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CONTENTS

<b>Tatoul MANASSERIAN</b> (11.10 - 29.11.2023) <sup>1</sup> 10.55528/18292828-2023.4-3 Institutional foundations of Armenia's economic diplomacy	3
<b>Manush MINASYAN</b> (05.10 - 10.12.2023) 10.55528/18292828-2023.4-10 The basic problem of economic growth calculation in the Republic of Artsakh	10
<b>N. KIRAKOSYAN, L. KHOJYAN</b> (24.09 - 07.11.2023) 10.55528/18292828-2023.4-18 Competence as a factor influencing the efficiency of civil servants and ways of their improvement in the Republic of Armenia	18
<b>Gagik SHAHNAZARYAN, Nelli SHAHNAZARYAN</b> 10.55528/18292828-2023.4-22 Talent Management Issues in the Context of Digital Economy (23.11 - 18.12.2023)	22
<b>Mher FRANGULYAN</b> (27.09 - 10.12.2023) 10.55528/18292828-2023.4-33 Tax system Strategies, their analysis and ways of improvement in Republic of Armenia	33
<b>Gevorg SMBATYAN</b> (13.11 - 05.12.2023) 10.55528/18292828-2023.4-46 Prospects for the creation of "Smart Ministries" with the implementation of artificial intelligence in the Republic of Armenia	46
<b>Karapet MOVSISYAN</b> (13.11 - 30.11.2023) 10.55528/18292828-2023.4-52 Dynamica of mortgage market development in the Republic of Armenia	52
<b>Knkush MOVSISYAN</b> (15.11 - 02.12.2023) 10.55528/18292828-2023.4-58 Legislative and legal support of the tax system of the Republic of Armenia	58
<b>Karen KHOJOYAN</b> (12.11 - 06.12.2023) 10.55528/18292828-2023.4-64 Prospects to improve the current state of financing the field of culture in Armenia	64
<b>A. MARTIROSYAN, R. KHACHATRYAN, R. VEZIRYAN</b> 10.55528/18292828-2023.4-77 Economically efficient cache friendly adjacency list for graph processing algorithms (02.11 - 23.11.2023)	77
<b>Jemma BAGHDASARYAN</b> (14.10 - 01.12.2023) 10.55528/18292828-2023.4-82 Modern approaches related to the management of socio-psychological services	82
<b>Nairi SARGSYAN</b> (24.09 - 21.11.2023) 10.55528/18292828-2023.4-91 The key directions of the strategy aimed at overcoming development disparities in the field of public administration	91
<b>A. MELIKYAN, V. BOSTANJYAN</b> (17.09 - 20.11.2023) 10.55528/18292828-2023.4-97 Modernization of civil society and social partnership achieved as a result of public policy: an opportunity for market economy's growth	97

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<sup>1</sup> The dates the articles were received and accepted for publication. Next is the DOI.

## INSTITUTIONAL FOUNDATIONS OF ARMENIA'S ECONOMIC DIPLOMACY

**Tatoul MANASSERIAN**

Ph.D., Doctor of Science, Professor

Key words: economic diplomacy, institutions, church, verbal and written principles, laws

**Introduction.** Each country has its own way and traditions of economic diplomacy. In the case of Armenia, all the peculiarities that were typical for the various stages of the centuries-old history of the evolution of the Armenian statehood are highlighted. Over time, the goals of economic diplomacy have undergone certain changes. For example, in the pre-Christian period, one can highlight the construction of a strong state, the expansion of its borders, the establishment of adequate relations with neighboring states, the formation of an army capable of combating invaders, the determination of the most tolerable level of tax extraction with others, the preservation of national identity, the negotiation with opponents for the development of the state. The goals also included formation of a flexible structure, an effective system of state management, getting the maximum benefit from the geopolitical position and conditions, the expansion of new spheres of influence with the spread of Christianity, etc.

**Methodology.** In our opinion, one of the basic issues of methodology related to economic diplomacy is that among the variety of goals, the strategic issues have not been clarified. Moreover, the major problems and priorities, which could ensure the necessary political, economic and military security and sovereignty, have not been formulated. As a result, the Armenian state was disintegrated, and only as a result of clerical diplomacy and the balanced policy of the Armenian Apostolic Holy Church, the national, existential problem was solved, which allowed the re-establishment of statehood later. Therefore, it is important to take into account the traditions, principles and values of the economic diplomacy of historical Armenia in order to learn from them and form stable institutional foundations for the establishment and development of the future nation state. At the same time, it is essential to study the experience of states that profess ancient civilizational values and are effectively positioned in the modern world and the expediency of localizing its individual components based on the peculiarities of our country.

**Literature review.** A unified approach to the institutions of economic diplomacy has not yet been formed. Some interpret this term by the activities of various structures and their problems [Chohan, 2021], and others by laws and legal acts [Saner & Yiu, 2006]. Some of the experts believe that the institutes of economic diplomacy are the two main diplomatic formats, bilateral and multilateral, which are used in interstate, in particular, economic relations. In our opinion, the main methodological gap in this issue is manifest-

ted in the fact that the perception of economic diplomacy as a lever and factor aimed at solving not only external but also internal problems is not yet widespread.

Some researchers treat the institution of diplomacy as a set of means of peaceful influence at the state's disposal, while others, on the contrary, understand diplomacy as the establishment of official communication between states for dialogue or negotiations. Diplomacy also refers to the technique of implementing foreign political or economic, financial tasks. In this case, emphasis is placed on the process of diplomatic implementation of its function. For example, in many international organizations (in particular, the UN) there is a process of accreditation, participation in the work of bodies, decision-making, obligations and implementation of decisions, etc. The concept of diplomacy as a political tool and institution is related to the art of negotiating to prevent or settle conflicts, search for compromises and mutually acceptable solutions, expand and deepen bilateral or multilateral cooperation. Often, the institution of diplomacy is also identified with the art of negotiation, i.e. skillful use of a combination of tactical methods and techniques, as well as knowledge of the subject of negotiations aimed at the implementation of specific goals that are a link in the implementation of strategic goals (in this case, foreign political and economic goals). Accordingly, it is important to consider that foreign policy, including economic policy, is the activity of the state beyond its political and administrative borders, or the entire complex of decisions and actions of the state, which is related to the external sphere of its activity. The state has at its disposal the institutions, tools and methods by which it realizes its foreign policy goals. In turn, the tools and methods of foreign policy implementation are interconnected and represent static and dynamic aspects of one reality. For example, the RA Ministry of Foreign Affairs and the Ministry of Defense (bodies) are the instruments of the state's foreign policy. They may have the same problem in the field of foreign policy. However, if the function of the RA Foreign Ministry is to establish contacts in order to solve the problem through dialogue, then the function of the RA Ministry of Defense is to solve the foreign political, conflict problem through the use of weapons or the threat of using weapons. Especially in the case of Armenia, it is quite obvious that the activities of these ministries are different in terms of content in the performance of their functions. However, in such a way, the activities of the two ministries will represent a complex of processes subject to certain but different rules.

**Scientific novelty.** The purpose of our study is to identify the institutional foundations of economic diplomacy that allow formulating the common interests and concerns between the parties/individuals, companies, states, international structures/ and reach the most effective solutions with acceptable tools and methods. Therefore, the institutional foundations of economic diplomacy should be considered more broadly and include the following main ones:

- traditions formed in the field,
- written and verbal principles acceptable to the parties,
- acceptable and applicable values and norms,
- rejectable phenomena, factors and methods,
- suitable and adequate state, private and public structures for solving the problem,
- foreign, regional and global structures regulating the given sector or related to it,
- strategic alliances, associations of various spheres of international commercial and economic cooperation,
- cultural, political, social, economic and other values and customs,
- the laws and by-laws of the given country and the other negotiating party or parties related to the field,
- international legal acts: agreements, contracts, declarations, etc.

**Analysis.** It should be noted that in the era of digitization and technological transformations, the institutional foundations of economic diplomacy have a tendency to develop and change. In fact, they are the "rules of the game" of society, or, more formally, human-made, constraining frameworks that organize relationships between people, reduce uncertainty, structure community life, define and limit the range of alternatives available to each person, and define the structure of stimuli in human interactions. They are formal, formal (laws, regulations, constitution) and informal but widespread (contracts and voluntary codes of conduct) constraints and coercive factors that structure relationships between people [Douglass, 1991, 98]. On the other hand, an institution is a stable way of thinking and acting that belongs to a certain group of people or even a whole nation [Hamilton, 1919]. They are complexes of traditions and customs integrated into everyday life... Private customs spread throughout society, which leads to the emergence and strengthening of institutions; and institutions nourish and strengthen private customs and transmit them to new elements of a given group [Hodgson, 2006, 22]. An institution is also defined as a collective (joint) action that controls, liberates and expands individual action [Commons, 2012, 30]. An institution, in fact, is a widespread way of thinking, which is related to certain relations between society and the individual and the individual functions performed by them, and is also a system of social life, which is composed of a set of actors in a certain development at a certain time or at any moment, psychologically it can be characterized in general terms as a prevailing spiritual position or common conception of a way of life in society. They are ordinary ways of carrying out the process of social life in relation to the material environment in which society lives [Veblen, 2012]. Institutions are dominant and highly standardized social habits [Mitchell, 1987, 65]. Institutions are forms of organization of production, distribution, exchange and consumption, as well as established traditions, customs, legal norms (a set of legal norms), mentality of economic entities, rules of conduct, interest factors and incentives, which are

reflected in the features of the institutional system. structure of economic interactions, thinking and behavior in the system of stable social groups [Yueh, 2020, 10].

The institute is a complex of "traditions and daily customs", noting "the presence of social mechanisms that ensure their functioning" [Kleiner, 2016, 9]. The institution combines four main elements: formal legal norms, informal socio-cultural norms, formal organizations that monitor compliance with norms, and non-governmental organizations that perform these same functions. Accordingly, the remark of the researcher is very important that "the publicly significant result of the activity of the institutes is manifested by the nature (quality, efficiency) of the relevant public practice" [Zaslavskaya, 1989, 58].

For economic diplomacy, it is important to distinguish several important levels of the institutional system. One level of the institutional system includes those factors that have a direct impact on the adaptation of economic entities (state institutions, private companies, individuals) to certain conditions in domestic and foreign markets. The other level of the institutions of economic diplomacy is formed by the above-mentioned entities, which, in turn, have a complex system of economic and social goals (maintaining stable solvency, increasing the profitability of the capital used, increasing the competitiveness of products, creating acceptable working conditions for employees, providing a favorable micro-environment and etc): The process of public reproduction ensures the exchange of business information between the main entities of economic activity (private companies, financial structures, state bodies). In the context of the globalization of economic relations, their actions should be coordinated by international structures, which represent the next level of the institutional environment of economic diplomacy. The production, trade, economic and financial elite also has a certain role in economic diplomacy, which represents a separate level of institutions, which, based on its interests, constantly influences the state's internal and external economic policy, economic diplomacy and occupies an influential position in a number of economic sectors. The level of institutions, which mainly includes state economic management bodies, large companies carrying out international activities, as well as international economic and financial organizations, is particularly important.

Despite the fact that the formation of economic diplomacy previously took place elementally, it has been going on for several decades within the framework of the development of the world economy and diplomacy, as well as the growth of their institutional role in world politics and international relations. One of the most urgent problems of modern diplomacy is the rapid development of economy, business, trade, finance and information technology. With the globalization of economic relations (production, distribution, exchange, consumption markets, financial flows), the institution of the state is faced with the problem of determining their role in this new, increasingly interconnected space, and, accordingly, economic diplomacy is called to adequately respond to these chal-

allenges. Recently, the improvement of trade and economic relations between the states is in the focus of diplomatic activity. The main reasons for the interest of the institution of diplomacy in its historical economic roots are based on the following.

- in most developed countries, the share of foreign trade and investment in GDP is constantly increasing compared to local production,
- the implementation of economic reforms in the process of orientation of the market economy of developing countries, as well as the development strategy based on the strengthening of exports, contributes to the faster integration of the state into the regional and world economy,
- the globalization of trade and business leads to an increase in the volume of production and expansion of the range of services, activation of regular multilateral connections between countries.

At the same time, the demand for the institute of economic diplomacy is due to the fact that currently there are a large number of developed and developing states in the world, which inevitably implies a change in their role in the system of international relations. The current stage of socio-economic development of countries is characterized by two main trends: the implementation of transitional socio-economic transformations and the acceleration of integration into the world economy. In these conditions, the need for integration processes between these countries and their unification in regional economic groupings with the help of economic diplomacy is also increasing.

It is important to clarify that economic diplomacy and the government's foreign economic policy are not identical institutions, terms and concepts. The purpose of implementing economic diplomacy measures is to reach an agreement and a mutually acceptable solution to the problems of the development of economic relations, in other words, to develop effective interaction in which both parties are interested. The implementation of foreign economic policy goals and specific decisions of the government implies the need to adhere to the general foreign economic course of the country.

However, the effectiveness of economic diplomacy and, accordingly, the foreign economic activity of the country in general and its entrepreneurs in particular, depend on the existence of such an important institution as a clear state foreign economic strategy. It should clearly formulate the general goals, specific problems and strategic directions of the development of foreign economic activity indicate the priorities of the product and geographical structure of foreign trade, directions of investment cooperation and their respective institutions. Unlike today's well-defined principles, tools, and laws, in ancient times "diplomacy" arose as a verbal institution of interaction between communities of people. One of its components is rhetoric, for example, which assigned the most important role to rhetorical eloquence and emphasized the style and form of delivering the text, in "diplomacy" both sides of the process were important: both speaking, expressing, and

the ability to listen and understand the speech of the envoy of the other side. In other words, the emphasis was placed on the informational content of the text in oral institutes. The word "diplomacy" is derived from the Greek word *díplōma*, which was the name of the double tablets issued in ancient times, on which letters were printed. In Greece, they were given to the country's envoys as credentials confirming their powers.

The institute of diplomacy is used for the study and assessment of various phenomena and processes, as well as for solving difficulties and problems arising in various fields with its help. To some extent, this is due to the imperfection of the existing concepts in foreign and international politics, of which diplomacy is an integral part. This is manifested, for example, in the use of the term "diplomacy" as a synonym for foreign policy, or in the combination of the words "power diplomacy" or "coercive, diplomacy", the semantic content of which contradicts the understanding of the essence of the institution of diplomacy. In this regard, it is extremely important to understand the place and role of diplomacy in the arsenal of tools for implementing the state's foreign policy. In modern conditions, the institution of diplomacy is most often used in order to clarify the model of interaction between states in the field of international relations and to effectively implement its goals. It is characterized by the rejection of violent means for the realization of national interests and foreign political goals of states. Thus, diplomacy, including economic diplomacy, is opposed to another model of interaction between sovereign states, a model based on the use of violence and coercion. The model of peaceful (diplomatic) interaction between states is established through a number of institutional (formal, codified and informal) measures (international and diplomatic law, diplomatic etiquette, established diplomatic traditions, etc.), which determine and regulate: forms and methods of interaction between states. In other cases, diplomacy is used to clarify the means or method of implementing the state's foreign policy. Diplomacy as a "means of implementing foreign policy" includes a set of non-military practical measures, techniques and methods that are applied taking into account the specific conditions and the nature of the problems to be solved. The definition of diplomacy as a means of implementing the foreign policy problems of the state more accurately reflects the content of diplomacy. Among the narrower interpretations of the institute of diplomacy, one can also find the concept of diplomacy as a function, i.e. presenting a functional activity for the implementation or management of bilateral or multilateral relations. At the national level, as a rule, this function is entrusted to the ministries of foreign affairs and is carried out by professional, technocratic diplomats, working both inside the country and abroad (employees of embassies, permanent missions accredited to international organizations and special missions). Today, however, along with professional diplomats, we believe that this function can also be performed by representatives of other state and non-state organizations that have a mandate to negotiate from the country's government. At the international level, the management function is carried out by international organizations, mainly organizations that are part of the UN system or operate under its auspices. Another, perhaps more acceptable, but narrower interpretation of the institute of diplomacy is the concept of "diplomacy" as one of the peaceful tools of foreign policy. However, it should be noted that here too there are some contradictions.



**Conclusions.** Thus, diplomacy is only one (albeit the most typical) peaceful tool of the state's foreign policy. However, war is the tool and most typical force of foreign policy. At the same time, parallel to the institutions of diplomacy and war, the state can use other institutions and instruments, both peaceful and forceful. There are fundamental differences between diplomacy and other peaceful instruments of foreign policy. Diplomacy is a permanent institution of professional, specialized mediators (negotiators), diplomats, created in each state with the aim of achieving the following goals:

- establishment and maintenance of permanent ties between countries,
- informing and interpreting the official positions of their government,
- preparing and conducting negotiations in the name and on behalf of their state,
- provision of some public services to citizens of their country.

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**Tatoul MANASSERIAN**

**Institutional foundations of Armenia's economic diplomacy**

*Key words: economic diplomacy, institutions, church, verbal and written principles, laws*

At the current stage of change in the international economic system, under the influence of the counterbalancing processes of globalization and regionalization, complex transformations are taking place in national economies, the study of which and the systematic analysis of the internal and external institutional structure of the economy become a priority. Therefore, identifying the interactions between the institutional components of economic diplomacy and developing a prospective development strategy based on them can contribute to the effective management of the risks of the national economy in conditions of global uncertainty, ensuring a sufficient level of economic security and competitiveness. Like any other complex multi-level system, the institutions of economic diplomacy also need some classification. In this article, the views of international experts and researchers are taken into account.

## THE BASIC PROBLEM OF ECONOMIC GROWTH CALCULATION IN THE REPUBLIC OF ARTSAKH

**Manush MINASYAN**

PhD, associate professor  
Senior researcher, Institute of Economics, RA NAS

Key words: economic growth, economic activity index, economic development, sustainable growth, gross domestic product, tax/gross product ratio

**Introduction.** Economic development is often defined as a long-term process that provides per capita income or economic growth. In the understanding of modern economics, the main economic problems are caused not only by growth, but also by structural and institutional changes that affect the quality of life. Economic growth refers to the quantitative increase in the production of goods and services, and the term "economic development" includes changes in economic conditions that make most members of society more comfortable. Economic development, as a complex long-term and multifactorial process, is anchored on economic growth. Since the beginning of 2020, the rate of economic growth has undergone unforeseen changes all over the world, the series of global factors in Artsakh has been completed by the war unleashed by Azerbaijan.

**Methodology.** Statistical, analytical, comparison and abstracting methods were used in the presented scientific work. Using the statistical method, a research database was created, the most important data were selected using the abstraction method, the results were compared with the data of different countries, and the selected important factors were investigated using the analytical method.

**Literature review.** In researches related to economic growth, different economists presented different characteristics and interpretations. A. Lewis believed that developing economies exhibit dualism, where two economies with different structures can operate within the same country [Lewis, 1954, 92]. In the research presented by S. Das, priority is given to the two-factor model of economic growth [Das et al., 2015, 91]. It is noteworthy that in the initial stages of the research of factors related to economic growth, the authors considered productivity growth as the main factor contributing to economic growth, paying less importance to others [Griliches, 1996, 1324]. According to R. Lucas, the characteristics of economic growth have qualitative or quantitative characteristics. In this case, the quantitative factors of economic growth are influenced by the change in the savings rate, and the qualitative factors are influenced by the efficiency of investments [Lucas, 1988, 21-23]. Modern economic research emphasizes multifactor models of economic growth, which can include more than two dozen factors.

**Scientific novelty.** By studying the dynamic series of statistical data characterizing the economic growth, the main factors of the economic growth of the Republic of Artsakh,

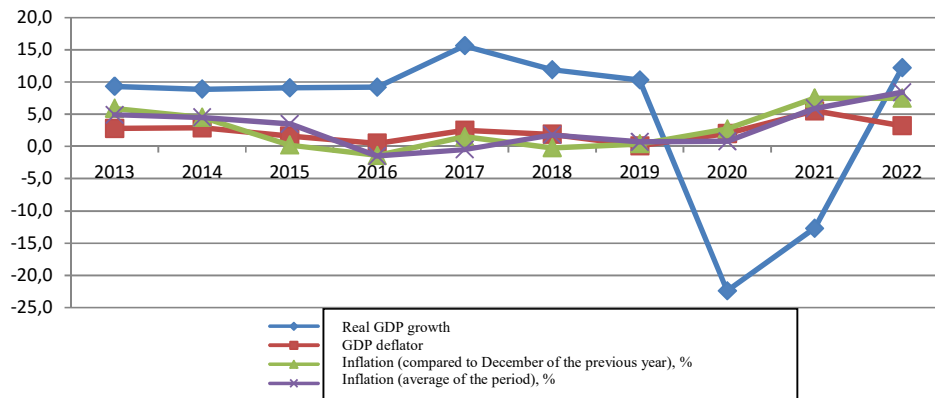
the features of accounting, the possibilities of economic development in the thirty-year period around the establishment of the republic were presented, and the impact of the 2020 war on them. The comparison with the economic growth indicators of the region and countries with small economies made it possible to assess the real achievements of the economic development of Artsakh, which has a closed economy.

**Analysis.** In the modern world, statistics is quite an "expensive pleasure", and countries with small and limited resources like the Republic of Artsakh, as a rule, do not have the opportunity to conduct alternative statistics in addition to the published official statistics, which would allow dispelling all doubts or identifying deviations by data identification. It cannot be denied that statistics is an exact science, and by combining various indicators in the economic chain, it is possible to study the main components that ensure economic growth, to assess their reliability and objectivity. The Republic of Artsakh had a dynamically developing economy before the war unleashed by Azerbaijan in 2020. 2012-2019 the average indicator of economic growth was 10.5 percent, the indicator of gross domestic product in nominal terms also increased significantly from 150.0 billion drams to 342.5 billion drams, the indicator of GDP per capita, respectively, increased from 1023.0 thousand AMD to 2307.6 thousand AMD.

**Table 1.** Main macroeconomic indicators of the Republic of Artsakh

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Nominal GDP	150015	168563	188840	209345	229651	272070	310252	342463	270907	249354	288792
(million drams)	373368	411502	454030	438035	477952	563620	642358	712797	553991	494977	662870
Nominal GDP in USE	9.9	9.3	8.9	9.1	9.2	15.6	11.9	10.3	-22.4	-12.7	12.2
Real GDP growth, %	0.7	2.8	2.9	1.6	0.5	2.5	1.9	0.1	2.0	5.5	3.2
GDP deflator, %	1023.0	1174	1308.7	1443.8	1577.3	1855.9	2103.3	2307.6	1820.1	1671.9	1922.6
GDP per capita USD	2546.1	2867.7	3146.5	3021.0	3282.7	3844.7	4354.7	4803.0	3722.0	3318.8	4413.0
volume of GDP per capita (prev.year, %)	108.5	111.7	108.3	108.6	108.7	114.8	111.2	109.6	77.3	87.1	111.4
Consumption/GDP, %	-	-	-	-	-	86.1	81.8	81.6	80.6	80.8	81.0
Private consumption/GDP, %	-	-	-	-	-	66.8	64.9	65.1	64.8	64.7	65.2
Gov. consumption/GDP, %	-	-	-	-	-	19.3	16.9	16.5	15.8	16.1	16.1
Investm./GDP, %	49.8	33.3	31.5	32.5	17.1	17.7	18.1	16.2	11.3	11.8	9.2
Net export / GDP, %	-64.2	-50.5	-51.9	-41.6	-35.9	-18.6	-20.1	-10.8	-24.9	-30.4	-24.3
Inflation (to December last year), %	3.0	5.9	4.5	0.2	-1.4	1.5	-0.2	0.4	2.7	7.5	7.5
Inflation (period average), %	2.0	4.9	4.5	3.5	-1.5	-0.5	1.8	0.7	0.8	5.9	8.4
AMD:USD ex. rate hourly average	401.79	409.63	415.92	477.92	480.49	482.72	482.99	480.45	489.01	503.77	435.67
Index of import volatility	0.221	0.263	0.252	0.305	0.360	0.650	0.640	0.798	0.522	0.442	0.325
openness of the economy	50.3	43.3	43.5	39.0	38.1	43.8	45.7	48.2	39.5	39.3	41.4

These indicators of economic growth conditioned the positive trends recorded in the main branches of the economy, the changes in the industry, construction, and services sectors are especially noteworthy. Also important is the acceptable inflation background in the economy, which almost maintained the level of macroeconomic forecast indicators. It is also interesting to consider the changing trends of the GDP deflator and inflation in 2013-2022;



**Chart 1.** Trends in GDP deflator and inflation in 2013-2022.

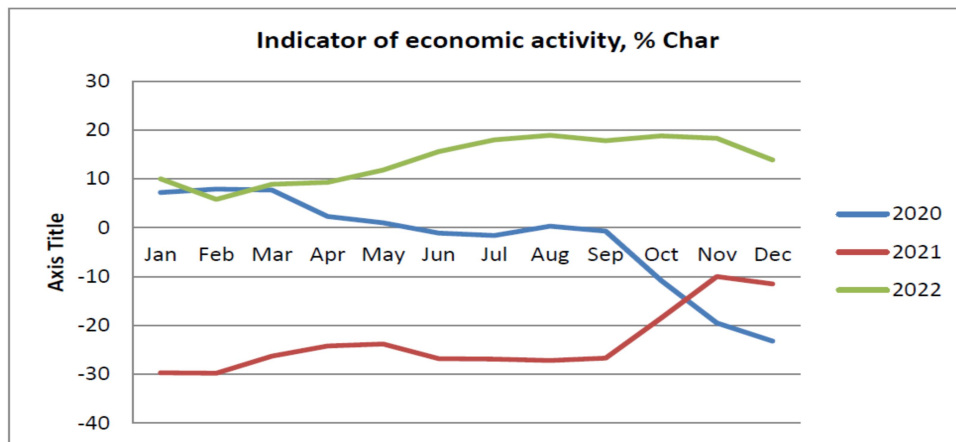
We consider it necessary to emphasize that a number of qualitative indicators, however, have undergone worrying changes, in particular, the investment/GDP indicator decreased from 49.8 percent in 2012 to 16.2 percent in 2019, the import coverage indicator increased from 0.221 to 0.798, the economy openness indicator from 50.3 to 48.2 (showing a minimum index level of 38.1 during that period).

Being an unrecognized state, in Artsakh, however, official statistics were conducted in line with international methodology, which allows comparisons with other countries to be made. According to the International Monetary Fund's "World Economic Development Prospects" database, Equatorial Guinea ranks first with 9185% economic growth in 1990-2020, and China ranks second with 2178% [<http://data.worldbank.org>, PPP]. Moreover, if in the case of Equatorial Guinea, when the GDP index was increased from 274 million dollars in 1990 to 25,161 million dollars in 2020, it was perhaps not a difficult problem, then in the case of China, which has a large economy, such a growth rate is really an economic miracle, when the 1990 1114,609 million dollars is increased to 24274131 million dollars in 2020. It is also interesting to observe the progress of the indicators of the countries of the region. Armenia's economic growth in 1990-2020 was 402%, Russia's - 348%, Azerbaijan's - 387%. The indicator of economic growth of Artsakh in 1996-2019 was 1956.0% [<https://stat-nkr.am>].

Developing countries tend to have economies that are more dependent on the exploitation of natural resources in the environment [Green Growth 2012]. Green technologies and sustainable development are not very affordable or accessible to them [Shreekaracharya et al., 2012]. Naturally, they are less able to protect themselves from the negative effects of climate change and environmental degradation.

The essence of the concept of green growth is that, while economic growth is a primary goal for a country, it needs to be separated from resource use and negative environmental impact. A key driver of green growth is the transition to sustainable energy systems. In this context, Artsakh, as a developing country, also did not have the opportunity to protect itself from climate change or neutralize the negative effects of environmental degradation, especially since the introduction of a sustainable energy system in recent years (the volume of electricity production in Artsakh exceeded domestic demand in the last two years before the war) was anchored to water resources. on application.

Economic developments in the Republic of Artsakh were characterized by the economic activity index (hereinafter referred to as the economic activity index), which is published monthly, and the gross domestic product index (hereinafter referred to as GDP), which is calculated and published quarterly. The first of these, indicator of economic activity, according to the methodology of the National Statistical Service of the Republic of Azerbaijan, is an aggregated indicator of the change in the real volume of output in the country's economy. It includes all types of economic activity and is initially calculated at the average annual prices of the previous year, which gives the opportunity to have the real change in the output volume of the given month compared to the previous month and the corresponding month of the previous year. Figure 2 shows the indicator of economic activity in 2020-2022 in monthly intervals compared to the same period of the previous year (cumulative).



**Chart 2.** Economic activity index (cumulative compared to the same period last year)

It is obvious from the given indicators that since the middle of 2020, the indicator of economic activity has experienced a decline, continuing to deepen in 2021, but has improved significantly in 2022. This indicator certainly does not claim to be a reliable one for the economic growth of Artsakh, because there are deviations between the indicator of economic activity and economic growth. For economic developments, having monthly publications, indicator of economic activity creates a wide range of opportunities for studies. In particular, by looking at the changes in sectorial indicators, one can get a clear idea of which sectors have contributed to the growth or decline of economic activity. It is noteworthy that in all months of 2022, the impact of the agriculture and trade sector on the GST was positive, while the impact of the industry and construction sectors was variable.

The next and main indicator characterizing economic growth is gross domestic product, which, according to the above-mentioned source, characterizes the value of goods and services produced in the country's economy (excluding intermediate consumption) intended for final consumption, accumulation and net export. Moreover, the GDP also includes an estimate of the unobserved economy. It should also be noted that GST does not include net taxes on products and indirectly measured services of financial intermediation, which are included in quarterly and annual GDP production-based calculations. In Artsakh, in 2005-2017 the GDP indicator was calculated in two ways (production and income formation) due to the lack of an appropriate database. In 2005-2022, according to the method of income formation, 33.9-43.6 percent of the GDP was made up of the economy's gross profit and gross mixed income.

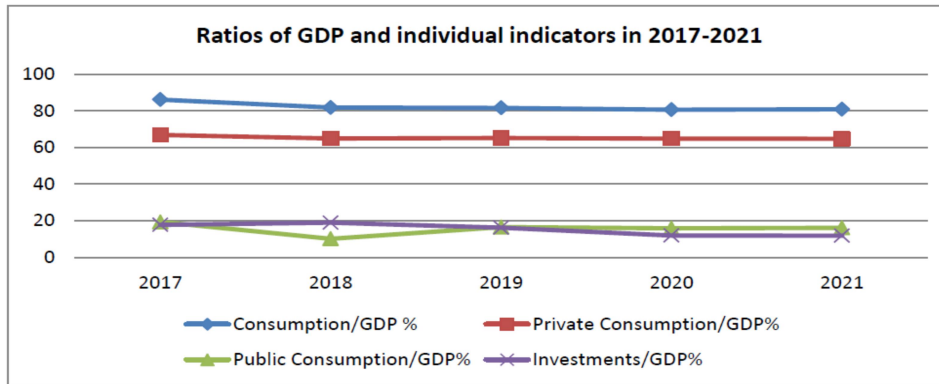
**Table 2** Account and structure of PC revenue formation, 2005-2022

	2005	2010	2015	2020	2021	2022
1. Domestic output (at gross market prices)	51379.4	118187.2	209345.7	270907.2	249354.9	288792.8
	100.0	100.0	100.0	100.0	100.0	100.0
2. Gross profit and gross mixed income of the economy	21030.6	48996.4	91344.1	105303.5	84601.6	99837.4
	40.9*	41.5*	43.6*	38.9*	33.9*	34.6*
3. Consumption of fixed capital	3907.8	9010.8	24270.9	46094.5	41875.1	50069.0
	7.6*	7.6*	11.6*	17.0*	16.8*	17.3*
	18.6**	18.4**	26.6**	43.8**	49.5**	50.2**
4. Net profit and net mixed income of the economy	17122.8	39985.6	67073.2	59209.0	42726.5	49768.4
	33.3*	33.8*	32.0*	21.9*	17.1*	17.2*
	81.4**	81.6**	73.4**	56.2**	50.5**	49.8**

note: current prices in the numerator, million drams, announcement

\*% to GDP, \*\*% to gross profit and gross mixed income of the economy.

Ratios of GDP and individual indicators in 2017-2021. are given in Figure 4.



**Figure 4.** Ratios of GDP and individual indicators in 2017-2021

According to the way of using the GDP, the final consumption expenses in 2017-2022 made up 80.7-86.2 percent of the index (see table 3).

**Table 3.** Use and structure of PC GDP, 2017-2022

The index	2017	2018	2019	2020	2021	2022
1. GDP, at current prices	272070.8	310252.7	342463.6	270907.2	249354.9	288792.8
	100.0	100.0	100.0	100.0	100.0	100.0
2. Final consumption costs	234528.9	254153.6	279734.5	218624.4	201863.7	241088.9
	86.2	81.9	81.7	80.7	81.0	83.5
3. Gross accumulation	49347.3	54482.1	61335.1	51836.5	47192.4	46548.6
	18.1	17.6	17.9	19.1	18.9	16.1

**Table 4.** Account and structure of Artsakh's disposable income, 2017-2022

The index	2017	2018	2019	2020	2021	2022
1. Gross disposable income	311 155.50	352 799.80	382702.3	328 237.50	299 040.50	362012.8
	100.0	100.0	100.0	100.0	100.0	100.0
Usage:						
2. Final consumption costs	234528.9	254153.6	279734.5	218624.4	201863.7	241088.9
	75.4	72.0	73.1	66.6	67.5	66.6
3. Gross savings	76 626.60	98 646.20	102 967.80	109 613.10	97 176.80	120 923.90
	24.6	28.0	26.9	33.4	32.5	33.4

The GDP of the Republic of Artsakh in 2022 amounted to 288,792.8 million drams in 2021. 249354.9 million AMD. The GDP growth rate was 112.2 percent, the GDP deflator index was 103.2 percent. After the 2020 war, the economy of Artsakh was experiencing an economic decline for two years, which is objectively understandable. The war also had a heavy impact on the economy. The significant loss of resources (human resources, agricultural land, gardens, production capacity, etc.) had a multifold effect on the economy. And, despite the recorded double-digit economic growth in 2022, the economy was still in the recovery phase compared to the pre-war period. From the study of the GDP

"gap", it becomes clear that the main engine of economic growth in 2022 is the industry sector, from 12.2 percentage point to 9.6 percent. The services and trade sector also contributed to the economic growth, the growth of which is 5.0 percent compared to the previous year, and the contribution is 2.7 percent.

Thus, from the analysis of indicator of economic activity and GDP components, it becomes clear that although the economic growth is not widespread in all sectors, but due to the high rates of growth recorded in some of them, the average indicator is also quite high. However, this is only one side of the phenomenon, which gives an opportunity to assess the foundations of economic growth. On the other hand, talking about the strength of these foundations, we must be able to assess their reliability. As we have already mentioned, the GDP indicator, apart from the actual data of the sectors of the economy, also includes the unobserved part of the economy. The National Statistical Service of the Republic of Artsakh, in accordance with the internationally accepted methodology, adds its estimated shadow of the economy to the GDP indicator. As a rule, the government fights against the shadow with various measures. From this point of view, the simplest indicator to characterize shadow reduction is the tax revenue/GDP ratio. It is no secret that "one of the main problems of the state is to provide tax revenues due to economic growth and to increase tax revenues due to the reduction of the shadow" [Hakobyan, 2022, 101], which steadily decreased in the Republic of Artsakh from 14.8 percent in 2008 to 10.8 percent in 2008-2013. The increase in the 2017-2020 tax revenue/GDP index was partly a consequence of the reduction of the shadow, which, however, was not taken into account in the calculations of the National Statistical Service, as a result, the reduction of the shadow was reflected to a significant extent in the economic growth index, additionally contributing to the recording of a high economic growth index. , it also becomes clear from the study of the series that, along with the growth of the tax revenues/GDP indicator, the assessment of the unobserved economy has decreased, which also substantiates what has been said.

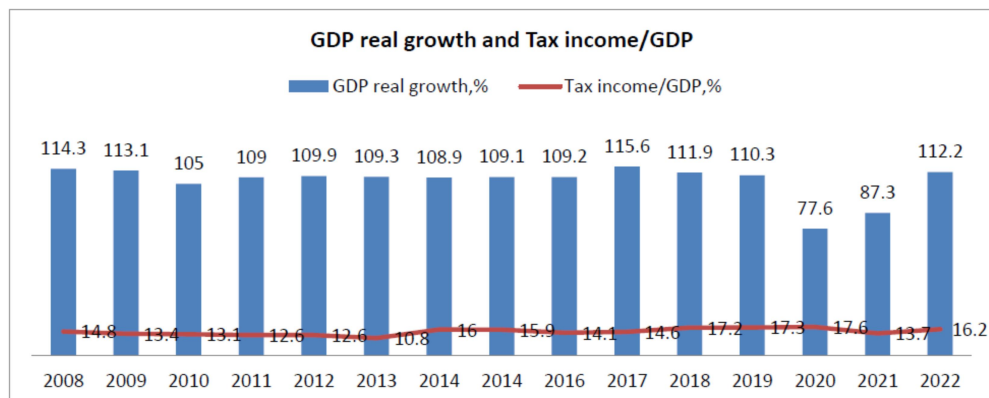


Figure 5. Taxes/GDP and Real GDP Growth (%)



Figure 5 shows the dynamics of taxes/GDP and real GDP growth indicators for 2008-2022. In 2014, the tax/GDP index increased by 5.2 percentage points compared to the previous year, mainly due to the inclusion of mandatory social payments in the income tax, and this effect was maintained in the following years as well. It is noteworthy that the tax/GDP indicator in the considered period had the highest level in 2020: 17.6 percent, which was recorded in the conditions of 22.4 percent economic decline.

**Conclusions.** We can conclude that, due to a number of factors, before the 2020 war, the economy of the Republic of Artsakh recorded a rather high growth vector, as a result of which above-average economic growth is continuously recorded, which is mainly due to achievements in the services and trade sectors, as well as industry and construction. This is due to branch activation. At the same time, one of the "secrets" of recorded economic growth is the methodological problem of not revising the assessment of the unobserved economy, which, at the expense of reducing the shadow, creates the illusion of additional growth, which is also statistically reflected as economic growth.

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### Manush MINASYAN

#### The basic problem of economic growth calculation in the Republic of Artsakh

*Key words: economic growth, economic activity index, economic development, sustainable growth, gross domestic product, tax/gross product ratio*

In the understanding of modern economics, the main economic problems are caused not only by growth, but also by structural and institutional changes that affect the quality of life. It is no secret that economic development, as a complex long-term and multifactorial process, is based on economic growth, the latter is a quantitative increase in the production of goods and services, the term "economic development", in turn, includes such changes in economic conditions that for most members of society make them more comfortable. For about thirty years, Artsakh has built an independent, free, state anchored on democratic values, where a person is a real value, along with his freedom and preferences. Having gone through a difficult path of establishment, having a closed and degraded, impoverished economy with limited development opportunities, however, Artsakh recorded quite good indicators of economic growth, which were higher than the countries of the region. Since the beginning of 2020, the rate of economic growth has undergone unforeseen changes in Artsakh all over the world.

## COMPETENCE AS A FACTOR INFLUENCING THE EFFICIENCY OF CIVIL SERVANTS AND WAYS OF THEIR IMPROVEMENT IN RA

**Narine KIRAKOSYAN**

PhD in Economics, Associate Professor, Chair of Management

**Lala KHOJYAN**

PhD student at the Chair of Management, ASUE

Key words: competence, work efficiency, civil service

**Introduction.** In the context of globalization, geopolitical changes, and ever-increasing demands of society, public administration bodies should focus on the most valuable resource - human capital. Public administration bodies are competing with the private sector in terms of human resource management to attract the best professionals and reduce the level of turnover. Only with the help of efficient working professionals can a dynamic and continually transforming system be developed. In this context, the state administration system should identify the possible ways that will contribute to increasing the efficiency of the civil servants' work. At the same time, special attention is needed to analyze the civil servant as an individual within the group as an element of the system and it is also important to study those holding a leadership position as an element with a large influence on a large group. These entities constitute the focal points of our research. The subject of the analysis is the development of ways to improve the competencies of civil servants.

**Methodology.** The informative basis for the research was the works of local and foreign authors on labor economics and civil service. Also, while conducting the study of the RA civil service system, we paid special attention to the legislative framework, which regulates several relationships. We used the methods of comparative analysis and deduction while conducting the research. Using the deduction method, we have defined the concept of work efficiency of civil servants. Using the method of comparative analysis, we compared the competencies nominated for professional and managerial positions of civil servants.

**Literature review.** The efficiency of civil servants' work reflects their professional success in terms of achieving pre-planned work results, and social outcomes, as well as the ratio of the obtained results and the resources spent on their implementation [Vasil'eva et al., 2016, 18]. According to another definition, the efficiency of the work of civil servants is the correspondence of professional level, skills, personal and business qualities, as well as the approach of performing official duties of a civil servant and the results of professional activities to achieve the goals set by state bodies [Znamenskij, Gusarov, 2020, 13]. As a generalization of the above, the efficiency of civil servants' work can be defined as follows: it is the ratio of the work performed to the resources spent, where the compe-

tency of civil servants and the way they approach work performance are important, as well as the achievement of the set goals at the lowest cost. From this standpoint, the competencies of civil servants need special study. In the modern world, there are three recommended approaches to competencies. Proponents of the first approach emphasize behavioral competencies. Advocates of the second approach consider both behavioral and numerical competencies to be in-demand competencies. The supporters of the third approach consider only digital competencies: information and computer literacy, media literacy, communication literacy, and attitude towards technological innovations [Konstantinova & Kudaeva, 2020, 1058-1059].

**Scientific novelty.** We have defined the term efficiency of work of civil servants. We proposed a methodology for classifying civil servants' competencies. We have also suggested additions to the competencies. One of the key propositions of our research is the introduction of an open self-education system.

**Analysis.** Since the civil service is an institution of public service and, due to its organization and corporate cohesion, is one of the factors for stabilizing and ensuring the spiritual and moral security of citizens, the civil servant's competence is manifested not only in the quality of his job performance, but also includes his personal characteristics, features of his social behavior [Krynychna & Gurkovskii, 2020, 32].

In the RA Law "On Civil Service" competence is defined as a set of knowledge, abilities, skills, and behavior, which is necessary for the effective implementation of the functions provided for in the passport of the position [Law "On Civil Service"]. Competencies in the civil service system are categorized into two groups: general and sample. The list of sample competencies can be expanded with the new ones and the list of general competencies can be revised at the discretion of the Civil Service Office of the RA Prime Minister, based on recommendations from respective authorities [Decision, 2019].

**Table 1.** General competencies for a group of management positions

General competencies	Applicable Managerial Position Subgroups
1 Leadership	1st, 2 <sup>nd</sup>
2 Strategic planning	1st, 2 <sup>nd</sup>
3 Personnel (performance) management	1st, 2nd, 3rd, 4th, 5 <sup>th</sup>
4 Policy analysis, monitoring	1st, 2nd, 3rd, 4th, 5 <sup>th</sup>
5 Decision making	1st, 2nd, 3rd, 4th, 5 <sup>th</sup>
6 Problem-Solving	1st, 2nd, 3rd, 4th, 5 <sup>th</sup>
7 Integrity	1st, 2nd, 3rd, 4th, 5 <sup>th</sup>
8 Program management	3rd, 4th, 5 <sup>th</sup>

As shown in Table 1, it is evident that, unlike civil servants in managerial positions within the 3rd, 4th, and 5th subgroups of the civil service, leadership, and strategic planning competencies were defined for civil servants in managerial positions belonging to the 1st and 2nd subgroups of the civil service, but program management was not. The

remaining competencies remain the same across all subgroups (see Table 1). Civil servants in the 1st and 2nd subgroups of professional positions, in contrast to their counterparts in other subgroups, are required to possess the "Program Development" competence. Meanwhile, the 3rd, 4th, and 5th subgroups, unlike the 6th, 7th, and 8th subgroups, should demonstrate proficiency in "Problem-Solving." (see Table 2). This reveals that there is little variation in general competencies across the subgroups of professional positions, mirroring a similar pattern in the subgroup of managerial positions. Furthermore, among the competencies of professional and managerial positions, the competencies of "Problem Solving" and "Integrity" are repeated. In light of this, it becomes evident that a clear classification of competencies is needed.

**Table 2.** Generic competencies for a group of professional positions

General competencies	Applicable subgroup of professional positions
1 Program development	1st, 2nd
2 Problem-solving	1st, 2nd, 3rd, 4th, 5th
3 Reporting	1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th
4 Data collection and analysis	1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th
5 Integrity	1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th

It is also important to explore the sample competencies defined for groups of managerial and professional positions. Essentially, these competencies serve as guiding elements for defining the job description. General and sample competencies lack a precise definition and can be subject to varying interpretations. We believe that this gap should be filled by defined descriptions of these competencies within the legislative framework regulating the civil service sector, along with criteria for their assessment.

**Conclusion.** Civil servants enter the civil service system with pre-existing competencies that contribute to their work efficiency and can be further enhanced over time through personal initiative and systematically.

Analyzing the range of competencies of civil servants in the Republic of Armenia and comparing them with the approaches proposed by theorists, it becomes clear that no place is given to digital competencies at all. Over time, due to the geopolitical situation, it became necessary to organize the work remotely. Moreover, in modern conditions, the tendency to organize work in such a way has not decreased. Therefore, we emphasize adding digital competencies to the general competencies of civil servants.

Regarding the classification methodology for general competencies among civil servants in professional and managerial positions, we propose the following approach: First of all, competencies should be categorized according to their mastery level, followed by the establishment of specific requirements for each subgroup, progressing from lower to higher levels of competence.

While performing the current work in accordance with the work plan, the civil servants may need to acquire certain competencies or improve the competencies they have, to ensure this, we propose to develop an open self-education system in the civil service system and create a centralized electronic platform that includes:

- Educational materials and e-courses provided by training institutions and meticulously classified to provide civil servants with efficient access to required information.
- Managers may have access to information on the e-courses attended by civil servants and the educational materials accessed, aiding in making informed managerial decisions.
- The platform may also facilitate professional discussions among civil servants and enable them to seek advice from more experienced colleagues, fostering the share of expertise.

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**Narine KIRAKOSYAN, Lala KHOJYAN**

**Competence as a factor influencing the efficiency of civil servants and ways of their improvement in the Republic of Armenia**

*Key words: competence, work efficiency, civil service*

A number of researchers have addressed work efficiency including that of civil servants, but researchers have not given one general definition. The question also remains open regarding the methodology for classifying competencies within the civil service system and strategies to improve the competencies of civil servants in the Republic of Armenia.

The purpose of the research is to identify the characteristics of competencies among the factors affecting the work efficiency of civil servants, as well as to make recommendations for their improvement. To achieve these goals, we have identified the following problems that need to be solved: to define the efficiency of civil servants' work and the factors determining it, analyze the competencies of civil servants established by the legislation in RA, and suggest ways to improve these competencies. To address these issues, we used the methods of comparative analysis and deduction.

## TALENT MANAGEMENT ISSUES IN THE CONTEXT OF DIGITAL ECONOMY

**Gagik SHAHNAZARYAN**

Senior Lecturer, Faculty of MBO, ASUE

**Nelli SHAHNAZARYAN**

Ph.D., Associate Professor, ASUE Faculty of Management

Key words: digital HRM technologies, human resources, digital economy, talent management

**Introduction.** The 21st century's technological growth has been characterized by rapid advancements, convergence of technologies, and their pervasive impact on various aspects of society. One of its impact can be considered the formation of the digital economy, which is a driving force in shaping the modern world, influencing how businesses operate, how people work, and how societies function. Its continued growth and development are likely to have profound effects on various aspects of people's lives and the global economy. However, the subject of this transformation is a human, but highly educated and qualified, who needs guidance, support and motivation to maximize his potential. They are more sensitive, and the traditional form of human resource management may force them to leave the company either because of indifference or because of a misunderstanding. To do this, companies need to implement new approaches in their human resources management systems, from which all parties will benefit.

**Scientific novelty.** Our scientific novelty will be the proposal of approaches to implementation in the HR management system and ways to do it. We also offer politicians, employers and employees to cooperate in finding the right solution to human resource management issues, since if employee is not satisfied, he tend to leave the country in search of a more comfortable life and opportunities for growth which will lead to the loss of highly educated and skilled employees, which is also a loss for the country.

**Methodology.** In the article have been used theoretical research methods, such as methods of analysis, induction and deduction, as well as methods of description and generalization. In particular, the basics of the digital economy and human resources were presented using the description method, the growth and share of the digital economy in the gross domestic product (GDP) were presented using the analysis method. Using the comparative method, a comparison of the level of digitalization of developed countries was presented. Also, the issues of human resource management in the context of digital economy were presented by deduction method and local aspects (local companies example) were presented by induction, conclusion and ways of solutions made via generalization.

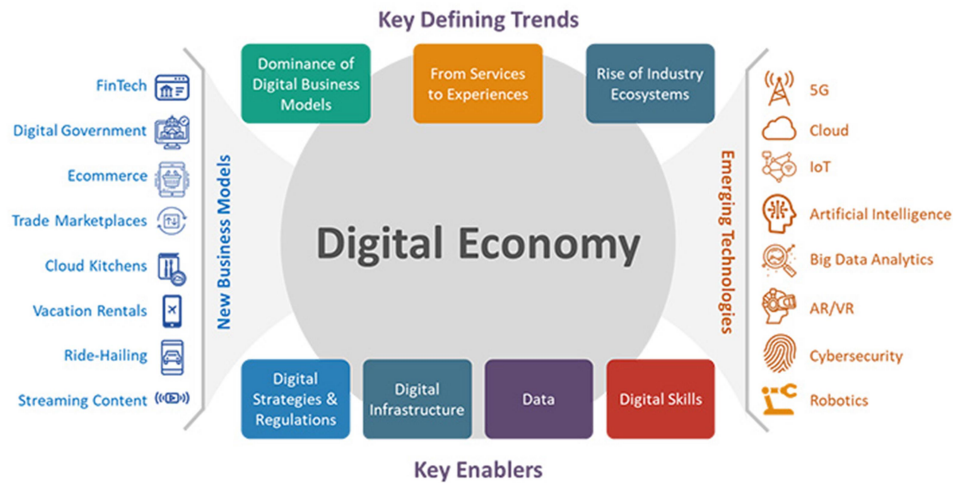
**Literature review.** Talent management is a critical aspect of organizational success, particularly in the context of the digital economy. The digital transformation of businesses has brought about significant changes in the way organizations manage their ta-

lent. McKinsey & Company identifies five core themes that drive the success of digital transformations: prioritizing hiring senior digital leaders, building a strong employee value proposition, developing a culture of innovation, creating a flexible and agile organization, and investing in employee development [McKinsey Digital, 2023]. Deloitte highlights the importance of mobility and flexibility for employees to remain relevant in the digital economy [Deloitte, 2016, 2]. Springer notes that HRM digital transformation has led to changes in employee-related functions such as recruiting, training, and evaluation [Jie & Zhisheng, 2023, 5]. Theintactone identifies challenges and opportunities for talent management, including setting standards for ethical behavior, increasing transparency, reducing complexities, developing a culture of reward and appreciation [Theintactone, 2019]. Therefore, talent management issues in the context of the digital economy are complex and multifaceted and require deep research and understanding for finding right solutions.

**Analysis.** The 21st century has witnessed an unprecedented surge in technological advancements, revolutionizing the way we live, work, and interact. Technology has become an integral part of our daily lives, influencing various aspects of society, economy, and culture. Its importance in shaping the trajectory of human progress cannot be overstated. One of the most evident and transformative impacts of technology in the 21st century is the revolution in communication. The rise of the internet, social media, and mobile devices has interconnected the world like never before. People can communicate instantaneously across borders, fostering global collaboration and breaking down traditional barriers. Social media platforms have empowered individuals to share ideas, mobilize for social causes, and create virtual communities, shaping the way societies perceive and engage with information. Technology has revolutionized education, making information more accessible and learning more interactive. Online platforms offer a plethora of educational resources, enabling self-directed learning and breaking down geographical constraints. Virtual classrooms and e-learning tools have become integral components of education, providing flexibility and personalized learning experiences. The democratization of information through technology has empowered individuals, fostering a culture of continuous learning and skill development.

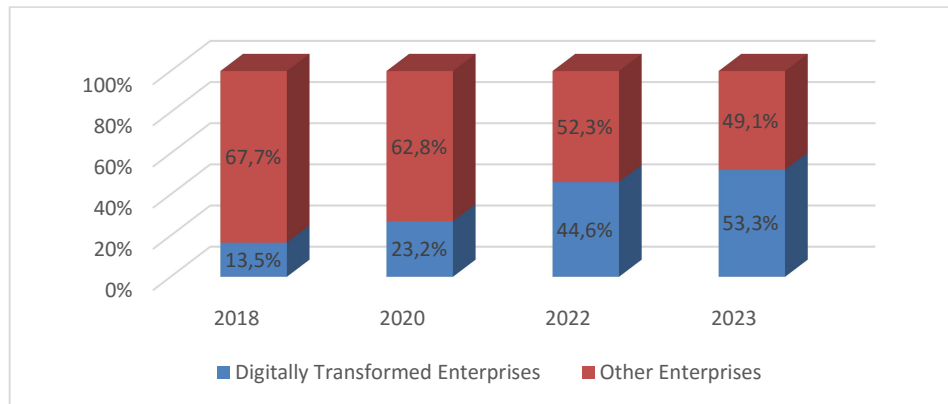
In the realm of the global economy, technology has been a driving force behind unprecedented transformations. Digitalization, automation, and artificial intelligence have reshaped industries, creating new opportunities and challenges. E-commerce, online marketplaces, and digital payment systems have changed the way businesses operate and consumers shop. The Fourth Industrial Revolution, characterized by the integration of smart technologies into manufacturing and production processes, has ushered in a new era of efficiency and innovation. This whole process becomes the basis for the formation of the digital economy. But what is meant by the concept of “Digital Economy”? Accor-

ding to Oxford Learners Dictionary, it refers to an economy that functions mostly through the use of digital technology, especially the internet [Oxford Learner Dictionary]. In other words – it refers to the economic activities that are driven by digital technologies, data, and connectivity.



**Picture 1.** Digital Economy and Its Characteristics [Huawei, 2021]

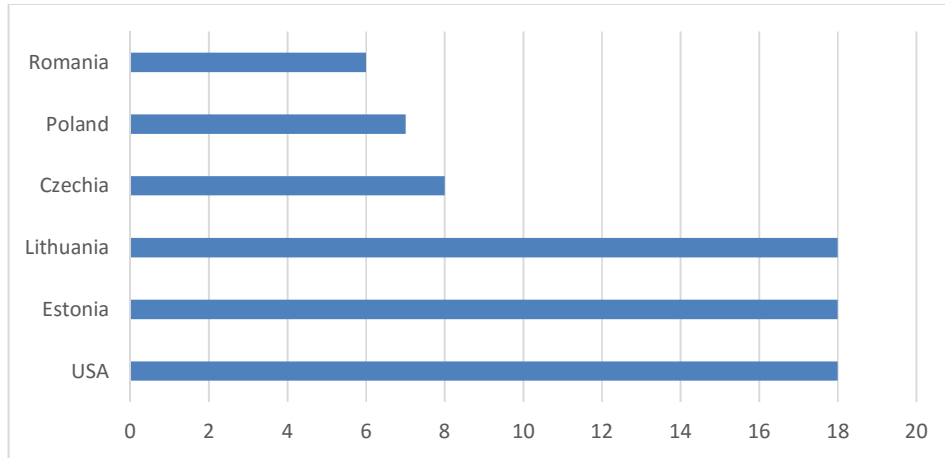
It encompasses a wide range of digital technologies and applications that have transformed traditional industries, created new business models, and influenced the way people live and work. The digital economy is characterized by the rapid and pervasive use of digital technologies, including the internet, mobile devices, cloud computing, big data, artificial intelligence, and the Internet of Things (IoT) (see Picture 1.).



**Figure 1.** Nominal GDP driven by digitally transformed and other enterprises worldwide from 2018 to 2023 (in trillion U.S. dollars) [Statista, 2023]

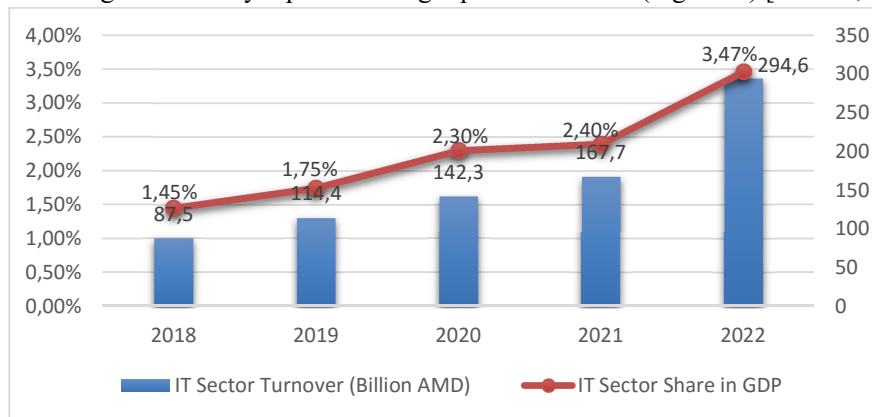


While in 2018, digitally transformed enterprises accounted for 13.5 trillion U.S. dollars of the global nominal GDP, in 2023 they are forecast to account for 53.3 trillion U.S. dollars, more than half of the overall nominal GDP. This signals that digital supremacy in the global economy is near (see Figure 1.).



**Figure 2.** Digital economy value as a share of gross domestic product (GDP) in USA, Central and Eastern Europe (CEE) in 2021 (%) [Statista, 2023] [Alger, 2022]

The share of the digital economy relative to U.S. GDP has increased from 11% in 2005 to an estimated 19% in 2022. During this period, the compounded annual growth rate of the digital economy was approximately 300 basis points greater than that of U.S. GDP growth [Alger, 2022]. Estonia, Latvia, and Lithuania had the highest value of digital economy as a share of gross domestic product (GDP) among the presented Central and Eastern European (CEE) countries, at 18 percent each in 2021. To compare, in Czechia, the value of digital economy represented eight percent of GDP (Figure 2.) [Statista, 2022].



**Figure 3.** IT Sector in RA [Statistical Committee of RA, 2023]

The World Bank estimates that the digital economy contributes to more than 15% of global gross domestic product (GDP), and in the past decade, it has been growing at two and a half times faster than physical world GDP [WEF, 2022]. Armenia, as a developing country, cannot stay away from the process of digital economy formation and has been actively working on developing its Information and Communication Technology (ICT) sector. As we can see from Figure 3, its share in GDP is growing every year and in 2022 amounted to 3.47%. The government has implemented initiatives to promote the growth of the technology industry, including tax incentives and support for startups. Yerevan, the capital of Armenia, has been emerging as a hub for tech startups. The government has supported various initiatives to foster entrepreneurship and innovation. There are startup incubators, accelerators, and events that aim to support and highlight the talent in the technology sector [Ministry of HTI, RA, 2023]. In addition, Armenia has a strong emphasis on education in science and technology fields. The country produces a significant number of IT professionals, and many Armenians are employed in the global IT industry. The presence of skilled IT professionals is crucial for the development of the digital economy. The Armenian government has been working on implementing e-government initiatives to improve public services, increase efficiency, and reduce bureaucracy. This includes the digitization of various government services and the introduction of online platforms for citizens [The Electronic Government of the RA, 2023].

The development of digital infrastructure, including high-speed internet connectivity and digital payment systems, is crucial for the growth of the digital economy. Armenia has been investing in improving its digital infrastructure to support the increasing demands of the technology sector. The success of the digital economy is influenced by various factors, including political stability, economic conditions, and global market trends.

The subject of above-mentioned development is the human with his human capital. Human capital was touched upon by Adam Smith in his work back in the 18th century. He noted that for the formation of talents, their education, training or retraining require a lot of money, and this money must be considered as human capital. These talents are part of the potential of the organization as well as society [Smith, 1776]. Jacob Mincer's article is also important, in which the author explains the individual distribution of income among members of society solely as a result of their professional education [Mincer, 1958]. The owners of human capital are human resources that need to be managed, maintained and directed. Human Resource Management (HRM) in Armenia has been developing rapidly over the past few years. In this process take place organizations like the European Association for People Management (EAPM) which is a professional community that aims to develop the field of HRM in Armenia [EAPM, 2023]. They work towards introducing modern technologies and leading tools in HRM in Armenia, promoting the establishment of an effective HRM system. Armenian HR Association focuses on the development of HR managers and leaders in Armenia. It was founded in 2010 and has

about 80 members who are the leading specialists of the HR sphere and have come together to achieve common goals. The main mission of the Association is to develop a professional community in the field of HRM in Armenia, working towards the introduction of modern technologies and leading tools in HRM in Armenia, promoting the establishment of an effective HRM system through the combination of contemporary world experience and national peculiarities. The main directions of the activities of HR Association are: public awareness of HRM, professional development, improvement of HRM framework, HR Club meetings. Members of the Association are HR directors, HR managers, HR consultants, HR professionals, HR generalists, HR trainees and other HR-related specialists who represent companies from different spheres. In addition, the availability of HR software tools in Armenian has also been a significant achievement in the development of HRM in Armenia. HRDB is one such tool that is available in Armenian [HRDB, 2023]. This tool can help companies and their HR teams to manage their HR processes more efficiently. Therefore, it is expected that the field will continue to grow and develop in the coming years. The advent of the digital economy has brought about significant changes in the landscape of labor and employment. As technology continues to evolve, it reshapes the way people work, the skills they need, and the nature of employment relationships. This transformation has both positive and challenging implications for workers and employers alike.

❖ **Flexibility and Remote Work:** The digital economy has facilitated greater flexibility in work arrangements. Remote work, enabled by digital technologies, has become more prevalent, allowing employees to work from anywhere with an internet connection. This flexibility can enhance work-life balance and increase job satisfaction. However, it also raises challenges related to maintaining effective communication, collaboration, and addressing potential feelings of isolation among remote workers.

❖ **Skill Requirements and Lifelong Learning:** The digital economy places a premium on digital literacy and adaptability. Rapid technological advancements mean that skills become obsolete more quickly, necessitating a continuous focus on learning and upskilling. Employees are expected to embrace a mindset of lifelong learning to remain relevant in the evolving job market. Employers, in turn, may need to invest in training programs to ensure their workforce is equipped with the necessary skills.

❖ **Gig Economy and Platform Work:** Digital platforms have given rise to the gig economy, where individuals engage in short-term, freelance, or on-demand work facilitated by digital platforms. While this provides flexibility for workers, it also raises concerns about job security, access to benefits, and the delineation between independent contractors and traditional employees. Policymakers and businesses grapple with finding a balance that protects workers' rights without stifling the benefits of gig work.

❖ **Automation and Job Displacement:** Automation and artificial intelligence have the potential to streamline processes and boost efficiency but may also lead to job displace-

ment in certain sectors. As routine tasks become automated, there is an increased demand for workers with skills in areas such as data analysis, problem solving, and creativity. Addressing the potential negative impact on displaced workers requires thoughtful policies, retraining programs, and a societal commitment to supporting those affected.

❖ *Data Privacy and Security:* In the digital economy, data is a valuable asset, and concerns about privacy and security have become more pronounced. Employees entrust their personal information to employers, and maintaining the confidentiality and security of this data is paramount. Employers must navigate the ethical use of employee data, balancing the need for information with respect for individual privacy rights.

❖ *Workplace Culture and Well-being:* The digital economy has implications for workplace culture, communication, and employee well-being. The constant connectivity facilitated by digital tools can blur the lines between work and personal life, leading to potential burnout. Employers need to foster a supportive culture that promotes work-life balance, mental health, and employee well-being.

Above-mentioned process is being guided and implemented by human. Therefore, despite the technology growth including the use of artificial intelligence the human is the key player in whole process. However, not ordinary human – the highly educated person will be called talent. The robots and artificial intelligence can replace the job of not qualified human, but not talents, since machine cannot make judgement and think out of scope when talent can and will. In this context, there is a big problem to manage them – teach, guide, motivate, assess and promote. It is too sensitive, since talents are unique and it is too difficult to make a talent from the ordinary human, but too easy to lose them with the loss of whole efforts and resources invested. Therefore, the talent management is very sensitive issue and should be considered too serious then it is in nowadays companies.

Traditional human resources management (HRM) approaches have some disadvantages. Here are some common disadvantages associated with traditional HRM:

❖ *Paperwork and Administrative Burden:* Traditional HRM often involves a significant amount of paperwork, manual record-keeping and administrative tasks. This can be time-consuming and may lead to inefficiencies.

❖ *Lack of Flexibility:* Traditional HRM practices may be rigid and lack flexibility, making it challenging for organizations to adapt to changing business environments and employee needs.

❖ *Focus on Compliance over Strategy:* Traditional HRM can be more focused on compliance with rules and regulations rather than aligning HR practices with the overall strategic goals of the organization.

❖ *Limited Employee Engagement:* Traditional HRM may not emphasize employee engagement and satisfaction to the extent required in the modern workplace. This can result in lower morale and productivity.

❖ *Hierarchy and Bureaucracy*: Traditional HRM structures may reinforce hierarchical and bureaucratic organizational cultures, limiting communication and collaboration across different levels of the organization.

❖ *Ineffective Performance Management*: Traditional performance management systems may rely on reviews, which can be infrequent and fail to provide timely feedback. This approach may not support continuous improvement and employee development.

❖ *Insufficient Emphasis on Employee Development*: Traditional HRM may focus more on hiring and basic training rather than ongoing skill development and career advancement, potentially hindering employee growth.

❖ *Limited Use of Technology*: Traditional HRM systems may rely heavily on manual processes and outdated technologies, which can hinder efficiency and data accuracy.

❖ *Resistance to Change*: Traditional HRM practices may be resistant to change, making it difficult to adopt new, more innovative HR strategies and technologies.

❖ *Risk of Bias and Inequality*: Traditional HRM processes, such as recruitment and promotion, may be susceptible to biases, leading to issues of inequality and discrimination if not actively addressed.

To overcome these disadvantages, we recommend organizations transition to more modern and strategic HR approaches, such as adopting digital HR technologies, implementing agile performance management, and placing a stronger emphasis on employee engagement and development. Particularly we suggest to:

1. Develop a talent management system with the following features:

❖ *Enhance Employee Experience Platforms*: Develop even more comprehensive employee experience platforms that seamlessly integrate various HR functions, providing a unified and user-friendly interface for employees. This could include features for career development, well-being, and personalized learning paths.

❖ *Advance Predictive Analytics*: Further advance predictive analytics capabilities in HR to not only forecast workforce trends but also to provide actionable insights for strategic decision-making. This might involve predicting turnover risks, identifying skill gaps, and optimizing workforce planning.

❖ *Personalize Learning with AI*: Utilize artificial intelligence to create highly personalized learning experiences for employees. AI algorithms could analyze individual learning styles, preferences, and career goals to recommend tailored training and development opportunities.

❖ *Blockchain for HR Credentials*: Expand the use of blockchain technology to securely manage and verify professional credentials, certifications, and qualifications. This could streamline the hiring process and ensure the accuracy and integrity of employees' educational and professional backgrounds.

❖ *Augmented Reality (AR) for Training*: Integrate augmented reality into HR training programs to provide immersive and interactive learning experiences. AR could be used

for on-the-job training, simulations, and virtual collaboration, especially in industries with hands-on work.

❖ *Emotional Intelligence and Sentiment Analysis:* Implement tools that leverage AI to assess and improve emotional intelligence within the workplace. Sentiment analysis could be used to gauge employee morale, engagement, and overall well-being, allowing HR to proactively address potential issues.

❖ *Diversity, Equity, and Inclusion (DEI) Tech:* Develop technologies that support diversity, equity, and inclusion initiatives. This could involve AI tools to identify and address biases in hiring processes, analytics for tracking diversity metrics, and platforms to promote inclusivity in the workplace.

❖ *Continuous Performance Management:* Evolve performance management systems to focus on continuous feedback and development. This includes real-time feedback mechanisms, agile goal-setting tools, and analytics to measure ongoing employee performance and growth.

❖ *Gamification for Employee Engagement:* Integrate gamification elements into HR processes to enhance employee engagement. This could include gamified training modules, recognition programs, and competitions to foster a positive and collaborative workplace culture.

❖ *HR Virtual Assistants with Emotional Intelligence:* Develop virtual HR assistants with advanced natural language processing and emotional intelligence capabilities. These assistants could understand and respond to employee queries, provide emotional support, and offer personalized guidance on HR-related matters.

2. Delegation of high proportion of HR functions to Artificial Intelligence, which should be present in 3 levels:

❖ *Recruitment Procedure:*

➤ It should more easily and correctly find potential employees in employee's networks like <http://www.Linkedin.com>, analyze their behavior in social portals and get preliminary understanding is that person suitable for exact position or no. Also, it can more effectively make a shortlist of applied candidates CVs.

➤ Secondly, with the help of inquiry forms, which should be prepared using cross-question methods, it is easy to determine the real personality of candidates and check their professional level with the help of professional tests.

➤ Finally, it will suggest candidates who are most suitable for that position, without sympathy, subjectivity, or influence of any other factors.

❖ *Talents Trainings and Support:* Via periodic inquiries, it can easily determine which talents are lacking in training and which needs improvement. He will also identify any problems that are bothering talents and try to find solutions. It should also be an informative portal that allows employees to understand what is happening in the company, and if any problems arise, employees can anonymously ask the AI a question and get

an answer. This will prevent a lot of conflicts within companies and give management some insight into the thoughts of employees.

❖ *Talents Assessment Procedure:* The assessment procedure should also be performed via AI. The AI should assess whether talent meet the needs of the company, have a high performance and make his duties and task in appropriate time. It should be made via periodically analyze of feedbacks received, work done and identified misstatements analyze and it is very important that talents are informed about their current status, so that they can make improvements and receive a promotion or bonus during the annual (seasonal) assessment. Otherwise, if they don't get promoted, they won't blame anyone but themselves. For making it each employee at least should:

- have clear KPIs (Key Performance Indicators),
- receive monthly feedback from the manager,
- have career coach, who should be at least 2 level high (by position) and be from the other department, who will make career growth plan, guide and support him,
- have clear clarification each decision implemented in the company concerning to staff. For example, promotion of any staff member – it must be clear why decision made, alternatively person will try to find the reasons by himself and will have a feeling of injustice. Nothing can harm employee more than the feeling of injustice. The digital HR system should eliminate this feeling from the staff.

Also, the employee should be able to give an assessment to the manager. It is desirable that employee reviews are anonymous so that the employee can get a clear idea of what is happening,

3. Since keeping the talents inside the company and inside the country is also the aim of government, government can also take place in this process. We suggest giving tax privileges to companies, which make investments in creating HR system by, at least, letting them to record as an expense the investments made on HR systems and thus decrease the income tax. Overall, all shareholders will benefit from the process.

**Conclusion.** Talent management issues in the context of the digital economy are complex and multifaceted. Organizations must prioritize hiring senior digital leaders, build a strong employee value proposition, develop a culture of innovation, create a flexible and agile organization, invest in employee development, and adapt to the changing nature of work in the digital age. Also in navigating the challenges and opportunities presented by the digital economy, it is crucial for policymakers, employers, and workers to collaborate. Proactive measures, such as investing in education and training, implementing fair labor practices, and establishing clear regulations around digital work, can contribute to a more inclusive and sustainable future for the workforce in the digital age.

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**Gagik SHAHNAZARYAN, Nelli SHAHNAZARYAN**  
**Talent Management Issues in the Context of Digital Economy**

*Key words: digital HRM technologies, human resources, digital economy, talent management*

The article examines the issues of human resource (talent) management in the context of the digital economy. It presents the role of human resources in the formation of the digital economy, the importance of human resource management, the disadvantages of traditional human resource management systems and the need to switch to digital human resources management systems. At the end of the article, it was indicated what the new digital human resources management systems should be, the introduction of artificial intelligence into human resource management at 3 levels was proposed – the recruitment procedure, talents training and support and talents assessment procedure, as well as a description of how this should be implemented. It was also suggested that the Government of the Republic of Armenia become a part of this procedure by providing tax incentives to companies that invest in the creation of a digital human resources management system.



## **TAX SYSTEM STRATEGIES, THEIR ANALYSIS AND WAYS OF IMPROVEMENT IN REPUBLIC OF ARMENIA**

**Mher FRANGULYAN**

Ph.D. in Economics, European University in Armenia, lecturer

Key words: strategy, improvement, analysis, tax system, function

**Introduction.** Management is the act of transforming a disorganized crowd into an organized, productive, and purposeful group. This is how modern theorist Peter Drucker defined management, who in his book "The Effective Executive" presents management as mental work, the effectiveness of which, unlike physical work, can be assessed from the point of view of how well the set goals have been achieved. To substantiate this, he presents a number of examples in his book, in one of which he describes a painting depicting a soap factory. Two men stand in front of one of the factory's many doors, looking in through the open door, where Mr. Smith sits with a mysterious face, a pipe in his mouth and his feet on a table. One of the two men standing in front of Mr. Smith's door asks the other. "Is Mr. Smith thinking of soap at this moment?" And indeed, how much Mr. Smith thinks about soap is not visible, it cannot be measured by material or quantitative indicators, and can only be appreciated in the actions and decisions that are aimed at the realization of the goals of the soap factory. In other words, whether or not Mr. Smith's performance as a manager is effective can be assessed by analyzing how well his decisions have contributed to the achievement of defined measurable goals [Drucker, 2017].

Considering the imperative to form an effective tax system in the above context, it becomes clear that in the process of forming such a system, both the strategies of the authorized tax authority in RA, and the reports on the implementation of these strategies, which will be able to record the tax system's set for certain periods, are of great importance. achievement of goals. This is the main reason why it is necessary to analyze and research all the strategies of the RA tax system, using the available scientific and methodological tools and the results of scientific research already known to science.

Considering strategy development and implementation as one of the most important directions of management, planning, and implementation of the function, tax system strategies were analyzed from the point of view of implementation of the planning function of tax system management. Therefore, taking into account that the implementation of the planning function is aimed at predicting the desired results that the whole system should strive for through the formation of a bridge between the present and the future, the analysis of strategic goals was chosen as an important scientific-methodical direction from the point of view of researching the strategies of the tax system. Priority was given to the compliance of the goals defined in all the strategies developed by the RA tax authority with the requirements presented to the goals known in management science. For the

purpose of analysis, a special role in the research was assigned to the measurability of the goals defined by the strategies, because only in the case of measurable goals would it be possible to give a clear, objective and fair assessment of the operation of the tax system, calculating both the effectiveness of the implementation of the structures provided by the strategies and the effectiveness of the entire tax system.

**Methodology.** The theoretical, informative and methodological basis for the scientific article were the reforms taking place in the RA tax system, the laws regulating tax relations, the studies carried out in the field of tax system management and reforms, legislative acts and decisions of the RA government, also the officially published reports of the RA SRC. In this regard, using the methods of analysis, comparisons, combinations, the scientific article has studied how much this or that structure developed for tax reforms and regulation of tax relations contributes to the efficiency of tax system management. Based on this, there were analyzed the strategies of the tax system, the methods and principles used for their development.

**Literature review.** It is a fact that there were covered many theoretical, practical and methodological issues in the direction of tax reforms and the formation of an effective tax system in RA. Such researches were done and they are continuing to be done by the both Armenian and foreign authors. From the point of view of researching the problems of the tax system, the mentioned authors mainly studied the development of the strategy of the tax authority, the improvement of tax administration, the implementation of reforms in the RA tax system, increasing the effectiveness of tax policy and other similar issues. In this case, there are few researches regarding to the management of tax system and how effective acts the tax system to achieve its purpose.

**Scientific novelty:**

- ✓ In order to improve the strategies of the tax system, it is necessary to periodically analyze them, comparing the obtained results with the defined measurable goals.
- ✓ In order to create an effective tax system, it is important to define measurable, realistic and achievable goals in tax policies and to create a system for evaluating the functions of the tax system for defining these goals.

**Analysis.** The tax authority of Armenia, called State Revenue Committee of Republic of Armenia (RA SRC), was established in 1999, despite the fact that the formation of the independent tax system in RA began in 1992 [Tamazyan, 2003]. Since the creation, the tax system has gone through several stages of development. In the most recent change in 2018 The RA SRC was reorganized since April of the same year. In general, the activities of the RA SRC are aimed at the formation of an effective tax system and the continuous improvement of it. For this purpose, during its activities, the RA SRC has developed and implemented a number of strategies, of which three were most important: 2008-2011, 2012-2014 and 2020-2024 strategies. Aiming to analyze them individually,

we study and analyze them from the point of view of the effectiveness of the tax system management. For the first time of its history in 2008 by the decision of the Government of the Republic of Armenia, for 2008-2011 it was approved and adopted the strategic plan, which is called the Strategy of the State Revenue (Tax and Customs) Administration of the Republic of Armenia. This strategic plan included 7 main objectives of tax administration and 7 main principles of customs administration strategy. At the same time, the above-mentioned strategy was the basis for the development of the customs administration strategy in 2008-2012 [Order No. 187-A], 2009-201 five-year strategic plan, and also IT sector development strategy of the tax authority in 2009-2011. This strategic plan should become a basis for the implementation of the RA SRC electronic management system in 2009-2011 [Order No. 2737-A], as well.

The mission of the mentioned strategy was to provide stable state revenues with the priority of the principle "facing the taxpayer". In order to achieve this mission, the State Revenue Administration Strategy envisaged the implementation of a number of objectives and the introduction of a number of systems [Decision N 941]. In particular:

*In terms of tax administration, the most important goals have been defined.*

- ensuring correct, complete and timely taxation of large businesses,
- definition of an effective tax burden for small businesses using "soft" tax administration,
- Overcoming tax authority corruption,
- full implementation of the principle of voluntary payment of tax obligations (self-assessment),
- new tax audit policy,
- implementation of an effective tax authority management system.
- ensuring effective management of tax administration information flows.

*In terms of customs administration, the most important goals have been defined.*

- increase in customs revenues,
- Ensuring the fair distribution of customs and tax burdens among business entities,
- ensuring the fight against smuggling and reducing the number of cases of violation of customs rules,
- providing high-quality services to business entities and shortening their terms,
- Ensuring the transparency of the customs system and creating honest behavior.

*In terms of tax payers service, the most important goals have been defined.*

- simplifying tax administration procedures and ensuring uniform application of legislation,
- strengthening the principles of voluntary tax payment (self-assessment),
- improving the organization of tax administration,
- increasing the level of tax discipline and the effectiveness of the fight against tax

evaders,

- increasing the level of accountability,
- provision of two-way feedback "taxpayer-tax authority",
- providing taxpayers with high-quality service and raising the level of taxpayer awareness,
- development of new technologies and means of communication.

*The most important goals for the development of the IT sector have been defined.*

- Integration with the electronic management system developed in RA,
- reconstruction, replenishment and completion of the information base of the tax authority,
- implementation and application of the assessment and management system of risk sectors and taxpayers,
- implementation and improvement of the system for submitting reports to tax authorities electronically,
- Improving the management and communication of interactive flows.

In 2008-2011 for the implementation of the above objectives, the RA authorized tax authority developed 100 or more measures, as a result of which a number of taxpayer service and management systems were implemented in the RA tax system. In particular, within the framework of the implementation of the strategy, there were introduced the system of submitting electronic reports by taxpayers, a number of customs control systems, the system of assessment and management of risky taxpayers, etc. Every year, the RA SRC published an annual report on the performed works, which summarized the performed measures and the next year's priority issues and development directions. And despite the implementation of various measures and the implementation of various systems, the annual reports of the RA SRC did not evaluate the effectiveness of the implemented measures and systems. In this regard, it was not reflected in the RA SRC reports.

- how much was the cost part of the implementation of this or that system,
- how effective was the implementation of the concrete system,
- to what extent the introduction of this or that system contributed to the growth of tax revenues
- to what extent the introduction of this or that system contributed to the reduction of the shadow economy.

Even more, analyzing the RA SRC 2009-2012 annual reports, it turns out that, despite the fact that the amount of taxes in 2007 instead of 505.5 billion drams, it was 749.3 billion drams in 2012, however, the tax/GDP ratio changed slightly by 2.72% (from 16.1% to 18.82%) (see table 1). The data in Table 1 document that the increase in taxes was mainly due to the growth of the GDP and did not contribute to the reduction of the shadow economy. It is clear from Table 1 that the increase/decrease in taxes from year to

year was accompanied by the increase/decrease in GDP, and the 2.72% increase in the tax/GDP ratio over 5 years (assumed to be the result of GDP growth) was also significantly influenced by Legislative changes in 2009, when the withholding tax was replaced by VAT.

**Table 1.** 2007-2012 taxes, tax growth rate, GDP, GDP growth rate, tax/GDP ratio in %

Indicator	2007	2008	2009	2010	2011	2012
<b>Taxes, billion Dram</b>	505.5	621.1	522.4	594.1	654.0	749.3
<b>Tax growth rate, %</b>	31.3	22.8	-15.9	13.7	10	14.6
<b>GDP, billion Dram</b>	3149.3	3646.1	3165.5	3460.2	3776.4	3981.5
<b>GDP growth rate, %</b>	18.2	15.8	-13.2	9.3	9.1	5.4
<b>taxes/GDP, %</b>	16.1	17.0	16.5	17.1	17.3	18.8

Analyzing RA SRC 2008-2011 strategy from the point of view of tax system management, it can be concluded that the latter did not have the goal of tax system management, including increasing the efficiency of management and, as a result, forming an effective tax system. Although the strategy has set goals for the implementation of some structures for the separate subsystems of the tax system, however, there is no record of any indicators for the defined goals at the time of strategy development, which would allow making the goals measurable and more realistic. This is the reason that RA SRC 2008-2011 in the reports, there is no assessment of the extent to which the set goals have been achieved or whether this or that structure has increased the efficiency of the tax system management and contributed to the effective implementation of the tax collection process.

By the decision of the RA government in 2012 was adopted and approved the strategy by the Tax Administration of the RA SRC for 2012-2014. In this strategy were identified 4 objectives of tax administration improvement [Decision N 195-N].

- increasing the quality of service for taxpayers,
- reorganization of the main business processes of the tax authority,
- introduction of modern tax control mechanisms,
- effective management of human resources, improvement of internal control mechanisms

At the same time, the vision of the tax authority defined by the given strategy was laid as the basis for the definition of the above-mentioned goals, to ensure the collection of tax revenues at the expense of improving the administration. In other words, one of the key issues of the above strategy is to improve administration. And since in the improvement of the administration, the people who carry out the administration, the tax and customs officers, play an important role, it can be argued that the effective management of human resources is also one of the most important issues of the strategy.

It is noteworthy that the RA SRC 2011-2013 served as a benchmark for the development of the above-mentioned strategy and the implementation of goals. Moreover, by RA SRC president's decree defines 51 measures with deadlines for their implementation, which need to be implemented in 2011-2013. The results of the strategic plan also are summarized in the RA SRC annual reports. However, as we have already mentioned for RA SRC 2008-2012 strategy, the annual reports did not evaluate the effectiveness of the implemented measures, there is no clear quantitative assessment of how much they contributed to the growth of tax revenues and the reduction of the shadow economy. In other words, the previous the results of the 2008-2011 strategy are not quantitatively and qualitatively measurable, there is no clear assessment of the implemented systems, therefore they could not be the basis for the new 2012-2014 strategy in defining strategy objectives.

And despite the fact that in 2012-2014 the goals of the strategy are not substantiated, because they do not have an indicator basis, however, let's try to analyze the results of the implementation of these goals, taking as a basis the RA SRC 2012-2014 annual reports and published reports on inspections and studies conducted by the RA SRC by year. According to the RA SRC reports, in 2012-2014 in the structure of the inspections and studies carried out by the RA SRC, the inspections of the accuracy of the use of control cash registers, and then the inspections aimed at the detection of unregistered hired workers, have a significant weight. However, it is important to pay attention to the fact that the total number of inspections and studies in 2012-2014 has a decreasing trend and has not undergone significant changes (see table 2). In particular, the number of inspections decreased by 12.05% in 2013 compared to 2012, and by 4.2% in 2014 compared to 2013.

**Table 2.** Inspections carried out by RA SRC by types in 2012-2014

Inspection type	Implemented inspections quantity		
	2012	2013	2014
Checking the accuracy of the relationship with the budget	1410	1470	1581
Inspection of control cash registers	7621	6972	5647
Check for detection of non-converted employees	3591	2194	2905
Other inspections	782	1152	1157
<b>Total</b>	13404	11788	11290

According to table 2, the total number of inspections in 2012-2014 ranged from 11,000–1,300. Keeping almost the same number of inspections allows us to assume that the implementation of inspections was of a planned project nature and was repeated almost every year with almost the same number. The basis for such an assumption is the analysis of the indicators of inspections with the annual reports of the RA SRC. In particular, the annual reports present only the quantitative indicators of inspections and their

increase or decrease, but it is not addressed to what extent the implementation of such a number of inspections contributed to the reduction of the shadow economy and the improvement of administration. In the reports, it is not specified and justified how the implementation of such a number of inspections is justified, how effective is the implementation of the given function of the tax authority and why fewer or more inspections were not carried out. Analyzing the results of inspections and studies carried out by the RA SRC in 2012-2014 reports, we can also assume that the inspections were carried out without evaluating the effectiveness of the given function and did not contribute to the improvement of administration (see table 3).

From the analysis carried out according to Table 3, it becomes clear that:

- Regarding the inspections and studies carried out in 2012, 34.3% of taxpayers had the inspections and studies repeated in 2013, and 31.15% in 2014.
- Regarding inspections and studies carried out in 2013, inspections and studies were repeated in 2014 for 38.9% of taxpayers.

At the same time, analyzing the checks on the use of control cash registers (cash register checks), which have the largest share in the number of total checks, it turns out that the amount of the fine per check in terms of cash register checks has not changed significantly.

**Table 3.** 2012-2014 repeated audits of the same taxpayers by year by taxpayer

<b>Indicator</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Number of audited taxpayers	17717	12328	12741
The number of taxpayers re-verified compared to the previous year	-	6087	4797
Proportion of re-verified taxpayers compared to previous year, %	-	34.3	38.9
In 2012 compared to the number of re-verified taxpayers	-	6087	5519
In 2012 relative to the proportion of re-verified taxpayers, %	-	34.3	31.15

In particular, in 2012 the amount of the fine for the cash register inspection was 137,846 drams, in 2013 it was 158,188 drams, and in 2014 it was 156,146 drams. Taking into account the fact that the fine for committing the same violation again within a year is 300,000 drams, it can be assumed that re-inspecting 1/3 of taxpayers every year does not aim to improve inspections. In other words, the re-inspection of taxpayers was not aimed at changing their behavior by fining them again, but it is assumed that it had a formal nature and was the result of the implementation of the planning project.

In order to improve the administration, in 2012-2014 one of the measures implemented by the strategy is the effective management of human resources. For this purpose, the

"Educational Center" SNOC began to carry out intensive activities, one of the most important tasks of which is the training of tax and customs officials. Despite the fact that the above-mentioned SNOC was established in 2008 by the decision of the Government of the Republic of Armenia, still the SNOC started to carry out vigorous activities in 2012. According to the annual reports of the RA SRC, as a result of the activities of the SNOC, for the first time in 2014, 1455 out of 1913 tax employees were trained, 141 were certified, 534 out of 791 customs employees were trained, and 12 were certified. Then in 2014 then every year 81-85% of tax officers and 71-75% of customs officers were trained. Annual mandatory trainings were accompanied by changes in tax laws, which gives reason to assume that the trainings were related to changes in the tax code and laws. It is assumed that this is the reason that the annual reports of the RA SRC, apart from the quantitative indicators of the tax officials who participated in the competition, won the competition, were held responsible, encouraged and trained, other data are missing. In particular, there is no assessment of the effectiveness of the activities of the "Learning Center" SNOC. The reports do not include data on the costs of maintaining the activities of the SNOC, the costs for the training of tax and customs officials, and it is not presented to what extent the training of tax and customs officials contributed to the increase in taxes and the reduction of the shadow economy.

In general, no matter how much 2012-2014 the systems introduced by the strategy contributed to the development of the RA tax authority, however, as in 2008-2011, during the strategy, after the implementation of the systems, there is no assessment of the effectiveness of the implementation of these systems. In the same way, the goals defined by this strategy are also not measurable and less realistic, which does not give an opportunity to clearly and objectively assess the effectiveness of the tax system management, justifying the expediency, urgency and necessity of the costs incurred for the implementation of these structures.

Unlike previous years, 2015-2018 no strategy has been developed for the RA SRC. In these years, the activities of the RA SRC were mainly aimed at the implementation of reforms in the administration of state revenues. During the implementation of the latter, the State Revenue Committee of the Republic of Armenia was guided by the program of the Government of the Republic of Armenia for the given year, the perspective development of the Republic of Armenia for 2014-2025 according to the administrative directions fixed by the strategic plan and separate programs approved by the RA government's decisions of the given year. In other words, 2015-2018 RA SRC strategic goals were not defined, and the annual reports of RA SRC summarized the tax and customs inspections carried out each year according to individual types. As in the previous reports, as well as in the 2015-2018 RA SRC annual reports, there is no information regarding the reduction of the shadow economy and the measures implemented in that direction. Grounds for



developing a new strategy emerged only in 2019, with point 2 of the annex approved by the RA Government's decision N667-L of 08.06.2018, by which state administration bodies are obliged to develop strategies and activity plans.

By the decision of the RA government in 2019 RA SRC 2020-2024 was approved the strategic plan for the development and improvement of agriculture, according to which the RA SRC is assigned to review the strategic plan every year, until July 1 of the given year, and present a new strategic plan for the next 5 years every year. In this case, we try to analyze the problems and goals defined by the strategy 2020-2024 which is later changed in 2021. In contrast to the previous strategies of the SRC, the mission of the RA SRC was defined by the above-mentioned strategy [Decision N 1830-L].

- *regarding the tax service:* to provide targeted and effective tax administration through professional tax preparers, providing quality services and using electronic management systems, the implementation of which will ensure reduction of the tax shadow and sustainable growth of tax revenues, contributing to the formation of a new culture of willingness to pay taxes and among taxpayers increasing the level of law enforcement.

- *regarding the customs service:* to support the sustainable development of the RA economy through the provision of quality services through professional customs contractors, through the promotion of foreign trade, the facilitation of customs administration and the security of the domestic market. Based on these missions, with the above-mentioned strategy, the RA SRC 2020-2024 goals have been set.

- Improving the quality of services provided to taxpayers by improving management systems, the sub-goals of which are the introduction and development of electronic and digital tools, as well as the restructuring and optimization of SRC functions and procedures.

- Increasing the efficiency of the administration, increasing revenues, reducing the shadow, the sub-goals of which are the prevention of tax and customs offenses and encouraging voluntary discipline, increasing the effectiveness of the fight against tax evaders and reducing the level of tax shadow.

- Modernization of infrastructures, construction, the sub-goals of which are modernization of existing infrastructures and expansion of cooperation, modernization of customs subsystems and technical saturation.

- Increasing the level of dialogue with the public, the sub-goal of which is the expansion of dynamic feedback opportunities with the public.

- Implementation (improvement) of the modern human resources management system, the sub-goals of which are the formation of personnel policy and work culture, the modernization of the professional education, training and qualification system.

In other words, according to the 2020-2024 strategy, the RA SRC mission is aimed at reducing the shadow economy, but the strategy does not define how much the shadow of

the RA economy is and how much the shadow is planned to be reduced by this strategy. From this point of view, the mission and objectives of the given strategy are not measurable and do not meet the requirements presented to the objectives of the management system. In particular, in the theory of management, it is accepted that the mission is the main goal of the organization, is above all its goals and should describe the activity of the organization in the present and in the future [Davletov, 2015]. And since the above-mentioned strategy not only does not describe the current state of the shadow economy, but also the strategy records that the tax authority in RA does not have an effective system and mechanism for systematic evaluation of the shadow, then the RA SRC 2020-2024 strategic mission becomes a dream. Moreover, with the strategy of 2020-2024 the shadow economy indicator is missing among the macroeconomic indicators predicted for (see table 4). This is when the mission of the above strategy is to reduce the shadow, and the mission for any organization is the basis of its existence. In fact, there are no predictions made about the basis of the strategy's existence.

**Table 4.** RA SRC 2020-2024 macroeconomic indicators predicted by the administration's development strategy, billion drams

Indicators	2019	2020	2021	2022	2023	2024
GPD	6,630	6,975	7,615	8,320	9,152	10,067
Tax revenues and government duty	1,463	1,562	1,736	1,922	2,160	2,416
Taxes / GPD %	22.1%	22.4%	22.8%	23.1%	23.6%	24.0%
Efficiency factor	<b>1.49%</b>	<b>1.93%</b>	<b>1.71%</b>	<b>1.56%</b>	<b>1.26%</b>	<b>1.12%</b>

At the same time, it should be noted that in the predicted indicators of the strategy, a decrease is predicted in terms of the efficiency index, even compared to the period before the strategy. Although a strategy with the mission of reducing the shadow economy was expected to have a high efficiency ratio at the expense of reducing the shadow economy. According to the table, it is quite clear that the overarching goal of the strategy is the increase in tax revenue that is projected for each of the years of the strategy. However, if there is no quantitative reduction of the shadow economy in the economy, then the growth of tax revenues and GDP is not economically justified [Bostanjyan et al., 2017].

We believe this is the reason why the strategy of RA SRC 2020-2024 was changed in December 2020 and the mission of RA SRC was changed. With the change made, the mission of the RA SRC in terms of tax service was defined as ensuring the revenues controlled by the tax authority of the RA state budget by providing digitized and high-quality services, improving tax discipline with targeted and "invisible" administration. Since the objectives of the strategy derive from the mission, it is clear that the above objectives defined by the strategy do not meet some of the requirements for the objectives

[Udalov et al., 2013]. In particular, the following requirements are presented to goals in management theory. The goals should be:

- clearly and quantitatively measurable,
- feasible
- flexible and capable of adjustments,
- understandable
- controllable, if necessary, allow to evaluate the degree of their implementation,
- coherent in time and space,
- beneficial to the organization and its environment.

For all objectives defined in the above strategy, there is a description, necessary measures, expected results and measurable indicators. However, not all measurable results defined for goals and sub-goals are quantifiable. Some goals are not controllable because they do not have a baseline at the time the strategy is created. For example, for the sub-goal "increasing the efficiency of customs control", measurable indicators have been defined by the strategy. Amendments have been made to relevant normative legal acts and international agreements,

- the electronic payment system works,
- the information systems necessary for preliminary declaration have been launched,
- an evaluation system of conscientious businessmen is introduced,
- the results and analyzes obtained as a result of the implementation of the Time Release Study tool are applied.

The indicators are evaluated as follows:

- ✓ target indicator: "done"
- ✓ Baseline: "not done".

Of course, systemic changes, the introduction of new tax systems and the modernization of old systems are important for the functioning of the system, but the implementation of these systems is not justified if there are no quantifiable indicators. In particular, in this case, there is no quantitatively evaluated indicator, to increase or decrease of which the implementation of the above activities should be aimed. The lack of causal relationships between quantitative indicators and implemented systems does not allow us to clearly justify that the implementation of these systems will contribute to the achievement of military goals. In another example, for the sub-goal "Communication System of Taxpayer Service Centers of RA SRC", a measurable indicator was set to increase the internal satisfaction of taxpayers by 35 percent. Of course, in the measurable indicators, it is planned to assess the satisfaction before and after the implementation of the system, but at the time of strategy formulation, there is no measurable indicator. Maybe after evaluation it turns out that satisfaction needs to be increased by 10 or maybe 50 percent. Also, it is not specified with which period of time the satisfaction index will be compared.

From the point of view of management, not only the implementation of the system is important, but its continuity and perspective.

**Conclusions.** To summarize: thus, analyzing the strategies of the RA SRC, one can come to a conclusion.

1. The strategies of the RA SRC were drawn up without a comprehensive and objective assessment of the functions of the tax authority. As a result, despite the fact that new systems have been regularly introduced in the RA tax system and are continuously being introduced, their effectiveness and necessity are not substantiated in any way. From this point of view, it is necessary to evaluate the functions of the tax authority in order to understand how well the functions of the RA SRC are defined, how much each of them contributes to the growth of tax revenues and the reduction of the shadow economy.

2. It is necessary to form a regularly improved system for evaluating the functions of the tax authority, which should provide an opportunity to measure the effectiveness of the operation of each function and the implemented systems, by carrying out a factor analysis of how much this or that function of the tax authority contributes to the implementation of the mission of the tax authority and the effectiveness of tax collection activities implementation.

3. When developing the strategies of the tax system, their goals should be defined based on the results of an objective and fair assessment of the tax system's activity. In this regard, the strategic goals should become measurable and achievable, taking into account the indicators of the assessment of the functions of the tax system. Because if precise and measurable strategic goals are defined, it will be possible to understand how much the functions of the tax system have contributed to the realization of these goals and as a result form an effective tax system.

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**Mher FRANGULYAN**

**Tax system Strategies, their analysis and ways of improvement in Republic of Armenia**

*Key words. strategy, improvement, analysis, tax system, function*

Tax system strategies generally indicate the set of mechanisms needed to create an efficient tax system. In this context, the analysis of the strategies of the tax system is aimed at the discussion of the correct definition of strategic goals and the possibilities of their implementation. By analyzing the strategies of the RA tax system, the omissions and errors are revealed, which should be taken into account in the process of developing tax system strategies. It is necessary to improve the strategies of the tax system, because as a result it will be possible to develop such goals. In turn, the implementation of the strategy may contribute to the formation of an effective tax system. In this regard, the performed analyzes and studies show that one of the directions for improving the strategies of the tax system is the objective and fair evaluation of the functions of the tax system. The formation of an objective and effective evaluation system of the functions of the tax system will allow to understanding to what extent the performed functions contribute to the realization of the goals of the tax system by implementing such functions, as a result of which the efficiency of the tax system will increase.

**PROSPECTS FOR THE CREATION OF "SMART MINISTRIES" WITH THE  
IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE  
IN THE REPUBLIC OF ARMENIA**

**Gevorg SMBATYAN**

Ph.D. student, RA Public Administration Academy

Key words: artificial intelligence, technological progress, public perception, public administration system, algorithms, database, smart ministry

**Introduction.** AI refers to replicating human intelligence, programmed to think and learn like humans. AI technologies include machine learning, natural language processing, computer vision, and robotics [The Federal Government, 2020, 10]. These technologies allow computers to perform tasks that normally require human-like intelligence, such as understanding language, recognizing objects, and making decisions based on data. "Artificial intelligence is a system that can make predictions, recommendations or decisions for a certain set of goals defined by a person, influencing reality" [Araya, 2022, 8]. AI is used in almost every industry, including healthcare, finance, manufacturing, transportation, and more. AI has the potential to improve efficiency, productivity and accuracy in many aspects of daily life, and is expected to have a significant impact on the economy and society in the coming years. AI is transforming the world we live in and it is becoming more and more common in our daily lives. AI is changing the way we interact with technology, from virtual personal assistants like Siri to self-driving cars and automated customer service bots. However, AI not only has the potential to revolutionize our personal lives, but it can also develop key sectors in the country if it is applied effectively in the public administration system.

**Research methodology.** The study of AI, as well as its improvement, will allow us to process huge amounts of data within seconds, through which analyzes will be made and decisions will be made, in which there will be little or no chance of error. Foreign professional literature on artificial intelligence, scientific, analytical and online publications of researchers, as well as the world index of AI served as an information base for the study. For the sake of scientific analysis, the subject of research was divided into separate parts, and each of these parts was studied. During the study, the separately studied parts were put together, as a result of which conclusions were made.

**Literature review.** As such, there are no Armenian researches on the topic of the application of AI in the state administration system, the main studies were carried out by foreign authors and through this research, reference was made to the strengthening of the state in the case of the latter's significant application in the state system of the Republic of Armenia (hereafter RA). AI has become one of the most talked-about and fast-growing areas of technology in recent years. It involves creating computer systems that can per-

form tasks that normally require human intelligence, such as language comprehension, visual perception, decision making, and problem solving. The concept of AI dates back to the mid-20th century, when John McCarthy, Marvin Minsky, and Allen Newell began developing computational models of intelligent behavior. The term was coined in an academic context in the 1950s to denote an emerging field of research that explored how robots are able to perform tasks by exhibiting intelligent, human-like behavior [Russell, 2016, 15] and the ability of machines to act as intelligent agents [Tzafestas., 2016, 24].

AI includes such methods as supervised and unsupervised machine learning [Smola, 2005, 30], artificial neural networks [Priddy, 2005, 12], case-based reasoning [Kolodner, 34], machine reasoning [Bottou, 2014, 133]. AI also includes cyber-physical systems such as robotics, image and face recognition, speech recognition, virtual assistants and autonomous vehicles [Radanliev, 2020, 3]. However, it is only in the last decade that AI has gained much attention due to advances in deep learning algorithms and massive increases in computing power. One of the earliest and most famous applications of AI was IBM's Deep Blue chess program, which defeated world chess champion Garry Kasparov in 1997. Since then, AI has been applied in a wide range of domains, including natural language processing, image and speech recognition.

AI can play a major role in public administration through analysis, monitoring, decision-making processes and other managerial tasks. Dealing with AI requires a paradigm shift in public administration to collect, store and analyze data, train public employees and make them competitive.

**Scientific novelty.** The scientific novelty of this article is the prospects for the creation of "Smart Ministries" through the introduction of AI, which can breathe new "breath" into the efficiency of the management system.

**Analysis.** The government's strategies focused on the AI is a relatively new phenomenon and the states have started to implement it in their strategic plans since 2016. In 2023, the global index of AI (hereinafter: Index) defines the 62 countries (among which the Republic of Armenia is also included) that implemented AI. This list includes only Turkey (table 1) from neighboring countries of Armenia [Tortoise Media, 2021].

**Table 1.** World Index of AI

<b>Table 1</b>	<b>Total score</b>	<b>Place</b>
United States	100	<b>1</b>
China	61.5	<b>2</b>
Singapore	49.7	<b>3</b>
United Kingdom	41.8	<b>4</b>
Turkey	20.6	<b>39</b>
Armenia	14.5	<b>54</b>

The global index of AI is based on 143 indicators, which are divided into seven sub-pillars:

*Talent* - focuses on the availability of skilled professionals to deliver AI solutions.

*Infrastructure* - focuses on the reliability and scale of access infrastructure, from electricity and Internet to supercomputing capabilities.

*Operating environment* - focuses on the regulatory context and public opinion around AI.

*Research* - focuses on the volume of specialized research and researchers by examining the number of publications and citations in credible academic journals.

*Development* - focuses on developing the fundamental platforms and algorithms on which AI's innovative projects are based.

*Government strategy* - focuses on the depth of the government's commitment to AI based on investments and strategic plans.

*Commercial* - Focuses on startup-level, investment- and AI-based business initiatives.

The European approach to AI is often referred to in the context of the "global AI race", which also includes the USA and China [Craglia, 2018]. Although the USA has the highest private sector investment in AI [McKinsey, 2020], the use of AI in public sector is lower, partly due to the fact that the current and planned use of AI in public administration much less research and official information is available [Cath, 2018, 505-528].

The deployment of governmental AI initiatives in China is often cited as the most up-to-date of those in Europe and the United States. In general, the creation of surveillance systems using AI are often cited as initiatives that limit the rights of citizens and threaten the global balance of power [Creemers, 2018, 59-71].

From the indicators in Table 1, we can conclude that the use of AI in RA is at a fairly low level, and at the same time we can state that AI still has a development trend and those states that will give a greater role to its use will have a strong economy.

AI can help the state in different ways. One of the most promising applications of AI is data analysis, which is capable of processing vast amounts of data in seconds and can reveal patterns and trends that humans would be unable or hard to spot. In addition, AI can be used to automate many routine administrative tasks. For example, Chatbots [Deep Blue, 2023] can be used to answer frequently asked questions from citizens, freeing up civil servants to work on more complex issues.

Similarly, AI can be used to automate document management, such as the processing of permit or license applications. It can save time and money for both citizens and government, and it can be used to improve the accuracy and fairness of decision-making in public administration. AI algorithms can be used to identify patterns of discrimination in public policy and practice, such as hiring bias or unfair distribution of public services.



This can help public administration identify areas for improvement and ensure that their policies are fair and equitable for all citizens.

**Conclusion.** After the initial phase of the implementation of the AI, we are witnessing the design of steps aimed at the implementation of the AI in the government. This is a very important circumstance, as the AI assumes an increasingly central role in the state system, including administrative processes, provision of services to citizens and decision-making. Given the current state of policy and research on AI in the public sector, we highlight a number of areas that deserve further attention. We aim not to be comprehensive in our study, but to focus more on research-worthy issues that are becoming relevant.

The Armenian government has started using artificial intelligence and automation to improve its public services. However, the implementation of artificial intelligence in the RA public sector is still at an early stage, and there is a need to increase investments in technological infrastructure, develop skills and political frameworks.

The Government of the Republic of Armenia can use the AI in different ways.

*Healthcare.* AI can be used to improve health services by developing predictive models that can identify potential health risks and recommend preventive measures. It can also help diagnose diseases and develop personalized treatment plans for patients.

*Smart transport.* AI can be used to manage traffic flows and optimize public transport routes. It can also help reduce accidents and improve safety by analyzing data from cameras and sensors in real time.

*Education:* AI can be used to personalize student learning, improve assessment tools, and develop individualized curriculum based on individual strengths and weaknesses.

In addition to the above, AI can be used to optimize public services, such as application processing, records management and data analysis to support policy decisions. In general, AI can be used to improve public services and improve the quality of life of citizens.

The Armed Forces have a great role in the security of the country and considering this circumstance, it can be used to strengthen the security of the country. In particular, AI can be used to monitor borders, detect enemy movements and collect intelligence data. It can help the Ministry of Defense (MoD) to prevent any possible external threats. At the same time, AI can be used to analyze data and provide information that can help military leaders make the most accurate decisions possible. It can help the MoD optimize its resources and respond quickly to changing situations.

Based on the indicators of Hamatvi, as well as the analysis, we consider it necessary to propose the creation of Smart Ministries through the use of AI, which will include the following principles:

1. *Define the vision and goals:* the first step is to define a clear vision and specific goals for the Smart Ministry. The vision must be aligned with national priorities and address citizens' most pressing concerns. Goals should be reasonable (specific, measurable, attainable, relevant and time-bound).

2. *Conduct a needs assessment:* conduct a thorough needs assessment to identify gaps and issues in the ministry. This assessment should include the involvement of stakeholders such as citizens, civil society organizations and other government agencies.

3. *Develop a strategic plan:* develop a comprehensive strategic plan for the "Smart Ministry" based on the needs assessment. The plan should include the key strategies, tasks, and actions needed to achieve specific goals. Moreover, the required financial and human resources, as well as the necessary institutional mechanisms and partnership relations, should also be taken into account.

4. *Create a management framework:* create a management framework that will ensure the effective management of the "Smart Ministry". This will include defining roles and responsibilities, establishing clear lines of communication, and promoting transparency and accountability.

5. *Invest in technology:* invest in appropriate technological infrastructure, including hardware, software and networks, to support the implementation of the Smart Ministry. This should include a focus on data analytics, cloud computing, cyber security and other emerging technologies.

6. *Capacity building:* invest in capacity building of employees and stakeholders to effectively use technology and effectively implement Smart Ministry initiatives.

7. *Monitoring and evaluation:* develop a comprehensive monitoring and evaluation framework to track progress of smart ministry initiatives against established goals and objectives. This framework should include regular reporting and feedback mechanisms to ensure continuous improvement and learning.

Across the world, research and policy initiatives focused on AI in the public sector are rapidly developing and gaining increasing relevance. Given the dynamic nature of this complex phenomenon, it is necessary to consider the body of existing knowledge and monitor the evolving literature to ensure that we move forward in ways that maximize the benefits while mitigating the risks of AI.

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#### **Gevorg SMBATYAN**

#### **Prospects for the creation of "Smart Ministries" with the implementation of artificial intelligence in the Republic of Armenia**

*Key words: artificial intelligence, technological progress, public perception, public administration*

In the modern world, the role of artificial intelligence (AI) has a great impact on all existing sectors, and the impact of AI on the public administration system is even more important, considering the fact that the main functioning of the country depends on the improvement of the efficiency of the public administration system the development of sectors. AI can be applied in the public administration system in different ways. One of the most promising applications of AI is data analysis, and AI algorithms are capable of processing huge amounts of data in seconds and can identify patterns and trends that humans would not be able to spot. This can be invaluable for government agencies that can collect and manage large amounts of data, such as the Statistics Committee, the State Revenue Committee, the State Audit Service, the Ministry of Health, the Ministry of Territorial Administration and Infrastructure, and a number of other government agencies. Through the implementation of AI in the public administration system, problems can be identified more quickly and solved more efficiently. The article is dedicated to the introduction of artificial intelligence in the state administration system, its positive aspects and features. In the article, the main attention was paid to the creation of smart ministries through the AI, as well as the mechanisms to make the work in state structures more efficient, taking into account the studies of international experience.

## DYNAMICS OF MORTGAGE MARKET DEVELOPMENT IN THE REPUBLIC OF ARMENIA

**Karapet MOVSISYAN**

Ph.D. student, Chair of Banking and Insurance, ASEU

Key words: mortgage, loan, apartment, bank, interest, market, state

**Introduction.** Currently, the need to solve the mortgage lending problem has become one of the primary problems of the states. In particular, governments are trying to solve the problems in the market related to high interest rates and prepayments through their intervention. In that sense, Armenia is also trying to regulate the role and importance of the mortgage market through many legislative changes in the last few years.

The importance and contemporaneity of the topic is due to the fact that the active use of new mortgage products in Armenia promises a large number of benefits that can improve the situation of the domestic economy and provide housing for socially vulnerable citizens. The development of new mortgage products is also of fundamental importance for the banking system. Real estate investments with government guarantees, especially during times of volatility in the stock market, are of interest even with low returns

**Research methodology.** Every field of science has a certain goal of study, and in the course of realizing that goal, the understanding of the researched subject deepens, as a result, the studied economic phenomenon is enriched and made more complete.

In order to investigate the mortgage market and its problems, the dialectic method was used in the article. The essence of this is that when studying mortgage loans, it is necessary to consider them in the process of movement, development and change. An important characteristic of this principle is that there are internal cause-and-effect relationships between one phenomena, and the other condition each other's existence. For example, in order to reveal the relationship between mortgage products and their market, it is necessary to first clarify what a loan is, then what a market is, and then show that the development of the mortgage market depends on their correct development. Other things being equal, the causality between these two economic phenomena is reversed. We used the method of analysis and synthesis (analysis and comparison) to discuss the issues of mortgage policy of banks. The essence of this method is that the researcher divides or splits the economic phenomenon into separate elements and then analyzes each one separately. For example, in order to investigate the patterns of mortgage loan formation and the factors affecting it, one should study the macroeconomic situation of the economy, the incomes of customers, their tendencies, etc. That study is followed by synthesis.

Method of analysis. The method allows to identify various objects: persons, organizations, events, etc. Analytical connection diagrams present this information in a more vi-

sual and comprehensive way, which greatly helps in drawing conclusions [Booster, 2020]. The method allows to more clearly present the mechanism of the events that took place. The analysis method also allows to more clearly present the development of complex situations over time, define the sequence of events, their chronology, the nature of the connection between events and the roles of the main participants. Thus, the methods used in our research provide an opportunity to deeply study the mortgage market in Armenia.

**Literature review.** There are different definitions of the concept of "mortgage" in the professional literature. Thus, according to Nikonov's study "Risk management", the concept of "mortgage" was first used in Ancient Greece in the 6th century BC and was associated with fixing the fact of the debtor's responsibility for certain land areas before the creditor [Nikonov, 2009, 152]. In his works, Dolmatovich tells about the creation of specialized governmental agencies in the USA in 1968 and 1970, which were called to develop and introduce completely new financial technologies guaranteed by the state. Among such technologies were the guarantee of mortgage loans, the issuance of securities by banks, the organization of the secondary market, etc. Thanks to the activities of such agencies, the creation of the modern American model of mortgage lending began, which is still in effect today [Dolmatovich et al., 2018, 441-444]. Dolmatovich I. and Keshenkova N., characterize the features of mortgage lending in Canada, according to which mortgage banks were a traditional type of credit institutions in Canada. Those banks were mainly engaged in providing real estate mortgage loans, which invested in long-term state and corporate securities. Initially, the object of banking activity was land mortgage lending, and later housing construction lending [Dolmatovich et al., 445]. According to Ryabchenko, nowadays, by "mortgage" we understand obtaining a long-term loan with real estate collateral. Nersisyan suggests that two main types of mortgages are distinguished in modern practice [Nersisyan, 2012, 2].

- mortgage lending for the purpose of purchasing or building apartments with a pledge of residential premises, when the borrower is given credit by pledging the property at his disposal,
- mortgage lending for the purchase or construction of apartments, when the borrower takes a loan for the purchase or construction of an apartment, which is transferred to the bank as collateral.

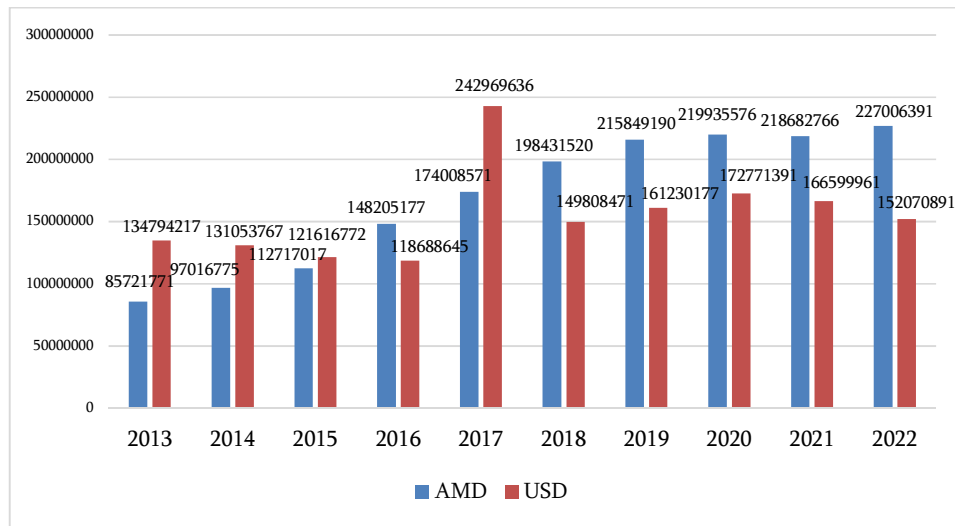
Thus, generalizing the opinions of the authors, it can be concluded that a mortgage loan is considered a loan secured by real estate collateral, which enables the borrower to acquire the given real estate with the right of possession, use and management after fulfilling all the obligations assumed to the lender within the specified period.

**Analysis.** The development of the mortgage market in Armenia began in 2005, and before that, the mortgage market as such did not exist. Taking into account the impact of

the financial and economic crisis on the RA mortgage market, its gradual evolution in Armenia can be conditionally divided into 3 stages.

- o development of the mortgage market (from 2005 to the end of 2008),
- o the mortgage market during the global crisis (end of 2008 - beginning of 2010),
- o the development of the mortgage market in the post-crisis period or the modern period (since 2010).

Figure 1 shows mortgage loans in drams provided by commercial banks, 2012-2022.

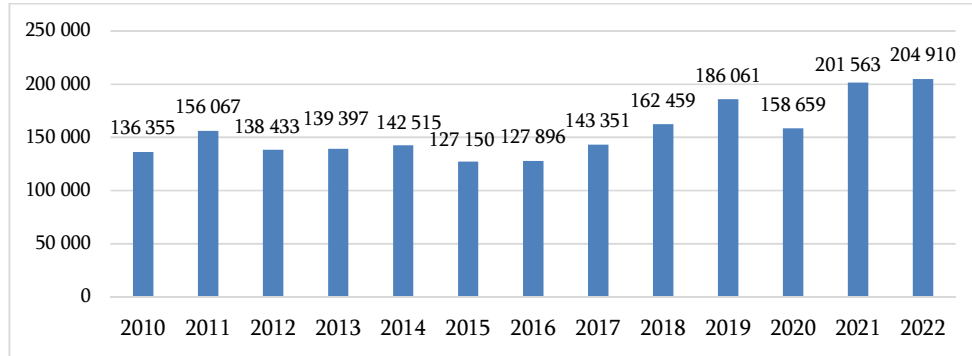


**Figure 1.** Mortgage loans provided by commercial banks in AMD and dollars, 2012-2022, (thousand AMD)<sup>1</sup>

In the chart, we can see that dram mortgage loans have increased year by year, which is due to the increase in interest on real estate. In 2020-2022, mortgage loans increased by 3.2%. In 2020, compared to 2019, there was almost no change in mortgage loans, the fastest growth was recorded in 2015-2016, 31.5%. During 2018-2019, due to the increase in demand for apartments in RA and the improvement of lending conditions, mortgage loans also gained momentum. That period is considered the period of fastest loan growth. We also see in the chart that they have quite different indicators, the highest indicator was recorded in 2017, 242 billion 969 million 636 thousand drams, and in 2022, this indicator was 152 billion, 70 million, 891 thousand drams, which decreased by 8.7% compared to the previous year. In addition, we need to present the indicators of state registrations of rights to real estate in RA in chart 2. According to the data, the number of trans-

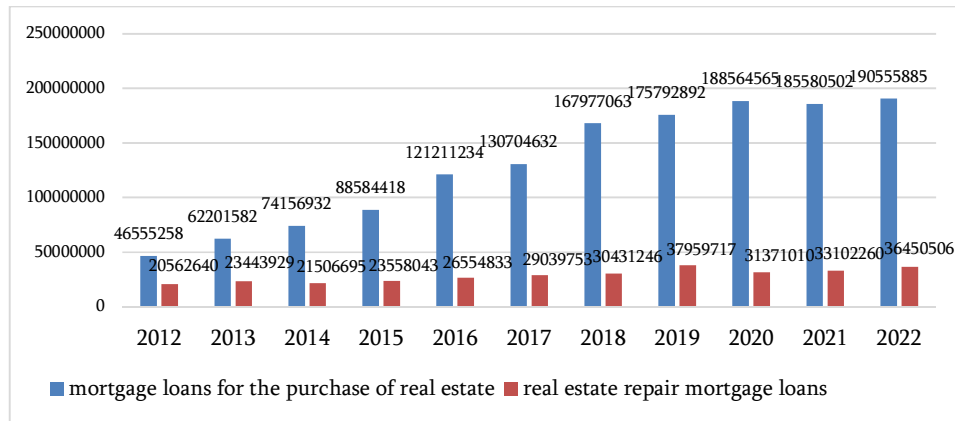
<sup>1</sup>Volumes of loans provided by the RA Central Bank, commercial banks and credit organizations, <https://www.cba.am/am/SitePages/statmonetaryfinancial.aspx>

actions in RA is increasing, which, according to the law of supply and demand, leads to an increase in prices. The increase in real estate prices in Armenia is a fact, but the market is not stable and both increases and decreases are expected.



**Figure 2.** The number of state registrations of rights to real estate by year, 2010-2022. <sup>1</sup>

A steady increase in demand is predicted in the near future, for which there are objective prerequisites. People's needs have changed, young families strive to separate themselves, moreover, to provide each of the children with a separate room. The requirements for quality indicators of the apartment have changed. Perhaps all this leads to sustained high demand. In RA, mortgage includes 3 types of loans: acquisition, repair and construction. After market studies, it appears that most mortgages account for more than 90% of acquisitions. Figure 3 shows the indicators of mortgage loans for real estate purchase.



**Figure 3.** Real estate purchase and repair mortgage loans, 2012-2022, ( AMD) <sup>2</sup>

Generally, mortgage loans are provided for the purpose of purchasing and repairing unimproved property. In the graph, one can see that there has been an increase during the

<sup>1</sup> State Cadastre Committee, Real Estate Market Analysis, p. 3, <https://cadastre.am>

<sup>2</sup> The loans of the CBA, commercial banks and credit organizations by sectors, [www.cba.am](http://www.cba.am)

period 2012-2020. In 2020, compared to the previous year, the increase was 7.2%. The growth of mortgage loans granted in 2020-2022 was 1.1%. Along with the fluctuations of mortgage loans, there is also a change in the currency structure of mortgage loans provided by banks. It can also be seen from the graph that they have also increased year by year, the highest figure was in 2019, and the figure for 2020 is less than the same figure by 21%. In 2022, compared to the previous year, mortgage loans increased by about 3 billion drams. In Armenia, mortgage loans are usually provided in the primary market, and the need to create secondary markets arises when the banking system is unable to fully satisfy the demand for mortgage loans by financing the capital formed at the expense of short-term deposits. due to the impossibility of providing long-term loans or due to reasons of maintaining capital, liquidity and other similar norms. In countries with state-sponsored subprime mortgage lending programs, market-based lenders face additional challenges due to increased competition. Through active secondary markets, it becomes possible to alleviate the burden of the state budget on housing subsidies, increase the availability of mortgage loans and develop capital markets, ensuring general economic growth. In particular, thanks to the secondary market, the price of the mortgage loan can decrease, distributing the risks more efficiently [Lea, 1994, 147].

Thus, based on our analysis, we may conclude that the indicators of mortgage lending in RA have increased year by year. The market of mortgage loans has been taken over by commercial banks, and the rest of the companies, credit organizations, provide fewer loans. Of course, the year-by-year expansion of banks and the diversification of services are positive phenomena for the RA financial market, but, on the other hand, the phenomenon that there is a monopoly of banks, and other financial and financial organizations provide less such services, is negative. from this point of view, the RA financial market is developing disproportionately.

**Conclusions.** The studies and analyzes carried out in the article allow us to draw some conclusions.

We noticed that during the years 2019-2022, the activity of some sectors of the RA economy led to an increase in the demand for loans from customers, and therefore to an increase in lending by banks. The growth of mortgage loans in recent years is also due to social and housing problems in the economy. At the same time, the gradually intensifying competition in the banking system led to an increase in the demand for loans. The more the mortgage system is developed in the national economy, the greater the theoretical weight of transactions based on mortgage loans, the more the real estate market depends on the financial market.

As a result of the study, we can also record that the market in Armenia mainly offers apartments to wealthy or high-income families as a nationwide problem. Few apartments are built by state or humanitarian assistance programs for the most needy and vulnerable



groups of the population: refugees, families affected by disasters and others. However, there is a large mass of the population between those two groups that has low or medium incomes: young people, newly formed families, middle-income families, who also have serious housing problems and for whom buying an apartment at market prices is not affordable. Therefore, it is necessary for the state, together with commercial banks, to develop products for all sections of the population.

The mortgage loan market in our country has a tendency to develop, which is due to a number of factors: creation of prerequisites for the formation of a developing financial market, stable economic growth, etc., but the most important of them is the large-scale housing construction that has taken place in the last few years. One of the objective reasons for the development of the mortgage market is the lowering of interest rates on loans by banks, which leads to an increase in interest from customers.

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**Karapet MOVSISYAN**

**Dynamica of mortgage market development in the Republic of Armenia**

*Key words: mortgage, loan, apartment, bank, interest, market, state*

Acquiring an apartment is one of the priority requirements of a person's life, without which it is difficult to talk about this or that social demand of the society. Taking into account the civil right of a person to demand housing, it turns into the most important socio-political and economic problem of the state. The development of mortgage lending can not only contribute to the improvement of the living conditions of the population, but also stimulate demand in the real estate and construction markets, can also ensure the inflow of funds to the housing market, stimulate construction, and also increase the profitability of budgets at all levels.

## LEGISLATIVE AND LEGAL SUPPORT OF THE TAX SYSTEM OF THE REPUBLIC OF ARMENIA

**Knkush MOVSISYAN**

Ph. D. student, Faculty of Economics and Management, YSU  
SRC of the Republic of Armenia, senior tax inspector

Key words: tax legislation, taxation principles, tax reforms, cashless transactions, real estate lease

**Introduction.** Clarity of tax legislation, simplification and improvement of tax administration are closely interrelated. There are still approaches in the tax legislation that significantly hinder the development and stability of the economy. The tax system will be more effective if the emerging issues are simple, stable and predictable. There is a unified tax system in The Republic of Armenia (RA), which is based on the principles of simplicity and clarity, cohesion, equality, non-discrimination, joint obligation, transparency and accountability, self-declaration and tax discipline, balanced tax administration, inevitability of responsibility, proportionality of responsibility, pluralism and publicity, modernity, competitiveness, efficiency [The Tax Code of RA, Articles 3].

**Methodology.** The theoretical, informative and methodological basis for the scientific article was the legal acts regulating tax relations: The Tax Code of RA (Code), The Law of the RA “On Non-cash transactions” as well as research conducted based on international experience. The latter made it possible to highlight a number of problems of violation of tax principles during the implementation of legal acts regulating tax relations, as well as non-observance of the requirements of the legislation, which undermined the transparency of taxpayers' activities and the opportunities to avoid taxation, as well as the development and stability of the economy.

**Literature review.** It is noteworthy to present the mechanisms operating in a number of countries that aim to solve the problems of violation of tax principles which arise during the implementation of legal acts regulating tax relations of RA.

In the case of renting out an apartment in the Russian Federation, there are 3 tax payment options: personal income tax, residential rental license system, self-employment tax [Federal Agency, 2021]. The declaration can be filled out manually when appearing at the tax office in person or electronically. Based on the submitted declaration and the attached documents, the tax authority will collect the amount of personal income tax payable - 13% of the income received from renting the apartment. If a person rents an apartment and lives in Russia for more than 183 days per year, he must pay personal income tax at the rate of 13%. If the person is in Russia for less than 183 days per year, the tax rate will be 30%. Another way to declare leasing of apartments is to use the franchise tax system. This option is available only to individual entrepreneurs. The cost of the

license is set by the state and is 6% of the approximate annual income that the entrepreneur can get from renting out the real estate. There is no need to pay personal income tax, income tax from the use of property and property tax when obtaining a license. The cost of a rental license is calculated based on its area and location. According to the clarifications of the Ministry of Finance of the Russian Federation, a non-resident taxpayer of the Russian Federation living abroad can continue business activities in the Russian Federation as a self-employed person. In this case, the income received from renting apartments in the Russian Federation will be taxed at the rate of 4%. In Russia, there is a fine for apartment owners for not paying tax on income from renting an apartment, as well as for late payment of tax and failure to submit a declaration.

Malta is subject to a 15% tax on rental income, which applies to both residential (from 1 January 2014) and commercial property (from 1 January 2016). 15% must be paid from the gross rental income. This rate applies to both resident and non-resident individuals. Any undeclared rental income is subject to tax at 35% of the gross rental income [Income Tax Law in Malta, Article 31, Government of Malta, 2023].

India has a “Fair Rent” rule, according to which the rent charged by the landlord should be 8% to 10% of the property value. If the landlord demands more rent, the tenant can appeal the claim in court for compensation. The owner has the right to raise the rent annually, can do so by about 5% each year. The tax exemption is allowed to be applied to the interest of acquired, repaired, constructed, reconstructed property [Pawani, M. 2023].

In Cyprus, rental income is consolidated with other taxable income streams and is taxed at rates on a progressive scale of income tax ranging from 0-35% after allowing for appropriate tax deductions [Delloite, 2022].

**Scientific novelty.** The main scientific novelty of the article refers to the presentation of new and applicable ways to increase the effectiveness of the RA tax system. In particular, in order to maintain the principles of taxation in the RA tax system, to ensure legislative and legal security, we have proposed to promote the implementation of transactions in a cashless way and reduce the volume of cash circulation, to simplify the system of declaring the remuneration contract, to establish certain privileges for those who lease the property, lessors, and tenants, as well as to apply responsibility strict measures for non-declaration of real estate rental income.

**Analysis.** When implementing the legal acts regulating tax relations of RA, sometimes the principles of the tax system are not observed. Most of the problems of the tax system, as a rule, are the result of inconsistency, ambiguity of the regulatory framework and ineffective interaction of executive and legislative bodies. In particular, under the Law on Cashless Transactions, a cashless quote or price offer cannot imply a higher price than a cash quote. However, a number of traders make a lower quote or offer when paying in

cash and this is often done publicly. The State Revenue Committee supervises and applies measures of responsibility over compliance with the requirements of this law or normative legal acts adopted on its basis. However, as a result of improper control, the principle of equality of taxation is violated, and unequal competition arises in the business field, which can lead a businessman to violate the requirements of the law, restoring the principle of equality of competition.

1. In order to solve the above problem, we propose to promote the implementation of transactions in a cashless way and to reduce the volume of cash circulation. The use of cash in Armenia is still a hot topic of debate and it is fertile ground for tax evasion. In order to solve this problem, it is necessary to undertake a comprehensive package of measures aimed at reducing cash. In particular:

- ❖ We suggest introducing the “Cashback” system as a compensation system. In case of non-cash transactions, provide cashback to the buyers, as a result of which they will force the sellers to make the transaction cashless through POS-terminals, and in the absence of the latter, the buyers will submit a corresponding claim.

- ❖ In order to avoid double “Cashback” in the case of cashless purchases by the same person with several cards we propose to create a unified electronic platform, where any person who wants to use the “Cashback” program can enter his personal data, including the card account number, which later can be considered as a “cashback” refund account.

2. According to Article 156 of the Code, natural persons should submit annual income tax calculations (declarations) to the tax authority with respect to the income specified in Article 151 the Code in accordance with the established procedure up to and including May 1 of the tax year following each reporting period in accordance with Article 53 of the Code. Citizens of RA who are considered residents of RA and who do not submit annual income tax calculations (declarations) in accordance with the above-mentioned clause of Part 4.1 submit annual income tax calculations (statements) to the tax authority in accordance with the procedure established by Article 53 of the Code, up to and including May 1 of the tax year following each accounting period. In other words, it turns out that in the case of the above two regulations, both natural persons and citizens of RA who are residents of RA must submit annual income tax calculations (declarations) to the tax authority.

The Code stipulates that the tax calculation written information about any transaction or operation during the reporting period considered to being the object of taxation defined by the Code, submitted by a taxpayer to the tax authority, while the declaration only contains information about income. Thus, we can state that in the case of such regulations, the principle of simplicity and clarity of the tax system is violated, because the legal acts regulating tax relations should be clearly defined for taxpayers and the tax authority, and should not contain contradictions and ambiguities. In order to solve the problem, as well as to avoid discrepancies, we propose in paragraph 2 of Part 4 of Article

156 of the Code to replace the words “annual income tax calculations (declarations)” with the words “annual income tax calculations and social payments”, and in Part 4.1, replace the words “calculations (declarations)” with the words “declarations” so that the calculations (declarations) established in paragraph 2 of Part 4 and Part 4.1 differ. In other words, it turns out that natural persons must submit annual income tax and social contribution calculations to the tax authority up to and including May 1 of the tax year following each accounting period, and citizens of RA who are residents of RA who do not submit the above calculations, annual income tax declarations.

3. From the legal point of view, there are also a number of problems, the solution of which will preserve the tax principles regulating tax relations, as well as increase tax revenues. In particular, the legal relations related to the lease of real estate in RA are regulated by the Code. According to Article 150, Part 7 of the Code, the rate of income tax calculated by an individual for rental payments is set at 10%, and in case the sum of rental payments received during the tax year exceeds AMD 60 million, the individual calculates additional income tax for the excess part: at a rate of 10%. According to part 1 of Article 258, the turnover tax is calculated at the rate of 10% in relation to the taxation base of the transactions considered as the object of taxation with the turnover tax in terms of rental payments. