

GOVERNMENT EFFICIENCY THROUGH THE LENSES OF MUNICIPALITY COUNCIL MEMBER

STUDY REPORT

KNOWLEDGE AND IMPACT

YEREVAN 2022



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Executive Summary

What is the expertise of the members of municipality councils contributing to the regional development in Armenia? What has changed after the Velvet revolution? To address these questions, we explore the variation of multidimensional expertise of the council members of the municipalities in the 3 largest cities of Armenia, Yerevan, Gyumri and Vanadzor, for the period 2016 – 2020. To explore the impact of the identified council members' expertise on outcome measures, we identify municipality level performance indicators in social policies and infrastructure development. These performance measures are used as outcome variables, while council members' expertise is used as factors driving performance measures.

We design a model framework enabling to construct composite indicators for deprivation from multidimensional expertise by using individual data from council members. We analyze the multidimensional expertise of council members by applying the methodology and the concept of multidimensional poverty (Alkire & Foster, 2011). As a part of the study, we derive contribution of each expertise related indicator to the composite deprivation measures. Based on the elaborated indicators, we construct a single deprivation score (giving different weights to these indicators) for each member of the council and assess the aggregate effect of deprivation from expertise to a performance measure. This method enables to assess the role of each characteristic of the expertise in the effectiveness of the performance measure.

The second set of the data comes from municipality budgets. We identify key performance measures on social policies and infrastructure development. We consider both planned and actual expenditures, and the difference is used as one of the efficiency measures of municipality performance. We also explore the trend of corresponding expenditure components with the objective to identify structural breaks in trends. That is, both the trend component and structural breaks are used to measure the efficiency of the municipality performance.

Finally, we make judgements on the possible relationship between municipality councils' expertise and municipality performance. With this, we explore to which extent expertise dimensions (and indicators) are related to distinct performance measures for a municipality.

Main findings:

- Overall, multidimensional expertise among municipality council members is lower in the post-revolution period. The result is consistent to the choice of the weights, suggesting that the finding is not sensitive to the way one prioritizes dimensions and/or indicators. Detailed analysis shows that a level of expertise in the post-revolutionary period stems from the profiles of the Gyumri's council members.

- From the contribution analysis, we find that international work experience and language knowledge dimensions contribute to the deprivation of multidimensional expertise the most in the pre-revolution period (both are 0.27). This means that in the absence of either of these dimensions or both, the multidimensional expertise is harmed most. For post-revolution expertise, the first contributing dimension is the work experience in the public sector, and the second contributor is specialization. That is, newly elected council members systematically lack in the experience in the public sector. On top of that, they also lack in professional specialization.
- Yerevan's budget performance, in terms of consolidated social and infrastructure expenditure items has been rather deteriorating in the post-revaluation period. As most of our observations for Yerevan come from council members elected on September 23, 2018, the average profile of a council member in the post-revolution period could have played an essential role in shaping budget performance outcomes. On the other hand, the average profile of the Yerevan's council member seemed to be improved from the multidimensional deprivation expertise. While we observe multidimensional expertise improvement, we do not observe budget performance improvement. The strong will to increase social expenditures in Yerevan can be revealed by large volumes of planned budget expenditures. Huge gaps between actual and planned expenditures reflect the failure of the Yerevan municipality to record desired improvement.
- The municipality of Vanadzor was successful in sustaining an increasing trend for budget expenditures on social and infrastructural measurements. On the other hand, Vanadzor's council members expertise is on average higher than that of other council members pooled together. Thus, for Vanadzor, we have relatively high expertise and better performance in budget expenditures, both planned and implemented. Interestingly performance is particularly successful in the post-revolutionary period.
- Our results for Yerevan and Vanadzor municipality enables to conduct a small counterfactual analysis. The newly elected council in 2018 in Yerevan as an "intervention" in the post-revolutionary period, which did not happen in Vanadzor, where the council with the majority of the pre-revolution ruling coalition continued operating. The setting enables to ask the question "what would happen if the council of Yerevan, elected on May 13, in 2017, continued operating after the revolution, through the year 2019?". Abstracting from other relevant factors, such a counterfactual analysis suggests that the Yerevan city council elected in 2017, could have successfully continued working after revolution.

- Unfortunately, our data does not allow to conduct mapping between expertise level and budget performance for Gyumri. Multidimensional expertise data comes mainly from council members elected in 2021, while the time span for budget performance is 2016 – 2020. Overall, we observe a positive trend in most of the budget expenditure types, but for the period in which we do not have data on the council members.
- Political power distribution in the council of Gyumri and its budget performance on social and infrastructural areas is compatible with those of the Vanadzor's council for the period 2016 – 2020. Based on the inspection of budget performance trends for the period 2016 – 2020 and the political power composition in the three councils, our conclusion is the following: in the post-revolution period, the councils in Gyumri and Vanadzor, represented by the majority of political parties and coalitions in power before the revolution, have been more successful in budget performance (in social and infrastructural areas), than the council in Yerevan represented by the majority of the current political power.

Recommendations:

Our central recommendation is *strengthening power decentralization mechanisms in a regional dimension*. Our analysis shows that central power representation at a municipality level (the case of Yerevan), suffers in efficiency, when country level power changes through a revolution. Discipline mechanisms outside a municipality can be more efficient, if the coordination within the agency is easier to achieve. The municipalities of Gyumri and Vanadzor continued operating as homogeneous organization with no conflict in different layers of organizational structures. The rules and discipline mechanisms have been changed for all incumbents, from major and community members to the junior specialists in any of division. Consequently, there could be no resistance layer within a municipality, and targeted benchmarks could have been reached more efficiently. It then follows that incentives designs, even if introduced by politically motivated groups, should minimize the risk of resistance in any layer of public organization for sake of reaching higher efficiency from the social perspective.

Also, there is a need to increase the role of professional expertise in regional level public authorities. Our study indicates the dominance of political factors in shaping performance outcomes, while it is possible to achieve a desired level of prosperity through professional conduct of resource utilization under strong premises of local democracy. We observe an insufficient level of local democracy indirectly, which can be a core reason for professionals not to serve as a council member. *This said, investing in local democracy will make community services in municipalities more*

attractive from the professional perspective. Otherwise, adverse selection of municipality council members on the ground of political and individual interests will further deprive the professional capacity of municipality councils.

1. Performance of municipal councils

Over the last three decades, there has been a growing interest in the management aspect of public sector institutions (see Beckett, 2000; Lapsley, 2009). The New Public Management (NPM) movement is based on the idea of adapting managerial frameworks and methods from the private sector and applying them in public sector (Kettl, 1997; Lynn, 1996). The increased interest in the public administration performance measurement systems globally is targeted to improving accountability, performance and increasing citizens' trust (Berman & Wang, 2000; Hoontis & Kim, 2012). A large number of countries have undertaken significant administrative reforms by focusing on performance measurement of those reforms (Hughes, 2012; Moynihan, 2008). The debate on the use and effectiveness of performance measurement systems is on-going (Ammons & Rivenbark, 2008; Berman & Wang, 2000; Pollanen, 2005; Padovani et al., 2010).

Performance indicators can be classified into four major categories, such as input (including human capital), process, output (products), and outcome indicators (Pollitt, 2006). With the widespread adoption of the NPM public sector organizations have increasingly shifted their focus towards using output and outcome indicators (versus the traditional approach of mainly focusing on input and process indicators).

Assessing how well a local authority functions is a complex task. Governments usually issue a wide variety of policies that require careful evaluation. However, the complexity of public problems such as unemployment and education makes the evaluation task very difficult. As a result, in the literature the evaluation of performance is rather focused on the output than the impact (except Carmeli, 2006). In our project, we explore the effect of multidimensional expertise (skills, knowledge, experience) of municipality council members (as a leadership unit in the local governance) on their administrative district performance.

In our project, we capture the budget allocations and the extent to which the spending is conditioned by the local authority's expertise. By doing so, we build on the arguments supporting the resource-based approach which is being increasingly applied on public institutions. As a part of the analysis, we inspect the possible structural change in performance measures after the Velvet revolution in May 2018.

2. Why expertise matters?

According to the resource-based view theory, top management team has a significant influence on its strategic direction and, thus, is key in shaping the organization's strategy (Barney, 2001). The

resource-based emphasizes that expertise is a firm-specific resource and acts as a performance driver (Teece et al., 1997). Expertise encompasses experience, skills, and boils down to capabilities and competencies. Expertise is a potential source of sustainable competitive advantage of an organization (Amit & Schoemaker, 1993; Barney, 2001; Peteraf, 1993).

Existing studies have mainly focused on examining the effect of top management team composition (see Lawrence, 1997), and more recently top management team dynamics or processes (see Hambrick, 1994, 1998) on organizational outcomes. Yet, there is scant research on the relationship between the top management's expertise (or skills) and the organizational performance enhancement (Michalisin et al., 2004; Carmeli & Tishler, 2006), in particular for the public sector. Given the complexity of public institutions management and the bureaucratic approach of political science, little importance is attributed to public officials' (namely, the leaders of public administration units) expertise when explaining variation in the performance of public sector institutions.

Within the public management literature, the role of public officials is increasingly expending as they become the key figures in translating the overall policy guidance provided by senior officials and politicians into actual operations of public administration and operational policies (Pollitt & Bouckaert, 2011). Public sector management in developing countries is deemed to be more challenging given the poor performance of public bureaucracies and poor incentive environment in those countries. For this reason, the risk is higher that public officials in developing countries are under-skilled, poorly educated and poorly motivated to perform their official tasks. Their motivation may be related to opportunistic behaviors and possibilities to exploit any official privileges that their positions give them. This claim is supported by evidence showing that public officials' attitude and the performance of their organizations depend upon the institutional environment in which they find themselves (Manning, Mukherjee & Gokcekus, 2000). Furthermore, administrative culture of the country and the dominant values held by the population in general can condition public officials' actions (Fernandez-Gutiérrez & Van de Walle, 2019).

2.1. *Expertise and performance*

While the question of building effective leadership in municipal organizations has been well studied in the literature of public management (e.g., Cayer et al., 2014; Wheeland, 2000), little effort was made to empirically examine the role of the top management teams and their expertise in the localities.

