place depending on the clusters. We will come back to these clusters below.

Table 4. Mean of the Funding Endowment Distribution and Difference by Provinces (in €)

Provinces	2007 (a)	2007' (b)	2008 (c)	Difference (d) = (c)-(b)	Ratio (e) = (d)/(b)
Brabant Wallon	1343510.77	1587658.60	1754150.85	166492.26	10.49%
Hainaut	4888588.47	5776961.15	6018566.65	241605.50	4.18%
Liège	3859738.06	4561144.17	4004158.56	-556985.60	-12.21%
Luxembourg	1475553.13	1743696.19	1838056.92	94360.72	5.41%
Namur	1882322.26	2224384.94	2653518.89	429133.95	19.29%

Data from the Walloon public administration, own methodology

When comparing the Walloon provinces, there is a compensation between the contributions from households and from the public authority. This allowance is due to fiscal equalization allocations. These endowments are all the more necessary where the fiscal potential is weakest, for example for general operating expenses, the police, the fire department, social policies, hygiene and public health policies. They are also necessary because expenses in social housing within Belgian municipalities are particularly high.

Some researchers have noticed that, with the mechanisms of equalization and externality endowments, the municipalities of the provinces of Hainaut and Liege receive more from the Fund than the regional. Indeed, a part of the endowment is distributed between municipalities with the lowest yield of additional taxes compared to the household tax. This mechanism explains why municipalities with lower tax potential, receive more revenue through the Municipal Fund. In addition, large cities benefit from the externalities endowment to a greater extent (Pagano et al., 2015). Observations may be a bit different if our methodology is used. Indeed, if an evolution may be seen between 2007 and 2008 endowment. This evolution seems, for the province of Liege, quite unfavorable and controversy quite favorable for provinces of Brabant Wallon and Namur. Therefore, we cannot analyze this evolution as Pagano (2015). Indeed, the evolution is favorable for all the provinces apart from the province of Liege. We could simply assist to rebalancing of the endowment.

However, this evolution could be analyzed differently if the methodology previously presented is slightly modified with a different methodology, namely the removal of two municipalities from the database which were previously considered as special cases (Liège and Charleroi). The table 5 shows this different methodology.

Table 5. Mean of the Funding Endowment Distribution and Difference by Provinces without Charleroi and Liege (in €)

Provinces	2007 (a)	2007' (b)	2008 (c)	Difference (d) = (c)-(b)	Ratio (e) = (d)/(b)
Brabant Wallon	1343510.77	1781438.73	1754150.85	-27287.88	-1.53%
Hainaut	3053197.29	4048411.10	4023454.02	-24957.08	-0.62%
Liège	1668143.52	2211888.09	2233857.54	21969.45	0.99%
Luxembourg	1475553.13	1956521.35	1838056.92	-118464.43	-6.05%
Namur	1882322.26	2495880.09	2653518.89	157638.80	6.32%

Data from the Belfius local research center, own methodology

This methodology shows a relatively similar evolution between Walloon municipalities. Municipalities of the province of Namur have seen the biggest rise. This situation could be seen as an exception. Conversely, municipalities in the province of Luxembourg are the most heavily affected and experience the largest decline. We cannot, therefore, presume that a large rebalancing has taken place between the different municipalities. We are mainly witnessing internal financial variations in the provinces, with exceptions, as noted above, in the provinces of Namur and Luxembourg.

The cluster analysis seems more interesting. It allows us to compare municipalities with identical functions and profiles. This analysis is displayed in the following table.

Table 6. Mean of the Funding Endowment Distribution and Difference by Clusters (in €)

Cluster	2007 (a)	2007' (b)	2008 (c)	Difference (d) = (c)-(b)	Ratio (e) = (d)/(b)
W01	1035976.03	1224237.48	1406840.94	182603.46	14.92%
W02	218625.21	2583545.00	2773339.12	189794.12	7.35%
W03	571991.89	675936.40	818533.19	142596.78	21.10%
W04	805960.26	952422.39	1187130.21	234707.82	24.64%
W05	1023268.16	1209220.30	1361150.71	151930.41	12.56%
W06	733416.20	866695.35	1107737.15	241041.80	27.81%
W07	1465839.97	1732217.93	1982394.23	250176.30	14.44%
W08	2227463.60	2632246.66	3168339.90	536093.24	20.37%
W09	4440244.03	5247141.87	6088093.81	840951.94	16.03%
W10	46173588.20	54564426.28	47628740.21	-6935686.06	-12.71%
W11	3920100.60	4632476.02	4982061.70	349585.68	7.55%
W12	2628677.96	3106371.21	3162515.45	56144.24	1.81%
W13	4541416.24	5366699.47	5807829.35	441129.87	8.22%
W14	1078859.77	1274914.23	1462972.82	188058.59	14.75%

Data from the Belfius local research center, own methodology

As explained previously, these clusters were composed on a relatively comparable basis. Thus, the two largest Walloon cities, Charleroi and Liège, belong to cluster W10 and can pose some difficulties. Indeed, the cities previously benefitted from a special funding regime. If we consider the Municipal Fund by not withdrawing these two cities as shown in Table 5, an extremely significant difference exists, and does not allow a good analysis of this endowment.

Thus, if we do not consider these two cities, the analysis is clearer.

