EFFECT OF MUNICIPAL
AMALGAMATIONS ON
PUBLIC EXPENDITURE: THE
CASE OF ALBANIA

by

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Abstract

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Territorial reform can be considered as one of the most widespread public reforms. Economies of scope and scale are the main justifications behind, but is it enough to overcome all difficulties and transaction costs?

Almost all developed countries went through such transformation, and many articles measure the effects, but conclusions vary. This research analyzes the case of Albania, one of the most recent, implemented in 2015. To test the effectiveness of the reform, the data of the different public expenditure categories at the local level and some proxies for quality have been used. The evaluation relies upon the difference-in-difference method with a careful comparison of the expenditures before and after the reform and innovative approach to identify treatment and control groups. Results turned out to be inconclusive: two years after the reform the per capita costs went down only in one category of public expenditure, but it did not help weaker municipalities as expected.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

C h a p t e r   1

INTRODUCTION

There are not so many public reforms that are universal but are still actual today despite their long history of discussions. A territorial reform, such as amalgamations of local jurisdictions, is one of them. In contemporary understanding of the term, this reform has taken its rise starting from 1960th.

Developed countries were the pioneers in this field: Canada, Sweden, Germany and other Western European countries have already undergone the process of power devolution and amalgamation of small administrative units, some even a few times. And the trend for such changes is now on political agenda for post-socialistic and other Eastern European countries (i.e., Armenia and Ukraine).

There are many motives behind such consolidation: to increase the quality of public services or the effectiveness of finance use, economy of scale, as well as the optimal political power distribution and corresponding budget allocation. Additionally, the tendencies for urbanization are pretty evident nowadays: people move out of villages, but the government has to provide services there anyway. Therefore, the key questions here include the following: what are possible negative consequences it may lead to and what is the best way to address these problems. An amalgamation is definitely a relevant option for policymakers to pursue.

There are many studies looking at how amalgamation influences public services. Their results are different. Probably, this is due to the discrepancy between two main reform objectives – to increase the quality of services versus to save money from the economy of scale. Moreover, there is a variety of secondary effects of the reform, such as getting the ideal size of local government or improving local democracy and political engagement.

This study focuses on Albania due to the country's considerable progress with a recent territorial reform. Although amalgamation in Albania was implemented in 2015, there is still no proper evaluation of the results. In 2001, this post-socialistic country had many fragmented villages with 5,000 inhabitants on average, which in 10 years became even less inhabited (3,700). Major reasons for such changes include the migration of people to the capital city or abroad. Due to this reallocation, half of local governments lose 25% of their inhabitants. This transformation raised serious challenges behind the government, and in 2015, with the help of international donors, Albania introduced a radical amalgamation reform. As a result, now they have 61 municipalities (instead of 373 units before) with an average number of people of 45,000 per municipality.

The main goal of this study is to investigate whether territorial reform in Albania helped to use public expenditures more efficiently and how the quality of services changed after the reform. For these purposes I will do post-ante analysis and answer the following question: What are the effects of amalgamations on public expenditure? Based on the evidence from other countries, I expect no significant decrease in spending.

For my research, I will use detailed panel data of Albania public expenditures for all government tiers during 2010-2017 years' period. Such dataset is available from the World Bank, where yearly revised budgets of Albania are presented. The panel data set covers years before, during and after the reform. As a unit of observation, I will use the territory of the amalgamated municipalities after the reform.

To evaluate the effects, I will consider the econometric model where public services such as spending on education, health, social security and administration will be the dependent variable. The estimation will be based upon the difference-in-difference method, which is used in most of the literature on this topic and suits the best to observe the changes in expenditure.

On top of this, this study may offer a few valuable policy insights. Particularly, if the government wants to increase the efficiency of public service delivery, what are the things to look at. Or if policymakers want to allocate budget resources more uniformly across the country, they need to know municipalities that need them the most.

The thesis is structured as follows. Chapter 2 is the literature review, where I discuss the most important studies about amalgamations effect on public expenditures. Chapter 3 illustrates how the reform was held in Albania. Chapter 4 and 5 describe the data and methodology. Chapter 6 presents results, and Chapter 7 offers conclusions and key policy insights.

LITERATURE REVIEW

This chapter offers different views for and against amalgamation. The main arguments refer to the economy of scope and scale, accessibility of services and political representativeness.

2.1 Main economic arguments

The supporters of the reform argue that amalgamated jurisdictions are more capable of providing a wider range of functions or in more theoretical terms, benefit from the economy of scope. Larger jurisdictions have better investment potential. Enlargement allows avoiding duplication of various government functions (Callahan, Murphy and Quinlivan (2014)). However, the most popular argument observed in almost every article refers to the economy of scale. In fact, Fox and Gurley (2006) said that economies of scale are the main reason to implement amalgamation reform. Below we discuss all views in more details.

Oates (1972) argues that smaller jurisdictions allow citizens to choose services that match their preferences better. In contrast, Dollery et al. (2007) said that combining several entities in one (e.g. administrative facilities) can result in financial benefits for them. Meaning that enlarged municipalities can reduce costs of public services provision due to sharing of functions.

Other supporters, like Kushner and Siegel (2003) asserted that economic planning of local resources, such as land, can be more effective in larger municipalities. This can be achieved because one manager is more accountable and controllable, while alternatively, many energy is wasted on coordination between various local public servants.

There were also many other authors who discharged the advantages of economy of scale, for instance, Boyne (1995) and Sawyer (1991). They espoused that by increasing the size of local government, we can economize on administrative expenses and reduce per capita costs to provide public services.

In contrast, Breunig and Rocaboy (2008) emphasize that economies of scale exist up to some point. If the average cost curve is U-shaped an vital policy question about the optimal size of local government rises. This argument also was supported by Hanes (2015).