One of the few studies is Carmeli (2006) that explored the effect of top management skills on the performance of municipal organizations in Israel. The author considered perceived (education, employment, and culture, recreation and sport services) and objective (collecting efficiency ratio and surplus (deficit) ratio) performance measures. The study finds that the managerial skills possessed by the top management team explain variance in organizational performance. It is claimed that the structural context and managerial skills are important predictors of municipality performance. Evidence from Israel shows that expertise and managerial capabilities possessed by the locality's top management team is associated with improvement of the educational system (Hecht, 2002), improved fiscal health and a positive impact on various objective performance measures (Carmeli and Tishler, 2004).

The structural context captured by the size and type of local authority (city, local council or regional council) can be one of the performance predictors (Carmeli, 2006). For instance, provided that businesses are typically headquartered in cities/urban areas, municipal councils will perform better than local and regional councils with respect to employment.

Eliuz et al. (2017) study the predictors of effective performance measurement in the context of Turkish municipalities by using a context-design-performance model. The authors assess effects of four factors on the effectiveness of organizational performance: external support (support of citizens and council members), organizational support (support of mayors, public managers, and employees), technical capacity of municipality, and quality of performance measures. The technical capacity is focused on both the human resources capability and the technological capacity of the organization. Evidence posits that technical capacity is one of the important predictors of performance (Ammons & Rivenbark, 2008; Berman & Wang, 2000).

Existing studies that examine documents rather than using surveys to gauge the extent to which performance measures are used in local government consider budget documents (for instance, Hatry, 1978; Usher & Cornia, 1981). Other performance measurement used in assessing municipal government performance include the following functional areas: police service, fire service, emergency medical services, animal control, community planning, code enforcement, housing, water supply/sewage, solid waste, street maintenance, traffic engineering, library system, and parks and recreation (Poister & Streib, 1999).

2.2. *Dimensions/indicator for multidimensional expertise of council members*

Expertise is, in general, the characteristics of experts and acts as an important and fundamental factor of human resource development (Holton et al., 2001). In the literature, it is argued that the

cultivating an expertise enhances the ability to systematically combine knowledge and information from diverse and wide-ranging areas, extending beyond knowledge limited to a particular field (Scardamalia & Bereiter, 1993).

Public management is a complex practice; hence public officials need expertise to address various complicated policy issues in society. Such expertise ranges from professional and technical knowledge, prior experience to a set of skills (problem solving, project management). Evidence shows that all these expertise is equally important for government officials (Ericsson & Lehmann, 1996, Herling, 1998).

Political science literature disentangles several important components of expertise for government officials. As per Choi & Chang (2009) government officials' expertise should be assessed from the viewpoint of a 'general administrator with expertise'. The authors claim that public officials' expertise is conditioned by knowledge of their job-related specialty, formation of professional knowledge through experience, education and training, job performance, policy development ability, and understanding of related work. In these lines, among other important factors which condition public officials' performance, one can find leadership skills (Olsson, 2009) and networks. It is argued that the increasing use of networks has strengthened the power of public officials (Sørensen, 2002). Exposure of public officials to business or economics education, working experience in the private sector, and seniority in the public sector are related to the equity-efficiency trade-off that officials make in their jobs (Fernandez-Gutiérrez and Van de Walle, 2019). The private sector experience is claimed to be an important dimension forming the expertise since the literature shows that public officials' values have been impacted by private sector management ideas (Maesschalck, 2004). Van der Wal, de Graaf & Lasthuizen (2008) argue that there are differences in the values public and private managers find important, yet their empirical work showed that both groups attach equal importance to efficiency, as a value driving their work. The extent evidence provides a solid basis for us to robe public officials' expertise measurements.

3. Municipal communities in Armenia

The public administration in Armenia is based on administrative units (marzes or regions) which are the deconcentrated executive bodies of the central government. There are ten marzes and Yerevan. Governors, appointed by the central government, are the heads of regions. Armenia is structured under a one-tier local government system, made up of municipalities (or municipal communities), including the city of Yerevan. The Ministry of Territorial Administration of the

Republic of Armenia undertakes socio-economic programs in the administrative regions and carries out the development and reforms of local self-government sector.

Municipal self-government can be categorized as urban and rural. The main responsibilities of the municipal communities are summarized in Table 1. Local self-government responsibilities are divided into own competences (divided into mandatory and optional ones) and delegated competences, which may also include some central government functions.

Table 1. Main responsibility sectors and sub-sectors

Areas	Municipal level
General public services	Administrative services (civil registry, etc.); Public buildings and facilities
Public order and safety	Municipal police; Urban traffic signs
Economic affairs/transport	Local road; Park spaces; Local ports; Urban transports; Pupils transport; Local tourism
Environmental protection	Parks & green areas; Waste management; Street cleaning
Housing and community amenities	Construction/renovation; Provision of drinking water; public lighting; Urban and land use planning; Urbanism
Health	Primary healthcare (medical centers); Preventive healthcare (mostly maintenance of hospital and ambulances buildings)
Recreation, culture & religion	Sports; Libraries; Local museums
Education	Pre-primary education; Maintenance of school buildings; Primary and secondary education (delegated responsibility of Yerevan city)
Social protection	Social care for children and youth; Support services for families

The decentralized government system and empowerment of local administrative units have been part of administrative reforms in the country started from 2016. 54 community enlargement programs have been implemented since February 14, 2016, forming 54 communities as a result of the unification of 486 communities.

As of 2015 there were 915 municipal communities and significant challenges in administering regional development in the country. Because of very small scale, a large number of municipalities could not raise sufficient revenues, maintain public infrastructure, ensure provision of basic public services that meet the needs of the population, and support local social and economic development. The driving force of the large-scale reforms launched by the government is regional development, efficient public administration and effective allocation of resources. Strengthening and empowering local governance been a focus of local civil society as well.

As the consolidation (or enlargement) of municipal communities in Armenia has entered its last phase, questions arise related to the effectiveness of such reforms and challenges. The pilot project of municipalities' consolidation in Armenia started in 2016. The first three enlarged communities were formed at that time: Dilijan, Tumanyan and Tatev.

The constitutional reforms of 2015 in Armenia were followed by [legal reforms](#) in 2016 that implied the removal of the point on the mandatory local referendums when municipal communities are to be consolidated or segregated from the Republic of Armenia "[Law on local referendum](#)". When the new government was formed in 2018 several amendments on the "[Law on Local Self-Government](#)" were adopted. This law, similar to the previous one, defined that the individuals who have the right to take part in the local referendum, the minimum of one third of the council members and the head of the community can initiate a local referendum. In 2019 [amendments](#) included the clause which defined that when the government comes up with a legal initiative on the municipal communities consolidation or segregation, the population of the concerned communities can initiate local referendums. Similar to the clauses of the pre-Constitutional reforms of 2015, those referendums have a suggestive power. Among other aspects, these amendments also defined that the head of the local community has the right to refuse running a local referendum, in case when necessary financial resources are not allocated. By these amendments reinstated the possibility of running a referendum prior to the community consolidation. While previously the referendum was mandatory, in the current version of the law it can be run only by the initiation of the citizens of the given community.

In July 2020, [legal amendments](#) on the election process of mayors and municipal councils implied that elections in towns of more than 4,000 voters shall be held through closed-list proportional representation. According to the [Bill G-567](#) mayors in the largest cities and towns will no longer be directly-elected but chosen by city councils, who will also be given the power to remove them mid-term. The major changes brought forward by the amendments were: (i) the previously applied bonus seat provision by which a party that receives 40–50 percent of council seats is awarded additional seats in order to reach a majority was removed; (ii) a 70/30 gender quota for electoral lists was required (this is the so-called "1 in 3" gender quota which assumes that each set of three sequential names on a party's candidate roster must include at least one candidate from each gender); and (iii) reduced the electoral threshold was reduced from 6 to 4 percent for parties and from 8 to 6 percent for party blocs. This voting system enables voters to choose only their preferred party and city council seats are allocated proportionally to the parties based on their vote share. Mayors are no longer elected directly but selected by the city council.

In September 8, 2021 the government approved the package of draft laws whereby it [suggests](#) to form 37 consolidated municipal communities on the basis of 441 communities. Thus, after this amendment to the Law on “Administrative-Territorial Division of the Republic of Armenia” and to the “Law on Local Self-Government” there will be 79 municipal communities, including Yerevan, Gyumri and five communities inhabited by national minority groups that will not be consolidated. The map of enlarged communities can be accessed [here](#).

After the Constitutional reforms and initiated administrative reforms the first municipal elections the country’s second- and third-largest cities, Gyumri and Vanadzor, respectively, hold elections in 2016 and Yerevan - in 2018.

Gyumri and Vanadzor elections of 2016: The two municipal elections held in October 2016 in Gyumri and Vanadzor were the first on after the new 2015 Constitution and updated Electoral Code, under which the mayor would no longer be directly elected but would instead be chosen by the city council. The Balasanyan Alliance (named after the former mayor Samvel Balasanyan) received about 35 percent of the votes, the Prosperous Armenia Party got about 22 percent. Two other political forces, including the Armenian Renaissance Party and the Alliance of Like-minded Liberals Party each received 4 percent and thus passed the threshold for being represented in the municipal council.

In Vanadzor, the municipal elections resulted in the Republic of Armenia Party (headed by Mamikon Aslanyan’s mayoral candidacy) receiving about 38 percent of votes. The Bright Armenia Party got 27.5 percent, the Armenian Renaissance Party received about 13 percent. Two other parties, the Prosperous Armenia and Armenian Revolutionary Federation, each received about 7 and 6 percent respectively.

Yerevan municipal elevations of 2018: The “My Step” Party Alliance got about 81 percent of votes in the Yerevan municipal elections on September 23, 2018. The second and third ranks are respectively for the Prosperous Armenia Party (about 7 percent of votes) and the “Luys” Alliance (near 5 percent of votes). These three parties formed Yerevan’s new Council of Elders (see Appendix 1. on the powers of the Council of Elders). The mayoral candidate of the “My Step” Party Alliance, Hayk Marutyan became the new mayor.

4. The method and the data

4.1. Computation of multidimensional deprivation

The unit of our analysis is the municipality council member in Armenia. Our outcome variable is based on the *multidimensional deprivation from expertise* score, and the methodology for constructing the score is described below. Let $X_{i,j}$ denote the achievement of a council member i in dimension j for all $i = 1, 2, \dots, n$, and $j = 1, 2, \dots, d$. We use a dual cut-off framework by Alkire and Foster (2011) to identify council members deprived from multidimensional expertise. The *deprivation cut-off* (denoted as $Z_j > 0$) is the deprivation line in dimension or indicator j . If the achievement of a council member i is higher than the cut-off, $X_{i,j} \geq Z_j$, she or he is not deprived in dimension/indicator j . Otherwise, the council member i is deprived in this dimension/indicator. If a council member i is deprived in dimension j , then we denote that the deprivation status value is $g_{ij} = 1$, otherwise, $g_{ij} = 0$. The second cut-off is the overall *deprivation cut-off* k ($0 \leq k \leq 1$), which is a pre-determined fraction of total number of dimensions or indicators. That is, if we define deprivation from expertise measure as the council member being deprived in 40% of total number of indicators, then we assign a value $k = 0.4$. In this process, there are two steps to identify a expertise-deprived council members. First, by giving weight w_j to each dimension or indicator j such that $\sum_{j=1}^d w_j = 1$, we obtain the weighted deprivation status value $w_j g_{ij}$ and the deprivation score,

$$c_i = \sum_{j=1}^d w_j g_{ij}. \quad (1)$$

Second, we compare the deprivation score with poverty cut-off for council member i and identify the status of (multidimensional) deprivation from expertise. If $c_i \geq k$, council member i is considered to be deprived (and we will denote c_i as $c_i(k)$), otherwise (that is, if $c_i < k$) non-deprived (in this case $c_i = 0$). The censored deprivation score ($c_i(k)$) captures the share of possible deprivations experienced by member i .

Three indicators are used to measure multidimensional deprivation from expertise: the headcount ratio (H), the average deprivation gap (A) and the adjusted headcount ratio (M_0). Dividing the number of the deprived council members by the total number of the members, we can obtain the headcount ratio:

$$H = \frac{q}{n} \quad (2)$$

where q is the number of deprived members, for whom $c_i \geq k$. Average deprivation score across deprived council members is represented by average deprivation gap,

$$A = \frac{\sum_{i=1}^n c_i(k)}{q} \quad (3)$$

This deprivation gap index, also called an intensity score, provides relevant information about multidimensional deprivation. Council members experiencing simultaneous deprivations in a higher fraction of dimensions have a higher intensity score and are more deprived than others with a lower intensity.

Based on these two measurements, the adjusted headcount ratio (M_0) can be obtained as:

$$M_0 = H \times A = \frac{q}{n} \cdot \frac{\sum_{i=1}^n c_i(k)}{q} = \frac{\sum_{i=1}^n c_i(k)}{n} = \frac{\sum_{i=1}^n \sum_j^k g_{ij}(k)}{n}. \quad (4)$$

Here, $g_{ij}(k)$ is the weighed deprivation status specific to dimension j . The adjusted headcount ratio is the share of weighted deprivations experienced by deprived members divided by the number of all members. If council members are deprived in all dimensions simultaneously, that is, the intensity score is the highest, M_0 approaches H .

The raw headcount ratio of a particular indicator/dimension is calculated as a per cent of deprived council members to the total number of members, before the second cut-off is introduced. While, the censored headcount ratio of dimension/indicator j , H_j^c , is defined as the percentage of deprived members who are deprived in j after the introduction of the dual cut-off:

$$H_j^c = \frac{\sum_{i=1}^n g_{ij}(k)}{w_j n} \quad (5)$$

The adjusted headcount ratio M_0 satisfies the additive decomposability principle (see Alkire and Foster, 2011), so it can be decomposed by dimensions and subgroups. Using equations (3) with (4), M_0 can be written as the weighted sum of the censored headcount ratios:

$$M_0 = \sum_j w_j H_j^c. \quad (6)$$

The contribution of dimension j is

$$C_j = \frac{w_j H_j^c}{M_0} \quad (7)$$

To decide on the weights for the dimensions and indicators we follow MPI's normative weights (see Decancq & Lugo, 2013) and each dimension is given equal weights (0.2), and within a dimension, indicators are given equal weights (we call it Weight 1). To check the robustness of our estimated results in the Appendix we present estimates using another weight (Weight 2), where all *indicators* are given equal weights.

4.2. Choice of dimensions/indicators and weight

Expertise is, in general, the characteristics of experts and acts as an important and fundamental factor of human resource development (Holton et al., 2001). In the literature, it is argued that cultivating an expertise enhances the ability to systematically combine knowledge and information from diverse and wide-ranging areas, extending beyond knowledge limited to a particular field (Scardamalia & Bereiter, 1993).

Based on the literature, our choice of dimensions and indicators are listed in Table 1.

Table 1. Dimensions, indicators, variable descriptions and weight.

Dimensions			Indicators	Variable description	Deprived [=1] if...	Weight I	Weight II
1	Education	1	Higher education	Higher education [=0 if not; 1 = BA; 2=MA; 3=PhD]	the highest degree is bachelor	0.083	0.091
		2	Foreign degree	Local/foreign degree [1= if there is at least one foreign degree]	there is no foreign degree or at least 3 (continual) months of international experience	0.083	0.091
2	Language skills	3	Number of languages	Number of languages, except Armenian and Russian (e.g., if 1, it indicates that respondents knows one language in addition to Armenian and Russian)	the respondent does not know at least one foreign language except Russian	0.167	0.091
3	Specialization	4	Major specialization from the highest degree	Use standard (numbered) classification	major specialization is other than the following areas: business, economics, public administration, STEM, agriculture and management.	0.083	0.091
		5	Minor specialization	Use standard (numbered) classification	there is no minor (second) specialization from educational degree	0.083	0.091
4	Work experience in public sector	6	Number of years at the current position	Number of years	less than 2 years	0.056	0.091
		7	Total years of work experience in the public sector	Number of years	if outside the range [3, 10]	0.056	0.091
		8	Managerial position in the public sector	Number of years, working at managerial positions (definition is needed for "managerial position" in the public sector)	the there is no at least 2 years of managerial work experience	0.056	0.091

5	Work experience in the private sector	9	Total years of work experience in the private sector	Number of years	less than 2 year	0.083	0.091
		10	Managerial position in the private sector	Number of years, working at managerial positions (definition is needed for "managerial position" in the private sector)	the there is no at least 2 years of managerial work experience	0.083	0.091
6	International work experience	11	At least one year work experience aboard	Number of years	international work experience is less than 1 year on a continual base	0.167	0.091

5. Data

The first step in data collection for this research is creating and systematizing the portfolios of municipality council members in the three major cities of Armenia, Yerevan, Gyumri and Vanadzor. In Table 2, we report summary statistics of the main variables used for constructing multidimensional expertise measures.

Table 2. Summary statistics for variable characterizing council members' profiles.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Yerevan	128	0.469	0.501	0	1
Gyumri	128	0.250	0.435	0	1
Vanadzor	128	0.234	0.425	0	1
Election date (year)	121	2017	4.590	1996	2022
Age	116	40.897	10.341	23	70
Gender (female = 1, male = 0)	128	0.297	0.459	0	1
Family status (married)	128	0.656	0.477	0	1
Higher education (bachelor = 1)	116	1.802	0.688	0	3
Foreign degree	128	0.055	0.228	0	1
Number of languages	128	0.148	0.378	0	2
Years in current position	115	4.209	3.465	1	23
Years in public sector	115	6.139	5.211	1	27
Years in public sector at managerial level	115	0.339	1.083	0	6
Years in private sector	116	13.241	9.103	0	38
Years in private sector at managerial level	116	5.543	7.273	0	27
Years worked abroad	116	0.198	0.737	0	5

5.1. *Measurements in multidimensional expertise*

In this part we analyze multidimensional expertise, grabbing the methodology and the concept from multidimensional poverty (Alkire and Foster, 2011; among others).

In Tables 3 and 4, we provide dimensions and indicators which are used to construct multidimensional expertise indices, proportion of council members who are deprived from multidimensional expertise (H) for a given cut-off value, adjusted headcount ratio (M0) and average (deprived) expertise gap (A). We use two types of weights, Weight 1 and Weight 2. In the case of Weight 1, *dimensions* are given equal weights (0.2), and within a dimension, in our case only for living standard, indicators are given equal weights. In the case of Weight 2, *indicators* are given equal weights.

The proportion of the council members deprived in expertise decreases because fewer members are deprived in more indicators; the average intensity of deprivations increases because the remaining members are deprived in more indicators. Consequently, the adjusted headcount ratio decreases. We observe that the multidimensional deprivation in expertise is mostly higher for post revolution council members for all reasonable adjusted headcount ratios, both under Weight I and Weight II. The cut-off region (0.4 – 0.7) is most interesting as we observe the values for H in the range (0,1). For this range of cut-offs, the proportion of council members deprived in expertise is higher in the post-revolution period. Differences are highly significant. Overall, our conclusion is that multidimensional expertise among municipality council members is lower in the post-revolution period. The result is robust to the choice of the weights, suggesting that the finding is not sensitive to the way one prioritizes dimensions and/or indicators.