Table 7. Mean of the Funding Endowment Distribution and Difference by Clusters without Charleroi and Liege (in €)

Cluster	2007 (a)	2007' (b)	2008 (c)	Difference (d) = (c)-(b)	Ratio (e) = (d)/(b)
W01	1035976.03	1373660.61	1406840.94	33180.34	2.42%
W02	2186251.21	2898877.09	2773339.12	-125537.97	-4.33%
W03	571991.89	758437.17	818533.19	60096.02	7.92%
W04	805960.26	1068669.38	1187130.21	118460.83	11.08%
W05	1023268.16	1356810.52	1361150.71	4340.20	0.32%
W06	733416.20	972479.01	1107737.15	135258.14	13.91%
W07	1465839.97	1943642.11	1982394.23	38752.12	1.99%
W08	2227463.60	2953522.98	3168339.90	214816.92	7.27%
W09	4440244.03	5887576.69	6088093.81	200517.11	3.41%
W10	17693765.25	23461188.01	22247345.09	-1213842.92	-5.17%
W11	3920100.60	5197888.40	4982061.70	-215826.71	-4.15%
W12	2628677.96	3485516.34	3162515.45	-323000.89	-9.27%
W13	4541416.24	6021726.79	5807829.35	-213897.44	-3.55%
W14	1078859.77	1430522.65	1462972.82	32450.17	2.27%

Data from the Belfius local research center, own methodology

Table 6 shows that the rebalance occurred in favor of some municipalities and to the detriment of others. Rural and residential municipalities in rural areas (W06, W04 and W03) have experienced the largest increases.

Similarly, large increases affect semi-urban municipalities with incomes below the regional average (W08 and W09).

Conversely, Table 6 shows that the municipalities, most favored by their centrality, by their activities or by their incomes above the regional average (W10, W11, W12 and W13), are the most strongly impacted by a decrease in the Municipal Fund.

In addition, central municipalities in rural areas (W12) and central municipalities (W02) have a negative evolution. This evolution may be related to a global effect of rebalancing in this municipality financing. However, we can underline the fact that the impact is rather diffuse and affects all the municipalities.

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6. Discussion

The funding of municipalities has largely evolved. Initially, the fiscal capacity of the municipality is used to allocate resources according to the contributive capacity of each. From now on, the Municipal Fund will be made up of different endowments.

The externalities endowment is original. It is not an equalization mechanism. It has been introduced in order to take into account the externalities. In fact, municipalities receive an amount corresponding to their normalized expenses. These expenses are the financial burden they would have to meet given the number of inhabitants. This amount is corrected by a coefficient measuring of the tax effort, to ensure that the municipalities themselves try to increase their fiscal revenues before resorting to solidarity. This endowment appears to be closer to the needs awareness endowment than to a redistribution endowment or the primacy of preferences of the higher authority (Bennett, 1982; Husson, 2008; King, 1984; Musgrave & Musgrave, 1989; Oates, 1999).

Table 8. Purposes, Objectives and Instruments for General Transfers

Purposes	Objectives
Primacy of the preferences of the higher authority	Implementation of the preferences of higher authorities in the field of merit goods or minimum standards of services. Compensation of tax revenue lost by the introduction of a centralized perception.
Redistribution endowment	Equalization of fiscal capacity (to be distinguished from taking into account actual tax revenues, which take into account the rates charged and the efficiency of collection).
Needs awareness endowment	Consideration of a higher local service production cost (e.g. island situation, unusual climate, etc.). Socio-demographic profile resulting in a demand for local goods and services above average (e.g., young children, elderly population, etc.). Centrality: response to requests for local goods and services from people not resident in the municipality ('externalities').

Source: Husson (2008a, 2008b), inspired by King (1984), Bennett (1982), Musgrave & Musgrave (1989) and Oates (1999).

Moreover, the Municipal Fund is also composed of a fiscal equalization mechanism. For personal income tax and property tax, the communal tax potential (above) is compared to the regional potential and the difference is compensated by the endowment.

7. Conclusion

The Municipal Fund has evolved a lot since its creation in 1860. Initially, this fund was distributed proportionally to the fiscal capacity of the municipalities and contained no element of solidarity nor equalization. It is no longer the case and the fund has shifted to a logic which takes into account the needs of the municipalities. As seen before, the current mechanism of financing takes into account externalities which was not previously the case.

Other endowments are also involved in this fund, which we have not discussed here. As pointed out above, they do not have the objective of introducing solidarity, but more detailed calculations could reveal the existence or the absence of implicit solidarity.

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Notes

Note 1. Code de la démocratie locale et de la decentralization, Livre I, Titre II, Chapitre II, Section 1, art. L1122-30.

Note 2. It is defined in the book of Alfred Marshall « *Principles of Economics* » (Marshall,

1890) who introduces the positive externality concept (Moulier-Boutang, 2000). Moreover, it has been developed by Cecil Pigou who defines these externalities in an environmental context (Pigou, 2013).

Note 3. The "*droit d'octroi",* a previously collected local tax is: entry fees, shipping fees, transit fees also known as "*pass-standing*" fees, surcharges for grant rights, rights of warehouse on the objects subject to the granting, the rights of granting on the manufacture or the extraction of certain products within the commune, the stamp duties on the receipts, the part of the expenses of escort and the fines and confiscation, attributed to the communal fund (Pagano, 2013).

Note 4. These clarifications may seem unnecessary, but the importance of secondary houses may introduce some bias in the analysis in other way.

Note 5. Art L1332-13 of the July 15, 2008 reform.

Note 6. Interested readers may find more information on this methodology on the website of the Belfius local research center, accessible on https://www.belfius.be/publicsocial/FR/Expertise/Etudes/Analyses-thematiques/TypologieSocioeconomique/index.aspx?firstWA=no. This website has been consulted the February 28, 2018