The economy of scale may have different effect depending on the homogeneity of the process. Hanes (2015) found that costs are reduced more when a bunch of small-sized municipalities consolidated together relative to a case when they merged with a large-scaled unit. Additionally, Hanes (2015) found that attitudes of municipalities towards amalgamation does not influence expenditure patterns and reform's effect.

Tiebout (1956) was one of the first who articulated an argument against amalgamation – less competition between adjacent municipalities. In the case of high fragmentation, locals can maximize consumer choice and take advantage of using services from neighbor municipality.

Other opponents argue that transformed units may need even more money (than before) due to a broader range of functions. Kessing (2010) points toward a decrease in accessibility of political representation, harder local monitoring and communication complexities. In some cases, amalgamation can even pose a threat to local identity (Soguel and Silberstein (2015)), which means that reform can menace the peculiarities of local culture or ethnicity.

2.2 Main empirical results

One of the first extensive amalgamation reforms took place in Sweden in 1952. Hanes (2015), who analyzed this reform, paid particular attention to the structure of municipalities amalgamated. He found that overall expenditures

decreased in small jurisdictions (up to 12,800 inhabitants) while for more populated amalgamated communities, the economy of scale did not work.

Quite mixed findings were provided by Moisio and Uusitalo (2013) for the reform that was held in Finland in 1979-1981. Similar to Hanes (2015), they compared per capita expenditures of merged municipalities with those who remained unchanged. No apparent effect was noticed as a result, which is more collated with theoretical assumptions. Some public spending like education or healthcare increased more in amalgamated units, while others, like general administration, decreased, although not so significantly to offset increasing. Importantly, in this research, the authors looked not only at public spending categories but also added indicators for amalgamation possibility. While this study offers a long-term perspective on the reform, it does not take into account many things have changed since 1980. Thus, a look at more up-to-date reforms is needed.

Such a recent analysis is offered by Blom-Hansen et al. (2016), who considered the amalgamation reform in Denmark that was held in 2007. This case was interesting to analyze because the government forced this radical reform, where only 13% of municipalities stayed untouched (239 municipalities combined into 66 and 32 left intact). Non-random nature of mergers poses a question of endogeneity, which authors account for by treating reform as the origin of exogenous variation in jurisdiction size. This means that the treatment group was formed from small municipalities that were exogenously ordered to amalgamate.

A modern type of methodology (difference-in-difference) was implemented, looking at how the cost of public services depend on the type of municipality (amalgamated or not) and time-span (before-after reform). Blom-Hansen et al. (2016) did not find any significant effect on expenditure. In some areas, costs savings indeed happened, but in others, they increased. The main drawback of this study is concentration only on cost-savings and ignoring the effect on quality, which is considered as another main objective of territorial reform.

This issue was raised in Reingewertz (2012), who says that it is crucial to check if the reduction in costs leads to a reduction in quality. This is a complicated task because the quality of many services is not easily measurable. He tries to use the following indicators: migration from municipality, new housing construction per capita, birth rate, educational tests rating and number of students in the class. Reingewertz (2012) uses two groups with 21 amalgamated municipalities and 219 that had not been reformed to look at how changes in public services outcomes were affected by amalgamation.

Also, he emphasizes the importance of controlling for the cost reduction trend. As a result, he found that in Israel reform helped to reduce costs by 9% while the level of services stayed the same. The results are significant even after controlling for the selection bias. To do so, he compared the level of budgetary variables of amalgamated municipalities to a subgroup of non-amalgamated. The difference is not significant so he can assume that there is no correlation between the fiscal situation and the amalgamation. After that, he also divided municipalities in another two groups depending on their answer for the invitation to amalgamate.

Another noteworthy reform was held in Switzerland where all jurisdictions could merge voluntarily. Steiner and Kaiser (2017) also divided them into two groups and applied DiD method to focus on the quality of services, which is the main objective of this amalgamation reform. They use five output measures to do so: public service delivery, local finance, local autonomy, local democracy, and administrative staff. The authors find that effect on expenditure is inconclusive, but the quality of public service delivery at least did not deteriorate. In some cases, mergers increased the quality of services delivered due to the professionalization of staff and local autonomy.

Most of the existing studies evaluate the effectiveness of amalgamations in OECD countries, but there is a few for CIS countries or other post-socialistic countries. For example, Swianiewicz (2010) discuss the reform in Macedonia and Georgia and finds negative aspects of amalgamations in these countries.

He mentions poorly developed infrastructure as a reason why the accessibility of administration worsened and fear among local people of not being represented increased. Thus, the effect of amalgamation can be undermined by the particularities of a region reform implementation.

Therefore, in my research, I aim to generate new evidence of the amalgamation reform in developing countries. Since the reform in Albania is the most recent one in Eastern Europe and has not been studied, it is useful to evaluate its effects on both costs and quality of public services.

This research contributes to the literature in several ways. It applies a new creative measure for the control group – a share of expenditures covered from local finances. Such standard allows analyzing reform's effects even when all or most of jurisdictions were quickly transformed. Five types of expenditures are taken into consideration for cost savings and one indicator, i.e., building permits is proposed as a measure for quality. Some recommendations for policy implementation follow.

REFORM IN ALBANIA

Since Albania waved off communist regime in the 90's, there not have been considerable progress in decentralization reform. The situation was defined in the 1992 law about administrative territorial distribution, which was based on inheritance from Soviet system. The local government units (LGUs) were highly fragmented and didn't have enough money to provide their services (like water supply or waste management). They could cover only 30% of their expenses in 2006, and in 2015 this ratio dropped even more to 20%. So they lived on transfers from the center and was dictated how to use the money. Because of this ambiguity and non-transparency, where it was hard to say who is responsible for particular government function, many corruption schemes were created.

Another big reason for reform was high administrative costs. It was unjustifiably expensive to maintain such a large number of workers in executive power at the local level. They did not do their job correctly, and citizens did not receive a decent level of services, which resulted into a reallocation of people from villages and rural areas to urban economies, and in some cases even to migration. At the same time, unfavorable tendencies in demographics evolved. For the ten years from 2001 to 2011 the number of people in the municipality reduced significantly. In some cases, the government didn't even know the exact number of users of their services.

So to change such situation government, together with international donors', created the new variants of administrative and territorial division map, which was implemented in the law "On the administrative-territorial divisions of local government units." The municipalities were reorganized in the way that 61 LGUs were created against 373 before. The average number of people increased substantially.

3.1 How they merged?

There were few options on how to divide regions (i.e., by geographic criteria or by water basins). After several consultations with experts and the local population, the following two criteria were chosen.

The geographical location and economic situation. Some LGUs are located in remote areas, other – closer to urban center. Some have a small number of inhabitants, others, near the sea, are more crowded. These two main factors influence the locations' economic structure. Some communes are concentrated on tourism or industry, but most of them are dependent on agriculture. It means that collected taxes and revenues vary substantially between the regions and economic indicators reflect which municipality contribute more to the Albanian economy. So, Davies index was used to compare the level of economic activity and using this information amalgamate LGUs properly.

The demographics. The main requirement of amalgamation was that number of people in the new municipality should exceed 30,000 for the high-density areas, 20,000 for average density territories, and 10,000 for less populated regions, which is the minimum amount. Also, some indicators connected to construction were included here, like the proportion of new buildings or continuity of construction. Because in some areas people are just registered but live in a capital city and the nominal number of citizens will not reflect appropriately the functionality of life there.

3.2 What is the difference in functionality?

The law gave LGUs more functions than before the reform. Now they are responsible for the administration of the kindergartens and daycare centers, fire protection, and rehabilitation of the drainage systems (which before were under the national agencies.) One of the costliest functions come up to be the wages

of pre-school and primary school teachers, which were financed with earmarked specific grants. New important tasks in an economic dimension like rural and forestry development (public pastures, biodiversity) as well as construction and rehabilitation of schools were added. For these purposes in 2016 5.7 bln. lek were allocated through Annual Budget Law.

From the other side, some functions were abolished or redirected to the higher tier of local government. Mostly they are connected to the administrative and operative expenses. For example, the number of positions for mayors of municipalities or secretaries decreased due to the reform.

It was expected that reform would result in reducing the responsibilities in utility services like drinking water supply, maintenance of school buildings and roads or sewer cleaning service.

For consistency, I will consider only own functions of local government (not shared ones with the center), which means infrastructure and public services (e.g., water supply, sewage, maintenance of local roads, public transport, etc.), local economic development, culture and social security.

3.3 What is the difference in financing?

The fiscal side of LGUs autonomy, unfortunately, remains at the weak condition. Local governments still have constraints in using their own-generated money, and there is an upper limit of expenditures to local government. The law (9936/2008 "On the management of the budgetary system in the Republic of Albania") obliges LGUs actual expenditures to correspond to actual revenues collected. The government tried to deal with this issue by implementing the new law on Local Government Finances (LGF), which gave more autonomy at the local level. In December 2015 there was a change in an unconditional intergovernmental transfers formula, which has an object to make the allocations of funds more equitable, transparent and relevant to local needs.

In more details, there are two forms of grants from central government:

a) Conditional, which goes for specific purposes or functions that are delegated to the local level. Central government sets the rules and gives some amount of money and the administration of municipalities cannot decide how to use them. Transfers go in the form of operational or capital expenditures for delegated and shared functions from the line ministries. For example, the Ministry of Social Welfare transfer money for care about persons with disabilities or poverty alleviation.

b) Unconditional, which provided for shared or own local functions. They are allocated based on a formula that includes demographic and geographic indicators such as population, area and amount of tax collected. The main goal of this transfer is to equalize revenues across municipalities. LGU can use them on their discretion.

The last one was necessary because in 2015, 72% of revenues were collected in Albania's ten largest municipalities, 38% of which was coming from capital city Tirana.

Apparently, indicators like poverty levels or needs for expenditure, which are necessary for fair allocation of intergovernmental transfers, are challenging to measure. This leads to manipulations [1] in transfers distribution and the necessity to change the system. There were long discussions on how to improve the situation and influence the level of LGU capacities. As a result, the government pushed the amalgamation reform, driven by the fear that, voluntarily, the process will be stuck due to week political culture and will not give expected results.

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[1] Minister of Social Welfare E. Veliaj speech in Parliament on 28 December 2013.

DATA DESCRIPTION

The data represent yearly revised Albanian budget for eight years, six years before the reform and two after. It includes expenditure and revenues at two levels – for local and central jurisdictions. Given the research topic, I will concentrate on the local ones, notably, I will impose the post-reform structure of 61 municipalities for each year. To be more specific, I aggregate data from 373 LGUs directly into new ones after amalgamation. This structure will give me the possibility to compare them appropriately.

There are ten types of expenditure in the data (by function). I am interested only in those that go to the local level and make a substantial share in the budget. Thus, defense, public order, environmental protection and healthcare were crossed out, as they make 0% of spending at a local level. These spendings are done by the central state. The remaining six categories are illustrated in Figure 1. The reforms started in 2015, but the adjustment to the budget entered into force only in 2016.
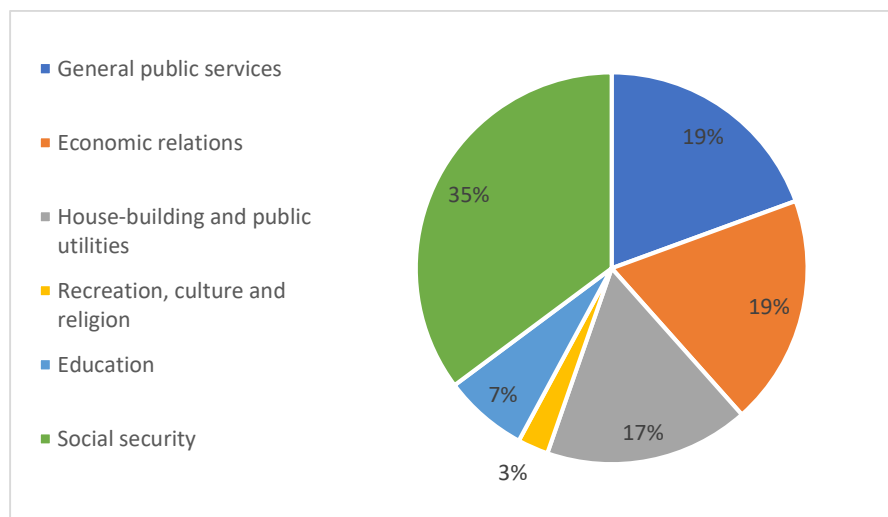
Figure 1. Share of local government expenditures, by function in 2015

It should be noticed that in absolute terms central budget spending on these functions are substantially larger than local, except for social security (e.g., social protection for families), which means that substantial part of expenditures is financed from the center.

To observe the difference with expenditures in the 2017 year, we depict the share for both periods, which you can find in Appendix Figure 5. From the graph, it can be noticed that the share of expenditure for general public services and social security decreased. This is determined by the fact that spending for housing and education increased significantly. Figure 2 below offers a look at the expenditure tendencies in the last seven years.
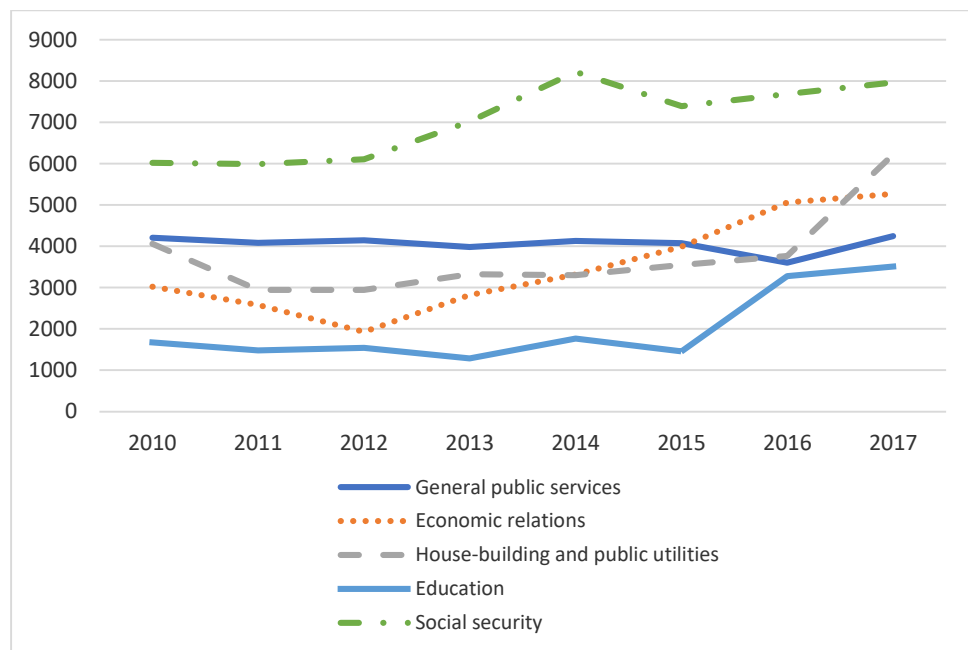
Figure 2. Local government expenditure per capita in nominal Albanian lek

As one can see only general public services that consist of operations at legislative organs, decline a little bit after the reform. This is due to the reduction in spending on executive organs, financial and fiscal affairs, external affairs. At the same time, expenditures in other categories increased, some even drastically,

for example, on education. Pre-school and primary school spending's increased more twice from, 3 mln. to 7.5 mln. lek in total.

Another essential change is observed at expenditures, related to economic relations, which consist of 5 subcategories. Such as expenditure on agriculture, forestry, fishing and hunting that increased by 3 times (from 0.75 mln. to 2.1 mln.) or expenditure on transport that increased by 1mln. This tendency was present starting from 2012, so presumably in this case, reform was not a significant factor.

It is important to highlight that each type of expenditure consist from several subdivisions, for instance function 1 which is General Public Services has 4 functions 2: 011 Executive and legislative organs, financial and fiscal affairs, external affairs, 016 General public services(unclassified), 017 Public debt transactions, 018 Transfers of a general character between different levels of government. And these groups can be detailed by specific programs, and each can have from one to ten of them, e.g., 017 has 01710 Payments for domestically issued debt subgroup.

Using this information and the fact that reform assigned some new functions to local jurisdictions, I remove all functions that were added after the reform.

Specifically, general public services left untouched; in economic relations category, I excluded forestry, drainage and national roads network expenditures because these sectors were filled by capital investments which had not existed before. For the building sector – all spending's connected to software development. In social security, I exclude all new functions connected to equal opportunities and civil emergencies.

In education expenditure, most changes were related to teachers' salaries, so it is not appropriate to exclude them. However, the difference for this category is significant between pre-reform and post-reform periods, so estimation of reform effect will be futile. Because of this, I decided to drop this expenditure

from the future discussion. Moreover, the main part of expenses goes from the center and share of education in overall spending is too small.
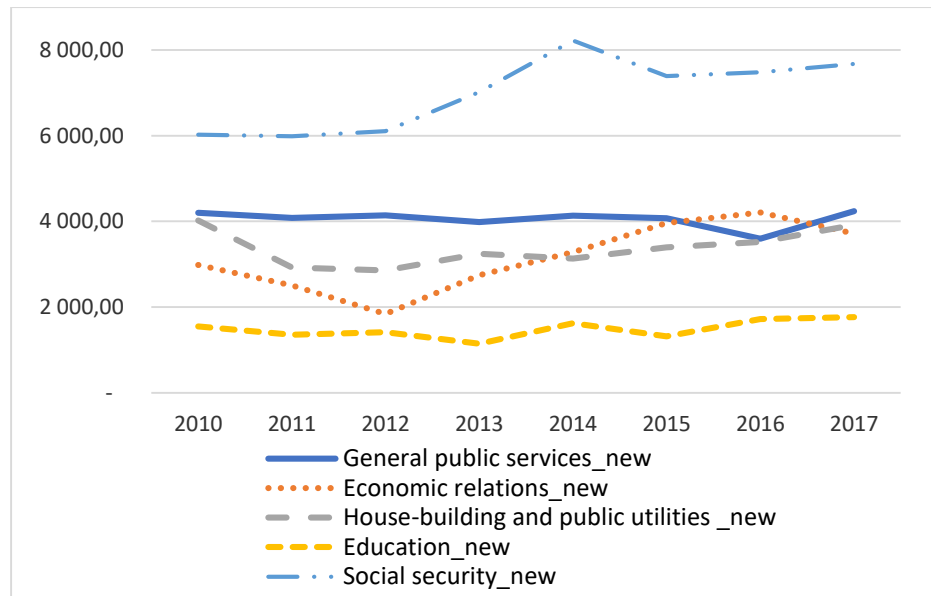
Figure 3. Local government expenditure per capita in nominal Albanian lek with the same functions

Updated expenditure tendency can be observed in Figure 3 and the summary of descriptive statistics for two years (before and after reform) are presented in Table 11 and 12 in Appendix.

The budget structure also differs before and after the reform. Table 1 presents the distribution between 2 main streams. Until 2015 most of expenditures were financed from local revenues, but after the reform – from the central budget fund, which we called previously conditional grants. On this ground I will separate my municipalities into treatment and control groups by the share of local financing.

Table 1. Aggregated local expenditures from different financial sources in bln. lek

Expenditures	2014	2015	2016	2017
From budget fund	28.6	26.4	50.1	61,2
From its own revenues	32.2	32.6	16.9	17,4
$\sum$ of local	60.8	59	67	78.6

 "From its own revenues" includes not only local taxes and fees but also unconditional grants and other sources of local financing. After the reform, central government decided to change the system of unconditional grants due to the ineffectiveness of local usage (distribution), on the one hand, and due to the delegation of new functions, on the other hand. For instance, LGU before reform could dispose money for land administration on its own. However, after amalgamation new function (e.g., forestry) was assigned; therefore, central government decided to transfer money under specific conditions for both of them. So, now some LGUs became less flexible because equalizing money come to budget fund with conditional use. This is why the vast decrease in spending from local revenues occurred.

But for my research, it is essential to look at the specific expenditure because the primary source of financing is different in each case. Most of the general public services were financed from own revenues before reform. The same applies to expenditures classified as economic relations and house building. Only social security almost entirely was financed from the central budget fund. Detailed segregation is presented in Tables 2 and 3.

Table 2. Local public expenditures financing from budget fund in bln. lek

	2014	2015	2016	2017
General public services	0.58	1.22	4.89	6.92
Economic relations	0.07	0.06	10.23	10.99
House-building and public utilities	1.91	2.36	4.97	11.89
Social security	23.27	20.79	21.79	22.44

Table 3. Local public expenditures financing from own revenues (including unconditional grants) in bln. lek

	2014	2015	2016	2017
General public services	11.45	10.62	5.45	5.30
Economic relations	9.24	10.37	2.39	2.88
House-building and public utilities	7.59	7.72	5.85	5.99
Social security	0.49	0.50	0.33	0.44

As I mentioned before, the group "From its own revenues" consists not only from revenues received. However, still, it is vital to know how much municipalities earn by themselves and what are the main sources. In Table 13 in Appendix, the detailed information can be found. Basically, LGUs earn money from a tax on personal income, profit and capital gains; property tax; taxation of goods and services within the country that include VAT; revenue from enterprises and ownership; revenue from administrative services, that include fees from administrative, regulatory and services fees.

To control for the quality or effectiveness of the change in public services I will consider a number of building permits issued in particular municipality and the number of active enterprises.

Table 4. Descriptive statistics for the number of building permits

	2014	2015	2016	2017
Mean	4.4	2.7	7.4	13.4
Min	0	0	0	0
Max	47	35	54	100
St.dev.	9.7	7.2	13.3	19.9
Obs	61	61	61	61

Tables 4 and 5 represents the descriptive statistics for these variables. The number of building permits increased significantly after the reform, although some municipalities have missing data or don't issue them at all. The maximum number even tripled comparing the 2015 and 2017 years.

Table 5. Descriptive statistics for the number of active enterprises

	2014	2015	2016	2017
Mean	1,844.8	2,496.5	2,634	2,663.1
Min	23	98	118	115
Max	44,640	47,224	46,078	46,948
St.dev.	5,768.9	6,197	6,061.7	6,156.4
Obs	61	61	61	61

The number of active enterprises experienced a slight increase, but essential fact resides in the maximum number, that become a bit smaller than in 2015. Meaning that at the most "entrepreneurial" municipality, some businesses closed.

Overall, the increase in both indicators after 2015 year is observed, although it can be explained by the significant increase only in some municipalities.

METHODOLOGY

In this paper, I would like to test if the amalgamation of local jurisdictions has a positive effect on public expenditure. Which means that amalgamation of municipalities leaded to increase of public expenditure.

In most of the literature, difference-in-difference method is used for such estimation and the model specification looks like this:

$$Y_i = \alpha + \beta_1 TG_i + \beta_2 T_i + \beta_3 T_i \times TG_i + \varepsilon_i$$

For consistency, a unit of observation is defined using the territory of the amalgamated municipalities after the reform. The dependent variable Y is the government expenditure for municipality i on some service (e.g., spending on education, social security, administration). Only services that remained the responsibility of the local government before and after reform are considered. Therefore, new functions are excluded to equalize expenditures before-after amalgamation.

The indicator T reflects the transformation process. It is equal to zero for the periods before the reform and to one – after the reform. TG is an indicator variable taking the value one if municipality i belongs to the treatment group; zero otherwise. Their interaction is included, and coefficient β_3 is exactly the target DiD estimator.

One of the challenges for estimating the effect of this kind of reform is to define the treatment and control groups. Because eventually almost all municipalities get reformed and all the transformation happened within one

year. Albanian government pushed the reform and all LGUs were amalgamated in 2015 with only 1 out of 373 left untouched.

Thus, we cannot use a standard indicator for amalgamation and we have to look at the expenditure system changes that happened at 2015. Tables 2 and 3 represent the exact information to contemplate: the difference between financing of local expenditures. Taking into account the mentioned data, we can easily rearrange it in the form of percentage from the total and create the appropriate indicator for all years and all types of expenditures. The indicators for two types are represented at tables 6 and 7 respectively. Data for another two are shown in appendix tables 14 and 15.

Table 6. Descriptive statistics: the share of financing from budget fund for general public services

	2014	2015	2016	2017
Mean	0.044	0.105	0.568	0.679
Min	0.021	0.063	0.137	0.132
Max	0.166	0.189	0.971	1
St.dev.	0.021	0.025	0.193	0.191
Obs.	61	61	61	61

Table 7. Descriptive statistics: the share of financing from budget fund for house-building and public utilities

	2014	2015	2016	2017
Mean	0.25	0.29	0.64	0.79
Min	0	0	0.12	0.32
Max	0.91	0.91	1	1
St.dev.	0.22	0.23	0.23	0.15
Obs.	61	60	61	61

From the tables above we can observe the tendency of increasing share of financing from the budget fund after the reform in 2015. Before that, in general public services almost all municipalities had a low share so I can say that in this type of expenditure strong enlargement happen. While in house-building, distribution across municipalities was more smooth and after 2015, some number of LGUs increase share of financing from budget fund. In other words, a high percentage of municipalities had a double reduction in the share of expenditures from own revenues (financed from the local sources).

Two others types of expenditures, economic relations and social security both have extreme cases of share distribution. First one was almost all from own money and then become from the budget fund. The second was all the time from the budget fund. The more detailed data regarding them is presented in table 15-16 in the Appendix.

Therefore, treatment is identified using a continuous variable equal to the share of expenditures financed (and decided) from the budget fund in the municipality's total expenditures. We based this definition on the assumption that municipalities that retain more opportunities to manage resource on their own after the reform (with a lower share of central financing) are less likely to be affected by amalgamation while municipalities those resources are now managed by central government (i. e. with a lower local financing share) are more affected.

Also from the table 13, we can observe the amount of total revenues. Comparing them to the resources that can be used on own consideration of the local government, we find that revenues are smaller that expenditures from own revenues. This is due to the unconditional transfer system that was mentioned above. However, we still consider the "own revenues" vs "budget fund" parts as the best to deal with, because the first can represent some autonomy and flexibility of the local government to use their money.

Chapter 6

RESULTS

After excluding additional functions and pooling together all municipalities for all years, I estimate the model explained above.

Table 8. Results of the DiD estimation for 2 main expenditure groups

	Log of general public services expenditures per person	Log of housing expenditures per person
TG	-4.22***	0.82***
	(0.72)	(0.15)
T	-0.52***	0.71***
	(0.13)	(0.25)
DiD	4.65***	-1.07***
	(0.74)	(0.36)
R²	0.07	0.07
N	488	486

Notes: Standard errors in parentheses. * - significant at 10% level, **- significant at 5% level, ***- significant at 1% level

In both cases all coefficients are significant at 1% level, so let's explain them in details. In column 1 we see that treatment effect (TG) is negative, which means that the higher share of budget fund financing in the municipality will lead to the lower amount of expenditures (1% increase in share will lead to 4.22% decrease in expenditure). Time effect reflects that after reform expenditure will be 0.52% lower. DiD shows that one percentage point increase in financing from budget fund increases per capita expenditures by 4.65%. So, if share of central financing after reform stays at a higher level, this will lead to the larger

increase in expenditures than in municipalities with lower budget fund share. Meaning that less flexible LGUs spend more money.

In column 2, I received the opposite effect on each indicator. In after reform period the expenditure will be at 0.71% larger and belonging to higher share in TG will increase spending by 0.8%. DiD shows that with 1 percentage point increase in the share of central financing after reform - per capita housing expenditure decrease by 1%.

Let's also consider the other two groups of expenditures.

Table 9. Results of the DiD estimation for 2 additional expenditure groups

	Log of economic relations expenditures per person	Log of social services expenditures per person
TG	-0.52	2.71***
	(0.62)	(0.76)
T	0.32	-3.37
	(0.63)	(2.2)
DiD	0.32	3.45
	(0.93)	(2.3)
R²	0.006	0.05
N	472	488

Notes: Standard errors in parentheses. * - significant at 10% level, **- significant at 5% level, ***- significant at 1% level

I estimated these type of expenditures as a separate group due to the extreme value of TG indicator. In the case of economic relations, it magnified from 1% from budget fund to around 98%. In social security own revenues financing was all the time higher 98%. Considering these facts, it was hardly expected that the difference between municipalities after reform could be captured.

After estimations some of our guesses turned out to be true: there was no significant influence on the economic relations expenditure. While, for social services, TG is significant at 1% level with a positive effect on increasing of the independent variable, which in our case is not good. Because this can be again a sign that LGUs which have higher dependence from center has higher expenditure per person. For after reform period we have that one percent increase in the share of central financing leads to a decrease in expenditure.

However, expenditure is not the only thing that matters to check regarding how reform affected the state of local public services. Quality is not less important to check the effectiveness. So to control for it I decided to look at the economic activity indicators independently from the expenditure. Because if I include them in the same regression with expenditure – the possible issues of endogeneity can appear.

There were two available indicators to measure the level of the economic situation at the local level: the number of building permits and number of active enterprises. The first can be influenced by two things: improvement in administrative services (e.g., entrepreneurs can take the documents required more easily or join to the electrical supply network) or improvement in business environment (e.g., easiness of doing business), which also can be a truth for short-run, due to small size of the country.

From the results in table 10, we can tell that there is only time influence on the number of building permits, meaning that after reform the more permits were issued. While the number of enterprises was influenced in reformed municipalities in a positive way. The after reform period is associated with 3.1% increase in enterprises quantity and a 1% increase in the share of expenditure from the budget fund amplified the number of enterprises by 9.7%. Although LGUs with higher share showed the increase that is not as much as lower ones. Meaning that less autonomous (i.e. higher share from budget fund) had less increment in the number of businesses.

Table 10. Results of the DiD estimation for quality

	Number of permits	Log of number of enterprises
TG	-9.49	9.76***
	(27.6)	(2.44)
T	26.4***	3.18***
	(4.33)	(0.38)
DiD	-24.1	-13***
	(28.2)	(2.4)
R^2	0.14	0.18
N	305	305

Notes: Standard errors in parentheses. * - significant at 10% level, **- significant at 5% level, ***- significant at 1% level

To present our estimations in more a vivid way, the graphics of change are presented in Figure 4. Because our TG is continuous, it cannot be represented on the graph. For simplicity, I divided the municipalities in two groups according to their local financing share before the reform. Which is the opposite indicator to budget fund: the higher share in budget fund equals to lower share in local financing.

The logic for the division was the following. I found the median share for local financing in the 2010 year and separated LGUs above and below the median. The first group we will call "big" and the second – "small" share hereafter, because in this case most of the "big" share municipalities are more autonomous. They are presented in Figure 4 below.

This was relevant only to 2 types of expenditures, because of the inability to separate the big and small share municipalities in economic relations. (i.e., median share is around 100%) or social security.
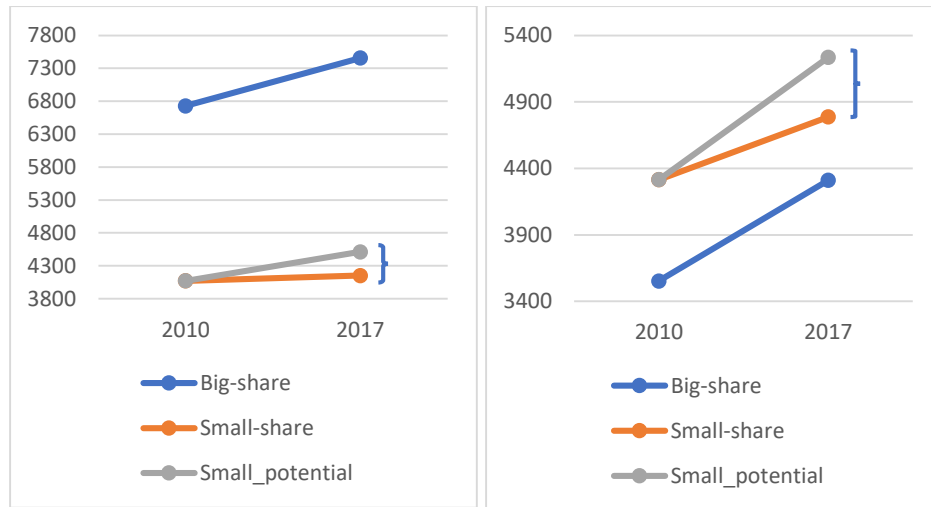
Figure 4. The change in 2 main types of expenditures: general public services (left panel) and house-building (right panel)

As we can see from figure 4, "big" share municipalities start from a different position in two cases. At the general public expenditures high-share LGUs located substantially higher than low-share, while in house-building otherwise. After reform there was an increase in spending in both groups and both expenditure types. High-share increased approximately by 10%.

To compare the difference between different shares, I draw the potential values if low-share evolved by the same path as high-share. This is close to our cross-term DiD estimator from the regression, but shows the different results. On the graph we can see that in both cases "small" LGUs experienced smaller increase then "big" ones, which is good for our policy. This gives us hope that reform was successful, but from these graphs we can only got the intuition what changes happen in expenditures. Because the division of big-small changed after reform and only two years are shown. This is why the graphs can be misleading and it is better to rely on regression results.

CONCLUSIONS

Since the middle of the 20th century, the amalgamation or territorial reform was implemented by many countries. Developed countries, especially Nordic, were pioneers in this field. Currently, some countries in Eastern Europe, particularly Ukraine, are also implementing the reform, hoping to improve the efficiency of local public services.

There is a range of economic arguments that support the amalgamation processes: better resources allocation and investment potential, economies of scope and the main and the most popular one – economies of scale. However, there are also arguments against, such as harder local monitoring cost of local governments, communication complexities and worse political representation of local people.

Therefore, many previous studies were trying to estimate the reform effect. Some authors look at local public expenditure only; in more advanced works, researchers tried to control for quality. The results are inconclusive. Most frequently, in one sphere situation improved but in another got worse.

In this paper, I tried to consider both aspects. Four types of expenditure (general public services, house-building and public utilities, economic relations and social security) and two proxies for the quality (number of building permits and number of active enterprises) were analyzed.

Albania was a country of interest because of the recent reform implementation and no precise economic research regarding its effect on public expenditure. Moreover, the preconditions in the country were very favorable to amalgamate the local jurisdictions: the country was extremely fragmented before 2015, divided by 371 municipalities with average population size 3,700 people. Under such conditions, it was very ineffective to provide public services, meaning that costs per person grew more and more over the years.

The Albanian government, together with international donors, pushed the reform and all LGUs were merged to 61 new administrative units, with a significant increase in the average population size to 45,000 people. Except for just actual merges, new functions were assigned to local administrations. Now LGUs became responsible for fire protection, rehabilitation of the drainage systems, administration of the kindergartens and daycare centers. Of course, money for such purposes was set, accomplishing two goals at once: delegate both responsibilities and financial means at the local level.

For the proper comparison between before and after reform period expenditures, I excluded all new functions of municipalities, as indicated in the data. Evaluation of the reform effects was made using the difference-in-difference method, which is used in most of the literature before. The dependent variables are some type of public expenditure or a proxy for its quality.

One of the difficulties in the case of Albania, which also applies to many other small countries, comes from the fast and universal transformation – the reform affected the entire country and was done in one year. So, a new way to segregate the municipalities is proposed, particularly using the differences in a source of expenditure financing. I looked at the share of expenditures financed from the budget fund throughout the years, so treatment is a continuous variable in our case. I assumed that municipalities with a lower share of budget fund (central) financing have higher autonomy and because of this are less likely to be affected by amalgamation. It was expected that the weaker group of municipalities (those who are more dependent from the center and less flexible) had to win after amalgamation.

Preliminary graphs confirmed expectations – the small-share own financed municipalities had smaller growth in per capita expenditure. However, the regression analysis did not support the preliminary results – the statistically significant (negative) effect was observed only for one type of spending. In

other cases, either all municipalities raised their per capita expenses or the effect was insignificant.

In relation to quality, an overall positive tendency of opening the new enterprises turned out to be heavily driven by more development into richer and prosperous communities.

As a result, I can say that two years, after the reform was implemented, the situation in municipalities is mixed. Expenditure on general public services decreased while the number of active enterprises increased. However, the local communities with a big-share of local financing received more benefits relative to units with a smaller share of their own recourses.

The main policy recommendation is to concentrate more on relatively poor communities (with a small share of local financing) and help them to prosper. It could be that the lack of flexibility in using transfers limits poor communities' abilities to benefit from amalgamation. Considering this, further research is definitely needed, because the government changed the unconditional grants transfer system for a reason. To verify this, the more rigorous identification of the control group can be considered and other explanatory variables can be added, which will clarify the results of reform even more.

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Table 11. Descriptive statistics of the public expenditures 1 year before reform (2015)

	Number of Observations	Mean	Std. Dev.	Min	Max
General public services	61	5251.5	2350.5	2139.7	14159.2
Economic relations	61	3867.6	3625	0	17176.5
House-building and public utilities	61	3826.9	3205.4	0	15809.1
Education	61	1182.8	1002.7	89.4	4825.2
Social Security	61	8727.9	2860	3000.3	16510.8

Table 12. Descriptive statistics of the public expenditures 1 year after reform (2016)

	Number of Observations	Mean	Std. Dev.	Min	Max
General public services	61	5029.4	2842.3	1770.3	18780.4
Economic relations	61	5003.3	5998.8	0	40555
House-building and public utilities	61	4283.1	3703.1	0	16814.6
Education	61	1500.5	1826.7	51.4	10037.8
Social Security	61	8822.1	2975.1	2883.6	15368.1

Table 13. Municipality revenue streams in bln. lek

Revenues	2014	2015	2016	2017
Tax on personal income, profit and capital gains	1,6	2	0.6	0.3
Property tax	3,6	3,9	4,6	4,8
Taxation on goods and services within the country (VAT)	4,5	3,2	5,57	8,7
Revenues from enterprises and ownership	0.3	0.35	0.48	0.5
Revenue from administrative services and secondary revenue	3,4	3,4	5,3	5,89
Total	13,6	13	16,6	20,3

Table 14. Descriptive statistics: the share of financing from budget fund for economic relations

	2014	2015	2016	2017
Mean	0.06	0.01	0.9	0.89
Min	0	0	0.31	0.37
Max	1	1	1	1
St.dev.	0.21	0.12	0.14	0.14
Obs.	61	61	61	61

Table 15. Descriptive statistics: the share of financing from budget fund for social security

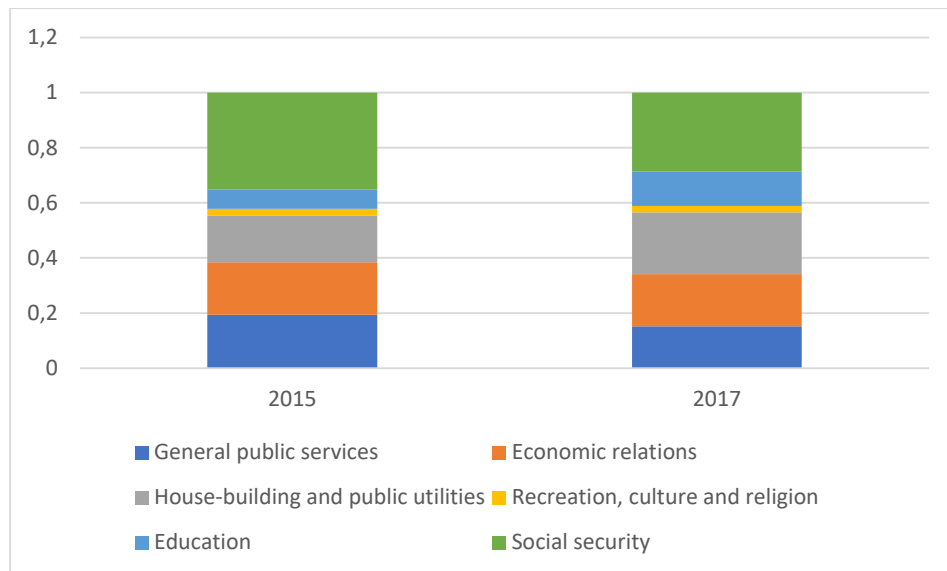|	2014	2015	2016	2017
Mean	0.98	0.98	0.99	0.99
Min	0.88	0.84	0.92	0.9
Max	1	1	1	1
St.dev.	0.02	0.02	0.015	0.015
Obs.	61	61	61	61

Figure 5. Share of local government expenditures depending on function in 2015 and 2017 years