Table 3. The multidimensional expertise measurements using Weight (I).

k	H (proportion of council members deprived in expertise)			A (average intensity of deprivation)		M0 (adjusted headcount ratio)		
	Prior to revolution	post revolution	Difference	Prior to revolution	post revolution	Prior to revolution	post revolution	Difference
0.1	1.000	0.989	-0.011	0.546	0.568	0.546	0.562	0.015
0.2	1.000	0.977	-0.023	0.546	0.573	0.546	0.560	0.014
0.3	1.000	0.966	-0.034	0.546	0.577	0.546	0.557	0.011
0.4	0.917	0.864	-0.053	0.564	0.601	0.517	0.519	0.002
0.5	0.583	0.614	0.030	0.617	0.655	0.360	0.402	0.042
0.6	0.333	0.386	0.053	0.663	0.712	0.221	0.275	0.054
0.7	0.042	0.227	0.186	0.722	0.754	0.030	0.171	0.141
0.8	0.000	0.034	0.034			0.000	0.028	0.028
0.9	0.000	0.000	0.000			0.000	0.000	0.000
1	0.000	0.000	0.000			0.000	0.000	0.000

Table 4. The multidimensional expertise measurements using Weight (II).

k	H (proportion of council members deprived in expertise)			A (average intensity of deprivation)		M0 (adjusted headcount ratio)		
	Prior to revolution	post revolution	Difference	Prior to revolution	post revolution	Prior to revolution	post revolution	Difference
0.1	1.000	0.989	-0.011	0.458	0.511	0.458	0.505	0.047
0.2	1.000	0.966	-0.034	0.458	0.519	0.458	0.501	0.043
0.3	0.917	0.886	-0.030	0.475	0.541	0.436	0.479	0.044
0.4	0.625	0.739	0.114	0.527	0.576	0.330	0.426	0.096
0.5	0.333	0.455	0.121	0.591	0.652	0.197	0.296	0.100
0.6	0.167	0.330	0.163	0.636	0.693	0.106	0.228	0.122
0.7	0.000	0.170	0.170			0.000	0.127	0.127
0.8	0.000	0.034	0.034			0.000	0.028	0.028
0.9	0.000	0.000	0.000			0.000	0.000	0.000
1	0	0	0			0.000	0.000	0

5.2. Contribution analysis

In the contribution analysis, if the contribution is larger than the weight in one dimension/indicator, council members are deprived more in that dimension/indicator. In Table 5 (contributions with Weight 1), when looking at the dimensions, as they have the same weights, direct comparison of contributions is possible. For all expertise cut-offs, international work experience and language knowledge dimensions contribute to multidimensional expertise the most in the pre-revolution period (both are 0.27). This means that in the absence of either of these dimensions or both, the multidimensional expertise is the most deprived. For post revolution expertise, the first contributing dimension is the work experience in the public sector, and the second contributor is specialization.

Table 5: Contributions to M0 for council members holding positions prior and post revolution phases (k=0.5), Weight 1.

Dimensions		Weight	Prior to revolution	Post revolution	Indicators		Weight	Prior to revolution	Post revolution
1	Education	0.167	0.01	0.073	1	Higher education	0.083	0.01	0.073
					2	Foreign degree	0.083	0	0
2	Language skills	0.167	0.27	0.129	3	Number of languages	0.167	0.27	0.129
3	Specialization	0.167	0.251	0.237	4	Major specialization from the highest degree	0.083	0.116	0.108
					5	Minor specialization	0.083	0.135	0.129
4	Work experience in public sector	0.167	0.122	0.31	6	Number of years at the current position	0.056	0	0.091

					7	Total years of work experience in the public sector	0.056	0.032	0.087
					8	Managerial position in the public sector	0.056	0.09	0.132
5	Work experience in the private sector	0.167	0.077	0.122	9	Total years of work experience in the private sector	0.083	0.019	0.017
					10	Managerial position in the private sector	0.083	0.058	0.105
6	International work experience	0.167	0.27	0.129	11	At least 1 year work experience aboard	0.167	0.27	0.129
	TOTAL	1	1	1		TOTAL	1	1	1

5.3. Municipality performance analysis

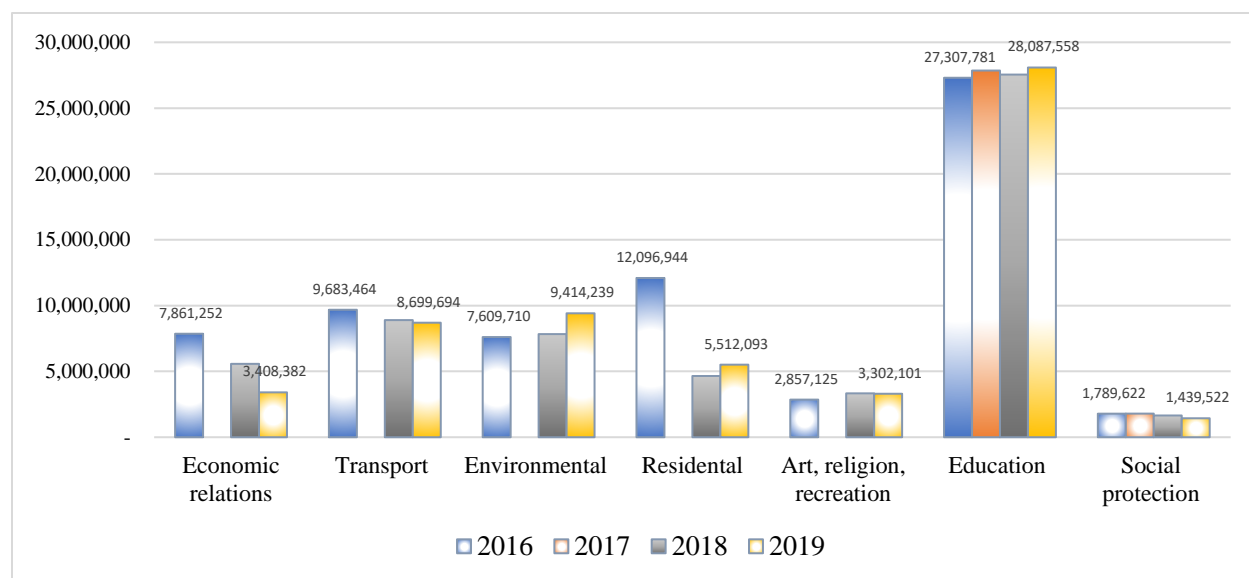
In this section, we conduct municipality budget performance analysis for the three municipalities. We explore the dynamics of the budget actual expenditures and the percentage deviations of the actual deviation from the planned values. While the actual values reveal the de-facto expenditures, useful to assess the volumes of the work done, differences between planned and actual values indicate the efficiency of the municipality in projecting expenditures, consolidating resources, and implementing defined projects as per the budget. We explore the evolution of the following consolidated budget articles: (i) economic relations, (ii) transport, (iii) environmental protection, (iv) residential construction and services, (v) art, religion and recreation, (vi) education and (vii) social protection.

5.3.1. Yerevan

In Figure 1, we report implemented budget items for Yerevan. In general, certain data are not available for a particular municipality. For example, for Yerevan, budget actual expenditure items are missing for the years 2017 (for 5 budget items out of 7) and 2020 (for all item). Overall, we observe a mixed trend for budget expenditure over time. Expenditures decrease on the following the articles: economic relations, transport, and social protection. Residential construction and services dropped in 2018 compared to 2016, and then increased but not substantially. Education expenditures increase in 2019 compared to 2018, but the growth is not substantial. The pattern is

mixed for art, religion and recreation, with a small drop in 2019. Our conclusion is that in 2019 the municipality of Yerevan failed to increase budget expenditures uniformly. For many consolidated budget articles, expenditures decreased.

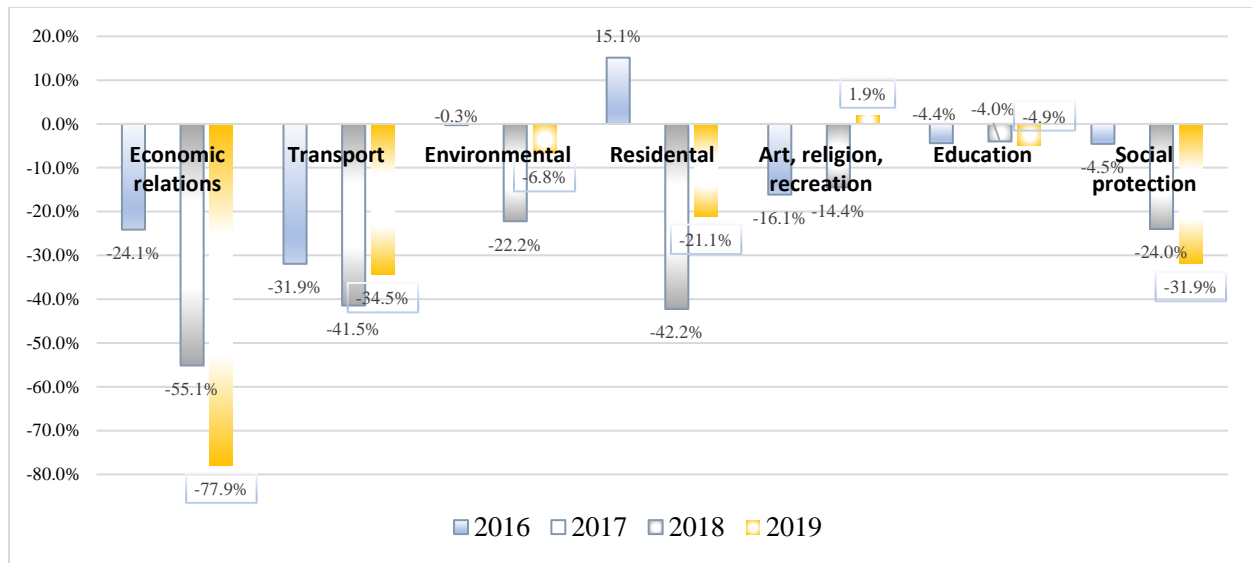
Figure 1. Actual budget expenditures for Yerevan, in 1000 AMD



Note. Data from 2017 (for some items) and 2020 are missing.

In Figure 2, we plot percentage differences between implemented and planned budget expenditures for the same articles. In most cases, actual volumes fall shorter from their planned counterparts. While percentage differences in magnitudes 1-10 would have been explained by setting real benchmarks for expenditures, differences above 10 percent signals about inefficient planning, and/or inefficient level of expenditures. The latter might be caused by low level of collected budget revenues and/or lower level of expenditures compared to collected revenues. In four consolidated budget items in 2019, we observe particularly high percentage differences in absolute values. These are economic relations, transport, environmental protection and social protections. Deviations of implemented expenditures from their planned counterparts for these items are in the range of 20 – 80 percent.

Figure 2. Percentage differences between the actual and planned expenditures for Yerevan, in 1000 AMD.

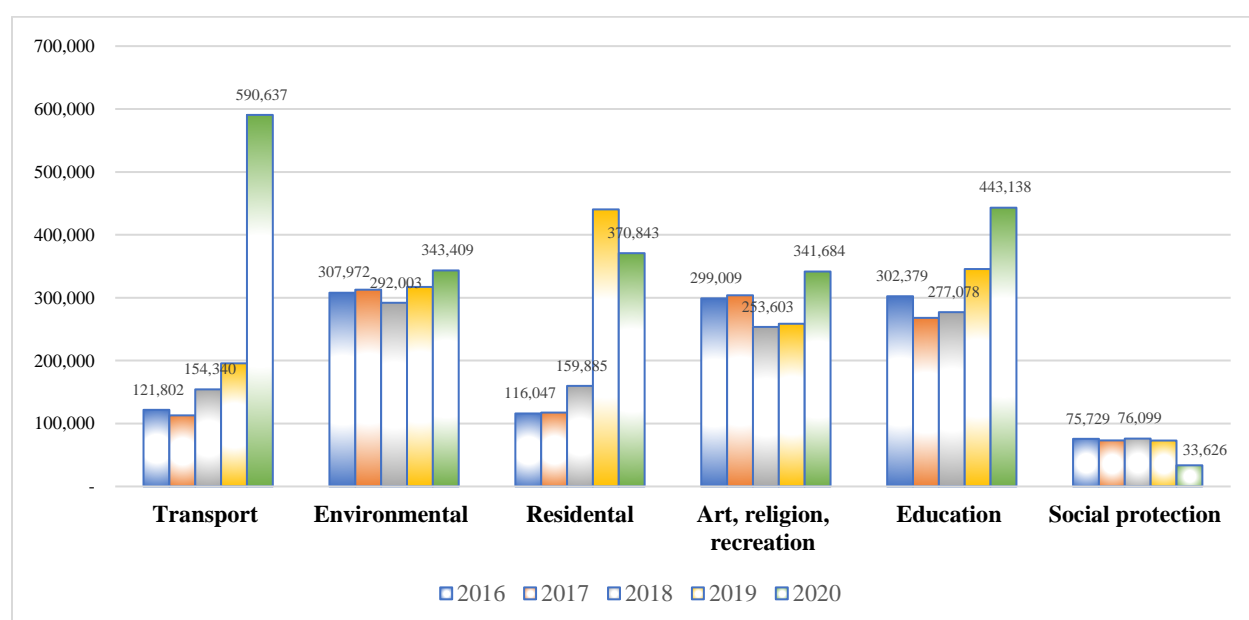


Note. Data from 2017 is missing.

5.3.2. Vanadzor

In Figure 3, we report implemented budget expenditures for Vanadzor. We observe positive trend in four out of 6 expenditure types. There are some differences, however. While expenditures on residential construction and services are lower in 2020 compared to those in 2019, the volume in 2019 is more than double of that in 2018. In the case of education, exceptionally large expenditures are observed in 2020, while the volume in 2019 is lower than that in 2018. Finally, social protection expenditures remained stable in the period 2016 – 2019, while they decreased in 2020 from 73 mln to 33 mln AMD. From the inspection of the implemented budgeted figures, our conclusion is that, overall, the municipality of Vanadzor has been successful in increasing expenditures in the period 2019 – 2020. Interestingly, the 2018 figures are mostly lower from their 2017 counterparts, suggesting that the Velvet revolution year was not that successful in the implementation of the municipality budget. Whether the downside and post-revolution period patterns are consistent with the expenditure planning, can be explored through Figure 4.

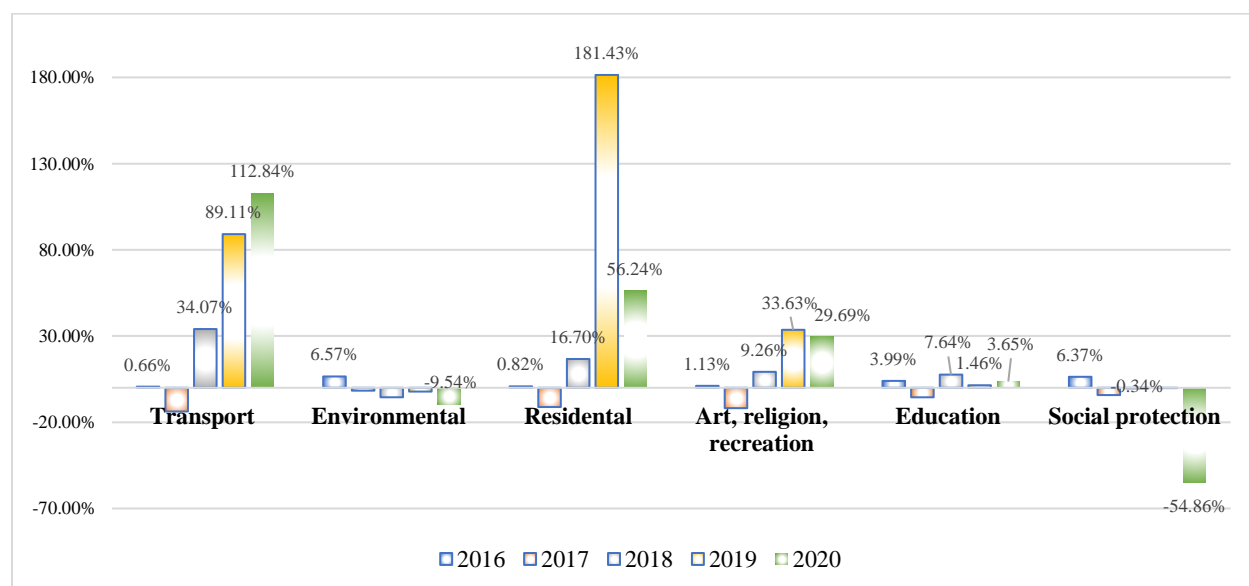
Figure 3. Actual budget expenditures for Vanadzor, in 1000 AMD



Note. The consolidated budget item “Economic relations” is missing in Vanadzor’s municipality budget structure.

In fact, we have exceptionally large (positive) percentage deviations for 2019 and 2020 for some of the expenditure items. In the area of transport, the positive percentage deviations between actual and planned expenditures are 89.1 percent and 112.8 percent in 2019 and 2020, respectively. Transport expenditures refer to different types of road renovation. Even in 2018, we could observe quite a large difference between actual and planned transport expenditures, 34.1 percent, while the difference was negative in 2017, -13.7 percent. There is a huge difference between actual and planned expenditures in residential construction and services in 2019. The post-revolution year was particularly successful in allocating resources for renovating water system. Contributions to the differences between actual and planned expenditures of the remaining items were negligible. We also observe positive differences in the consolidated budget item *art, religion and recreation*. Regarding the negative differences between actual and planned expenditures, the largest difference (in absolute value) is observed for social protection expenditures, -54.9 percent. In fact, these expenses have been planned to ensure around 2 percent annual growth for social protection expenditures in 2020, but the actual expenditures have not been processed.

Figure 4. Percentage differences between the actual and planned expenditures for Vanadzor, in 1000 AMD



Note. The consolidated budget item “Economic relations” is missing in Vanadzor’s municipality budget structure.

5.3.3. Gyumri

In Figure 5, we report implemented budget expenditures for Gyumri. We observe a positive trend in six out of seven expenditure types. Somewhat surprisingly, environmental and social protection expenditures have been decreasing in the post-revolution period, 2019 – 2020. Education expenditures increased in 2019 but dropped in 2020 to the level below that in 2018. Even in the light of decreases in environmental and social protection expenditures, the overall picture suggests that the municipality of Gyumri was successful in sustaining high and increasing level of consolidated budget expenditures in the post-revolution period.

From the inspection of percentage deviations between actual and planned expenditures, we learn that actual expenditures systematically are lower than their planned counterparts. The only exception is social protection expenditures in 2018, around 30 percent higher actual expenditures than have been planned. In 2020, implemented expenditures fall short from their planned volumes, which might be explained by COVID-19 and 44-day Nagorno-Karabakh war. Municipality specific factors can be highly relevant too.

Figure 5. Percentage differences between the actual and planned expenditures for Gyumri, in 1000 AMD

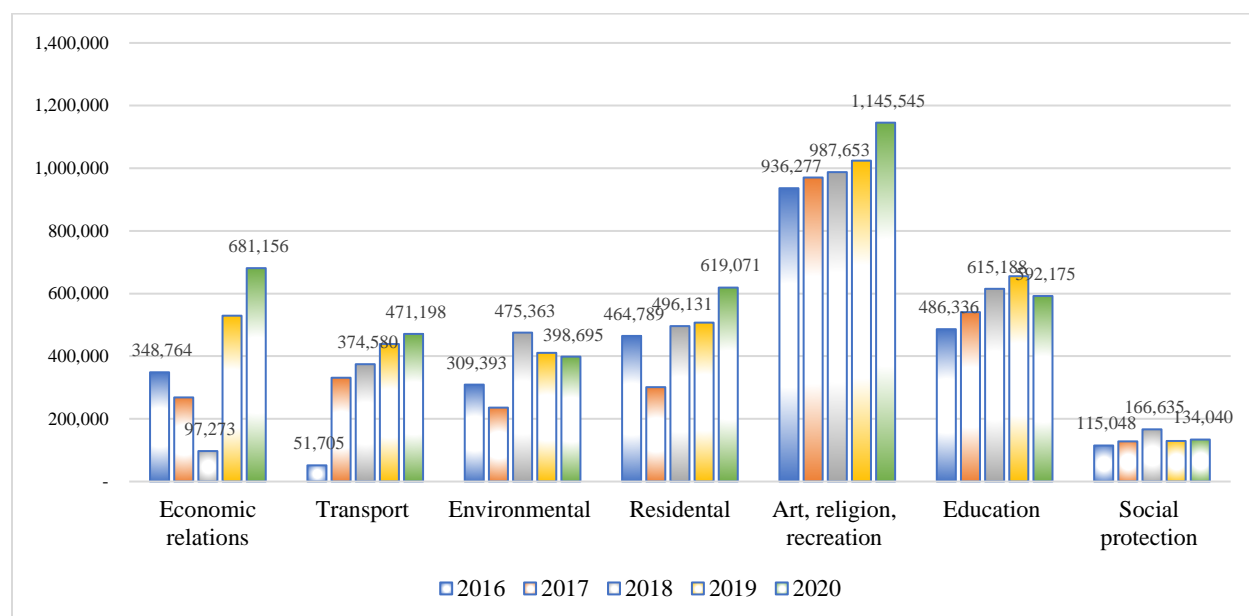
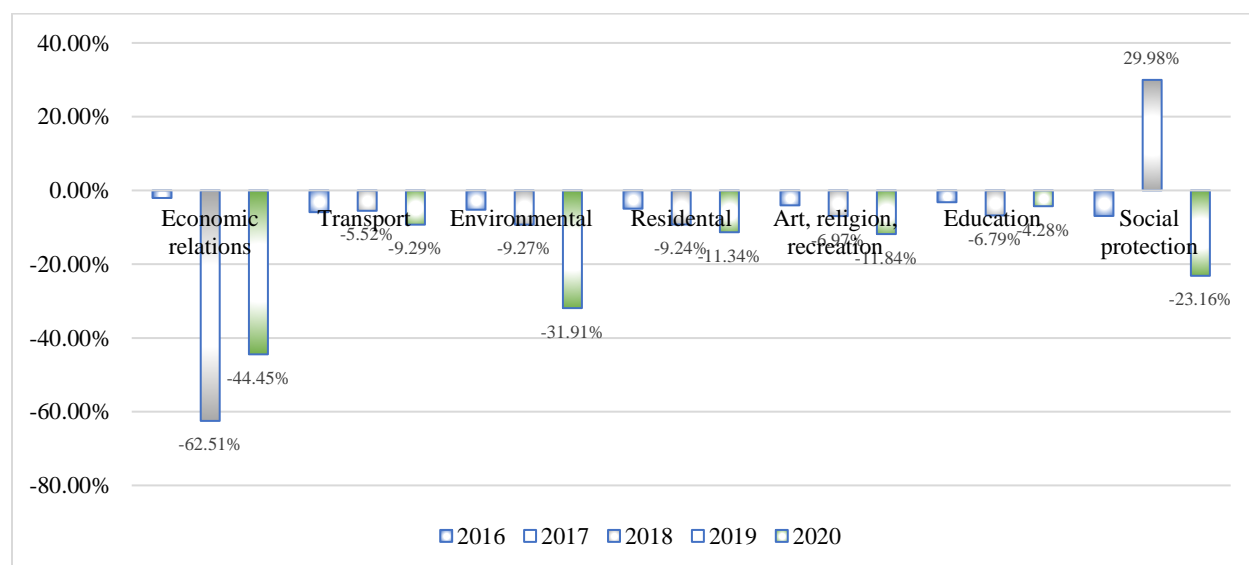


Figure 6. Percentage differences between the actual and planned expenditures for Gyumri, in 1000 AMD



Note. Data from 2017 and 2019 are missing.

5.4. Matching multidimensional deprivation and budget performance

In this section, we bring our observations from council members' (multidimensional) deprivation from and budget performance. In Table 6, we tabulate council members' observations by city and the period of revolution. In fact, the limitation of the data is that we do not have a sufficient number of observations for a given council before and after May 2018. That is, we cannot have a direct comparison of the levels of multidimensional deprivation from expertise for any municipality. Still, we can compare multidimensional deprivation from expertise after the revolution for Yerevan and Gyumri with the pooled deprivation scores from council members acting until May 2018, in any of the three municipalities. From the Table 6, we learn that most of the observations from council members elected before the revolution, come from Vanadzor (84 percent), while Yerevan and Gyumri cover more than 95 percent observations after the revolution. Still, pooling observations from the three municipalities to obtain deprivation measures as a comparison base may provide useful insights. Another interesting exercise can be comparing deprivation measures from Yerevan's and Gyumri' council members elected after the revolution. This makes sense, since the deprivation parameters (such as dimensions, indicators, weights, and cut-offs) are commonly applied for council members' profiles from the three cities.

Table 6. Observations on council members by city and revolution period.

	<i>Elected before May 2018</i>	<i>Elected after May 2018</i>	<i>Total</i>
<i>Yerevan</i>	1 4%	57 63.33%	58 50.43%
<i>Vanadzor</i>	21 84%	4 4.44%	25 21.74%
<i>Gyumri</i>	3 12%	29 32.22%	32 27.83%
<i>Total</i>	25 100%	90 100%	115 100%

From Table 7, we observe that both headcount and adjusted headcount ratios are lower for Yerevan's council members for most cut-offs. Statistical significance is, however, obtained only for the adjusted headcount ratio, for the cut-offs 0.2 and 0.3. Our conclusion is that, on average, Yerevan council members elected after May 2018, are not deprived in multidimensional expertise more than council members in any of the municipalities elected before 2018. Their profiles seem to be slightly better from an average profile.

When comparing deprivations of Yerevan's council members after May 2018 with those of Gyumri council members, for the same period (Table 8), we conclude that deprivation is higher

among Gyumri's council members. While, overall, we observe that the average expertise deteriorated after the revolution (Tables 3 and 4), this is largely due to the profiles of Gyumri's council members.

Table 8. Multidimensional deprivation index comparison for Yerevan.

k	H (proportion of council members deprived in expertise)			A (average intensity of deprivation)		M0 (adjusted headcount ratio)		
	Prior to revolution	Post revolution (Yerevan)	Difference	Prior to revolution	Post revolution (Yerevan)	Prior to revolution	Post revolution (Yerevan)	Difference
0.1	1.000	0.982	-0.018	0.540	0.506	0.540	0.497	-0.043
0.2	1.000	0.964	-0.036	0.540	0.513	0.540	0.495	-0.045**
0.3	1.000	0.946	-0.054	0.540	0.518	0.540	0.490	-0.050**
0.4	0.913	0.786	-0.127	0.558	0.548	0.510	0.431	-0.079
0.5	0.565	0.429	-0.137	0.611	0.613	0.345	0.263	-0.083
0.6	0.304	0.196	-0.108	0.659	0.684	0.200	0.134	-0.066
0.7	0.043	0.107	0.064	0.722	0.722	0.031	0.077	0.046
0.8	0.000	0.000	0.000			0	0.000	0.000
0.9	0.000	0.000	0.000			0	0.000	0.000
1	0.000	0.000	0.000			0	0.000	0.000

Table 7. Multidimensional deprivation index comparison for Yerevan: the post-revolution period.

k	H (proportion of council members deprived in expertise)			A (average intensity of deprivation)		M0 (adjusted headcount ratio)		
	Post-revolution (Gyumri and Vanadzor)	Post revolution (Yerevan)	Difference	Prior to revolution	post revolution (Yerevan)	Post-revolution (Gyumri and Vanadzor)	Post revolution (Yerevan)	Difference
0.1	1.000	0.982	-0.018	0.674	0.506	0.674	0.497	-0.177***
0.2	1.000	0.964	-0.036***	0.674	0.513	0.674	0.495	-0.180***
0.3	1.000	0.946	-0.054***	0.674	0.518	0.674	0.490	-0.184***
0.4	1.000	0.786	-0.214***	0.674	0.548	0.674	0.431	-0.244***
0.5	0.938	0.429	-0.509***	0.688	0.613	0.645	0.263	-0.382***
0.6	0.719	0.196	-0.522***	0.726	0.684	0.522	0.134	-0.387***
0.7	0.438	0.107	-0.330***	0.768	0.722	0.336	0.077	-0.259***
0.8	0.094	0.000	-0.094***			0.078	0.000	-0.078***
0.9	0.000	0.000	0.000			0.000	0.000	0.000
1	0.000	0.000	0.000			0.000	0.000	0.000

6. Further discussion and conclusions

We motivate further discussion and provide conclusive statements on the relationship between multidimensional expertise and budget performant for the three municipalities.

6.1. Yerevan

Yerevan's budget performance, in terms of consolidated budget items of social nature has been rather deteriorating in the post-revaluation period. Most of the observations for Yerevan come from

council members elected during Yerevan municipal elections on September 23, 2018. That is, the average profile of a council member in the post-revolution period could have played a critical role in shaping budget performance outcomes in terms of both planned and actual expenditures. On the other hand, the average profile of the Yerevan's council member seemed to be improved from the multidimensional deprivation expertise perspective, though we do not have a direct comparison base in forms of Yerevan's council member profiles prior to revolution. Still, our finding suggests that Yerevan's council member profiles are better than Gyumri's council in the post-revolution period and at least as good as those from prior-revolution period.

Question arises on the multidimensional expertise improvement while we do not observe budget performance improvement. The strong will to increase social expenditures in Yerevan can be revealed by large volumes of planned budget expenditures. Huge gaps between actual and planned expenditures reflect the failure of the Yerevan municipality to record desired improvement. While in-depth exploration of this failure is beyond the scope of this research, we would like to highlight the political factor relevant for such an outcome. In 2019, Armenia did experience major economic or geopolitical shocks. That is, underperformance of the Yerevan municipality in 2019 cannot be explained by country or regional level shocks either. It is very likely that these were the political processes which have created serious obstacles to record improvement in the area of social expenditures processed by the Yerevan municipality.

Clearly, our methodology in the construction of multidimensional expertise, based on the best empirical practices may not be workable for a particular situation. It may well be that a good profile of council members, prioritizing the rule of law and not prone to corruption, votes for corruption-free policies which are hard to implement. Strong resistance from the power-deprived opposition to change the long-lasting norms and informal rules can be the primary reason of the failure of the newly elected municipality. These are questions and concerns which deserve further exploration both from the theoretical and practical perspectives.

6.2. Vanadzor

Vanadzor's municipality was successful in increasing budget expenditure for most of the categories. Our observations come from Vanadzor's municipality council members elected mostly in 2016 (October 3) elections. There have been interesting political processes after the election. The Armenian Republican party and its coalition partner Armenian Revolutionary Federation (ARF) party received 15 seats, while the remaining political (non-ruling) parties received 18 seats. While the ruling coalition was eventually successful to get majority for its major's candidate, the meetings

and budgetary decision have been consistently questioned by opposition parties. This background is particularly important in the light of successful performance on the budget side, both in planning and implementation. Table 8 shows that multidimensional deprivation of Vanadzor's council members is lower than that of other council members, both in terms of headcount and adjusted headcount ratio. The only exception is the headcount ratio at cut-off 0.3, but the difference is not significant. That is, for Vanadzor, we have a relatively high expertise and, on the other hand, good performance in budget expenditures (both in planned and implemented). Interestingly performance is particularly successful in the post-revolutionary period.

Our results for Yerevan and Vanadzor municipality opens a room for counterfactual analysis. Consider the newly elected council in 2018 in Yerevan as an intervention in the post-revolutionary period. Such intervention did not happen in Vanadzor, which enables to make judgement on *what would happen if the council of Yerevan, elected on May 13, in 2017, continued operating after the revolution, through the year 2019*. In that council, the ruling party (Armenian Republican party) held the majority of total votes (71.25 percent) and its status would have been similar to that in Vanadzor council in the post-revolutionary period. Abstracting from other factors, this counterfactual analysis suggests that the Yerevan city council elected in 2017, may successfully continue working after revolution. The discipline from the new ruling party after the revolution could have been sufficient for 2017 council to operate efficiently and outperform the 2018 council.

Table 8. Multidimensional deprivation index comparison for Vanadzor.

k	H (proportion of council members deprived in expertise)			A (average intensity of deprivation)		M0 (adjusted headcount ratio)		
	Yerevan and Gyumri	Vanadzor	Difference	Yerevan and Gyumri	Vanadzor	Yerevan and Gyumri	Vanadzor	Difference
0.1	0.989	1	0.011***	0.572	0.531	0.566	0.531	-0.034
0.2	0.977	1	0.023***	0.577	0.531	0.564	0.531	-0.033***
0.3	0.966	1	0.034	0.581	0.531	0.561	0.531	-0.030*
0.4	0.864	0.917	0.053**	0.606	0.548	0.523	0.502	-0.021***
0.5	0.625	0.542	-0.083***	0.658	0.600	0.411	0.325	-0.086***
0.6	0.409	0.250	-0.159***	0.711	0.653	0.291	0.163	-0.128***
0.7	0.227	0.042	-0.186***	0.754	0.722	0.171	0.030	-0.141***
0.8	0.034	0	-0.034***			0.028	0.000	-0.028***
0.9	0.000	0	0.000			0.000	0.000	0.000
1	0.000	0	0.000			0.000	0.000	0.000

6.3. Gyumri

Unfortunately, our data did not allow to conduct mapping between expertise level and budget performance for Gyumri. Multidimensional expertise data comes mainly from council members

elected in 2021, while the time span for budget performance is 2016 – 2020. As already discussed, we observe a positive trend in most of the budget expenditure types, but for the period in which we do not have data on the council members. Still, we know that in 2016 – 2020 the majority of the Gyumri council and the elected major have been tied to the political power ruling before the revolution. That is, the picture in the sense of political power distribution in the council of Gyumri and its budget performance on social and infrastructural areas is compatible with that of the Vanadzor's council for the same period (2016 – 2020). We then conclude that, in the post-revolution period, the councils in Gyumri and Vanadzor, represented by the majority of political parties and coalitions in power before the revolution, have been more successful in budget performance (in social and infrastructural areas), than the council in Yerevan represented by the majority of the current political power.

7. Conclusions and Recommendations

Our analysis shows that country-level power representation at a municipality level (the case of Yerevan), suffers in efficiency, when country level power changes through a revolution. Discipline mechanisms outside an agency (in this case a municipality) seem to be efficient, if the coordination within the agency is easier to achieve. Norms, rules and practices, both formal and informal, established throughout the independence period are not easy to change by top-down mechanisms. While the operational departments in a municipality have experienced practices consistent with the concept of “greasing the wheels”, the newly established council “nomenclature” may easily perceive such practices as “sands on the wheels”. While these concepts are used for the role of corruption in economic prosperity¹, we believe that in the period of drastic political changes the discrepancy occurs at a perceptual level. That is, the new council would be very eager to label most of the actions by the operational departments as “side-actions” resulting in “sands on the wheels”, while these actions may not necessarily circumvent formal rules and practices. That is, this can be perception or prejudice related issue, rather than based on grounded arguments. Changing the department heads may not be very useful, since the conflict between new-comers and incumbents will be projected to a corresponding (lower) level, resulting in strong resistance from incumbents in that level.

¹ See, e.g., research on the link between corruption and satisfaction with government (Manzetti & Wilson 2006; Weitz-Shapiro 2008; among others).

Recommendation 1. Based on our findings, our central recommendation is to strengthen power decentralization mechanisms in a regional dimension.

In the case of Vanadzor and Gyumri municipalities, we observe distribution of power, which seems to be more efficient from the social perspective. The discipline outside a municipality executed by the political power did not hinder and perhaps contributed to improve efficiency of planning and implementing expenditures by these municipalities. Clearly, our analysis remains silent on the quality of the work behind these expenditures, but the observations that (i) *monetary resources have been effectively consolidated*, (ii) *expenditure have been planned accordingly* and (iii) *expenditures have been implemented with relatively small deviations* reflect at least efficient conduct from the monetary resource management perspective. Resource management and actual work quality regulation outside by marz- and country- level authorities seemed to be efficient, as we observe improved performance for these municipalities in the years 2019 – 2020 in most of the social and infrastructural budget items.

We hypothesized that municipalities of Gyumri and Vanadzor continued operating as homogeneous organization with no conflict in different layers of organizational structures. The rules and discipline mechanisms have been changed for all incumbents, from major and community members to the junior specialists in any of division. Consequently, there could be no resistance layer within a municipalities and targeted benchmarks could have been reached more efficiently. In then follows that incentives designs, even if introduced by political motivated groups, should minimize the risk of resistance in any layer of public organization for sake of higher efficiency from the social perspective.

A natural question is “what is the role of the council members’ expertise?”. We do not find direct relationship between council members’ expertise and municipality budget performance. In the case of Yerevan, expertise seems to be in place, but the budget performance mostly failed. In the case of Vanadzor, expertise was compatible with that of Yerevan’s council members, while the budget performance was significantly better.

Clearly, there is a need to increase the role of professional expertise in regional level public authorities. Smooth operations and report-based statistics for Gyumri and Vanadzor are observed (within-municipality) highly centralized environments, where top-down approaches are dominant. We do not observe the quality of deliverables, and efficiency in reporting may not be translated into an actual work one-by-one. Adverse selection of municipality council members, based on entrenched (political) interest, is likely to deprive the professional capacity of a council and disincentivize skilled to nominate for council member. Our study indicates the dominance of political

factors in shaping performance outcomes, while it is possible to reach to a desired level of prosperity through professional conduct of resource utilization under strong premises of local democracy. We do observe insufficient level of local democracy indirectly, which can be a serious reason for professionals to abstain serving as a council member. Council membership presumes rather a political activity, pushing out those profile who are politically loyal and ready to contribute merely based on professional skills. The relevance of local democracy in building professional capacity for municipality councils, is therefore, critical:

Recommendation 2. Investing in local democracy will make community services in municipalities more attractive from the professional perspective.

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Appendix 1. The Powers of the Council of Elders

The Law “On local self-government in the city of Yerevan,” states that the Council of Elders is elected by the procedure determined by the RA Electoral Code. Some of the most important responsibilities of the council include:

- elect the Mayor in cases and by the order prescribed by law “On local self-government in the city of Yerevan”;
- take a decision on a vote of no confidence to the Mayor;
- decide the salary of the Mayor, his deputies, the staff of the Municipality, the heads of administrative districts, their deputies, and the staff members of administrative districts;
- decide the regulations, structure, and staff of the Municipality and the administrative districts in accordance with the Mayor’s presentation;
- take a decision on one or four-year programs of Yerevan development, long-term and special programs, securing of loans;
- set control over the budget implementation, is empowered to take decisions on the details of the purposeful use of the budget, to liquidate decisions of the Mayor taken on management of the budget means, to discuss and make decision on the annual report of the Mayor on the budget implementation;
- make decisions on the names of streets, avenues, squares, parks of Yerevan, educational, cultural and other organizations subordinated to Yerevan;
- take decisions on annual program of allocation and eminent domain of Yerevan-owned property (including participation in authorized capital stock of land or legal entity), on their fees and alienation prices and conditions; and in case of a public auction on starting prices; on the draft of the General Plan of Yerevan; on the drafts of zoning of separate areas of Yerevan in accordance with the General Plan of the city;
- determine the areas for urban development (in the form of maps), the streets, squares, gardens, as well as the conditions under which the urban development activities are implemented beyond the urban development areas but are of urban significance;
- take decisions on urban development regulations of Yerevan;
- by the Mayor’s suggestion take decision on awarding the title of the Honorary Citizen of Yerevan to the citizens of the RA or other countries, etc.

Appendix 2. Municipality specific tasks (in Armenian)

Table A1. Համայնքի պարտադիր խնդիրներ, համայնքի ղեկավարի լիազորություններ, բյուջե-Վանաձոր և Գյումրի

1	2	3
Ոլորտ	Լիազորություններ	Բյուջե
Նախադպրոցական և արտադպրոցական կրթության կազմակերպում	<p>1. կազմակերպում է Նախադպրոցական և արտադպրոցական կրթության իրականացումը համայնքի տարածքում.</p> <p>2. կազմակերպում և կառավարում է համայնքային ենթակայության դպրոցների, մանկապարտեզների, ակումբների, մշակույթի տների, երիտասարդական կենտրոնների, գրադարանների, կրթական, մշակութային և երիտասարդական այլ հիմնարկների ու կազմակերպությունների գործունեությունը, դրանց շահագործման և նորոգման աշխատանքները.</p>	<p>2900 Կրթություն 2911 Նախադպրոցական կրթություն 2951: արտադպրոցական դաստիարակություն 2960: կրթությանը տրամադրվող օժանդակ ծառայություններ</p> <p>2820: Մշակութային ծառայություններ 2821: գրադարաններ 2822: Թանգարաններ և ցուցասրահներ 2823: Մշակույթի տուն, ակումբներ, կենտրոններ 2824: Այլ մշակութային կազմակերպություններ 2841: Աջակցություն Վանաձոր համայնքի ՀԿ-ների 2861: Մշակութային միջոցառումներ</p>
Սոցիալական պաշտպանություն	3. Նպաստում է համայնքում բնակվող սոցիալական աջակցության կարիք ունեցող անձանց և ընտանիքների սոցիալական կարիքների բավարարմանը՝ կազմակերպելով տնային այցելություններ և հնարավորության դեպքում մատուցելով «Սոցիալական աջակցության մասին» Հայաստանի Հանրապետության օրենքով սահմանված սոցիալական ծառայություններ կամ ուղղորդելով սոցիալական ծառայություններ տրամադրող տարածքային մարմիններ կամ մասնագիտացված այլ կազմակերպություններ.	<p>3000: Սոցիալական պաշտպանություն 3030: Հարազատին կորցրած անձինք 3070: Սոցիալական հատուկ արտոնություններ 3090: Սոցիալական պաշտպանություն</p>
Համայնքում մարզական կյանքի կազմակերպումը, ֆիզիկական կուլտուրայի և առողջ ապրելակերպի խրախուսում	4. կազմակերպում է ներհամայնքային և միջհամայնքային պարբերական զանգվածային մարզական միջոցառումներ/մրցույթներ.	<p>2800: Հանգիստ, Մշակույթ և Կրոն 2811: Հանգստի և սպորտի ծառայություններ</p>
Կառուցապատումը, բարեկարգումը և կանաչապատումը, համայնքի	5. կազմակերպում է համայնքի կոմունալ տնտեսության աշխատանքը, ապահովում է համայնքի սեփականություն հանդիսացող	<p>2600 Բնակարանային շինարարություն և կոմունալ ծառայություն 2611: Բնակարանային շինարարություն 2621: Համայնքային զարգացում</p>

աղբահանությունը և սանիտարական մաքրումը, կոմունալ տնտեսության աշխատանքների ապահովումը	բնակելի տների և ոչ բնակելի տարածքների, հանրակացարանների, վարչական շենքերի և այլ շինությունների պահպանումը, շահագործումը, կազմակերպում է դրանց նորոգումը	2630 Ջրամատակարարում 2640: Փողոցների լուսավորում 2650: Բնակարանային շինարարության և կոմունալ ծառ գծով հետազոտական աշխ.
	6. կազմակերպում և կառավարում է համայնքի սեփականություն հանդիսացող ներհամայնքային հաղորդակցության ուղիների, ջրմուղի, կոյուղու, ոռոգման ու ջեռուցման ցանցերի և այլ կառուցվածքների շահագործումը.	2500 Շրջակա Միջավայրի Պաշտպանություն 2521: Կեղտաջրերի հեռացում 2531: Գետերի հունների մաքրում
	7. կազմակերպում է աղբահանությունը և սանիտարական մաքրումը, ինչպես նաև իրականացնում է «Աղբահանության և սանիտարական մաքրման մասին» Հայաստանի Հանրապետության օրենքով նախատեսված այլ լիազորություններ.	2500 Շրջակա միջավայրի պահպանություն 2511: Աղբահանում
Համայնքի հասարակական տրանսպորտի աշխատանքի կազմակերպումը, համայնքային ճանապարհային ենթակառուցվածքների պահպանումը և շահագործումը.	8. կազմակերպում է համայնքային ենթակայության ճանապարհների, ճանապարհային երթևեկության կազմակերպման կահավորանքի ու այլ տեխնիկական միջոցների, կամուրջների ու ինժեներական այլ կառույցների պահպանումը և շահագործումը.	2450 Տրանսպորտ 2451: Ճանապարհային տրանսպորտ Փողոցների նշագծում Փողոցների ընթացիկ նորոգում ճանապարհային նշանների և լուսաֆորային օբյեկտների սպասարկման աշխատանքներ Փողոցներում անվանատախտակների պատրաստում և տեղադրում

Table A2. Համայնքի պարտադիր խնդիրներ, համայնքի ղեկավարի լիազորություններ, բյուջե-երևան

1	2	3
Ոլորտ	Լիազորություններ	Բյուջե
Նախադպրոցական և արտադպրոցական կրթության կազմակերպում	1. կազմակերպում է նախադպրոցական և արտադպրոցական կրթության իրականացումը համայնքի տարածքում.	2900 Կրթություն 2911 Նախադպրոցական կրթություն 2912 Տարրական ընդհանուր կրթություն 2920 Միջնակարգ ընդհանուր կրթություն 2950 Ըստ մակարդակների չդասակարգվող կրթություն 2951: Արտադպրոցական դաստիարակություն 2960: կրթությանը տրամադրվող օժանդակ ծառայություններ

	<p>2. կազմակերպում և կառավարում է համայնքային ենթակայության դպրոցների, մանկապարտեզների, ակումբների, մշակույթի տների, երիտասարդական կենտրոնների, գրադարանների, կրթական, մշակութային և երիտասարդական այլ հիմնարկների ու կազմակերպությունների գործունեությունը, դրանց շահագործման և նորոգման աշխատանքները.</p>	<p>2820: Մշակութային ծառայություններ 2821: Գրադարաններ 2822: Թանգարաններ և ցուցասրահներ 2823: Մշակույթի տուն, ակումբներ, կենտրոններ 2824: Այլ մշակութային կազմակերպություններ 2825: Արվեստ 2827: Հուշարձանների և մշակութային արժեքների վերականգնում և պահպանում 2840: Կրոնական և հասարակական այլ ծառայություններ</p>
Սոցիալական պաշտպանություն	<p>3. Նպաստում է համայնքում բնակվող սոցիալական աջակցության կարիք ունեցող անձանց և ընտանիքների սոցիալական կարիքների բավարարմանը՝ կազմակերպելով տնային այցելություններ և հնարավորության դեպքում մատուցելով «Սոցիալական աջակցության մասին» Հայաստանի Հանրապետության օրենքով սահմանված սոցիալական ծառայություններ կամ ուղղորդելով սոցիալական ծառայություններ տրամադրող տարածքային մարմիններ կամ մասնագիտացված այլ կազմակերպություններ.</p>	<p>3000: Սոցիալական պաշտպանություն 3070: Սոցիալական հատուկ արտոնություններ 3090: Սոցիալական պաշտպանություն 3092: Սոցիալական պաշտպանությանը տրամադրվող օժանդակ ծառայություններ 2491: Տնտեսական հարաբերություններ (այլ) Աջակցում է համայնքային կազմակերպություններին հուղարկավորությունների հետ կապված անվճար ծառայությունների մատուցման և գերեզմանատների պահպանման համար Աջակցություն համայնքային և ոչ համայնքային կազմակերպությունների ծրագրերին Առանձնահատուկ պայմանների կարիք ունեցող անձանց համար մատչելիության ապահովում</p>
Համայնքում մարզական կյանքի կազմակերպումը, ֆիզիկական կուլտուրայի և առողջ ապրելակերպի խրախուսում	<p>4. կազմակերպում է ներհամայնքային և միջհամայնքային պարբերական զանգվածային մարզական միջոցառումներ/մրցույթներ.</p>	<p>2800: Հանգիստ, Մշակույթ և Կրոն 2811: Հանգստի և սպորտի ծառայություններ Սպորտային միջոցառումների կազմակերպում Հանգստի գոտիների և զբոսայգիների կառուցում ու պահպանում Հեծանվահրապարակի շահագործում</p>
Կառուցապատումը, բարեկարգումը և կանաչապատումը, համայնքի աղբահանությունը և սանիտարական մաքրումը, կոմունալ տնտեսության աշխատանքների ապահովումը	<p>5. կազմակերպում է համայնքի կոմունալ տնտեսության աշխատանքը, ապահովում է համայնքի սեփականություն հանդիսացող բնակելի տների և ոչ բնակելի տարածքների, հանրակացարանների, վարչական շենքերի և այլ շինությունների պահպանումը, շահագործումը, կազմակերպում է դրանց նորոգումը</p>	<p>2600 Բնակարանային շինարարություն և կոմունալ ծառայություն 2611: Բնակարանային շինարարություն 2630: Զրամատակարարում 2640: Փողոցների լուսավորում 2650: Բնակարանային շինարարության և կոմունալ ծառ գծով հետազոտական աշխ. 2660: Բնակարանային շինարարության և կոմունալ ծառայություններ այլ</p>

	<p>6. կազմակերպում և կառավարում է համայնքի սեփականություն հանդիսացող ներհամայնքային հաղորդակցության ուղիների, ջրմուղի, կոյուղու, ոռոգման ու ջեռուցման ցանցերի և այլ կառուցվածքների շահագործումը.</p>	<p>2400 Տնտեսական հարաբերություններ 2420 Գյուղատնտեսություն, անտառային տնտեսություն, ձկնորսություն և որսորդություն 2420: Ոռոգում Ոռոգման ցանցի կառուցում և վերանորոգում</p>
<p>Համայնքի հասարակական տրանսպորտի աշխատանքի կազմակերպումը, համայնքային ճանապարհային ենթակառուցվածքների պահպանումը և շահագործումը.</p>	<p>7. կազմակերպում է աղբահանությունը և սանիտարական մաքրումը, ինչպես նաև իրականացնում է «Աղբահանության և սանիտարական մաքրման մասին» Հայաստանի Հանրապետության օրենքով նախատեսված այլ լիազորություններ.</p>	<p>2500 Շրջակա միջավայրի պահպանություն 2510: Աղբահանում Աղբահանություն և սանիտարական մաքրում Աղբամուղերի սպասարկման և շինարարական աղբի տեղափոխման ծառայություններ 2530: Շրջակա միջավայրի աղտոտման դեմ պայքար Գետերի հունների մաքրում 2561: Շրջակա միջավայրի պաշտպանություն Կանաչ տարածքների հիմնում և պահպանում Ախտահանման և միջատազերծման ծառայություններ/դեռատիզացիա Հասարակական զուգարանների պահպանում և վերանորոգում Սիզամարգեի ստեղծում և ծաղկապատում</p> <p>2450 Տրանսպորտ 2451: Ծանապարհային տրանսպորտ Անֆալտ-բետոնային ծածկի վերանորոգում և պահպանում Ասֆալտ-բետոնային ծածկի հիմնանորոգում Եզրաքարերի վերանորոգում Հետնապատերի վերանորոգում Հետիոտնի անցումների կառուցում և վերանորոգում Կամրջային կառուցվածքների վերականգնում և պահպանում Հրազդան կիրճի բարեկարգում Մայրուղիների ու փողոցների վերակառուցում ու հիմնանորոգում Փողոցների պահպանում ու շահագործում Ավտոկայանաեղի կազմակերպման ծառայություն Թեթևհարթակների կառուցում Ավտոբուսներում թեթևհարթակների ապահովում Փողոցների, հրապարակների ու այգիների կահավորում 24:55 Խողովակաշարային և այլ տրանսպորտ Վերելակների հիմնանորոգում</p>

		<p>Երևանի Մետրոպոլիտենի աշխատանքների կազմակերպում Վերգետնյա էլեկտրատրանսպորտով ուղևորափոխադրման ծառայություն կյլ ծախսեր</p>
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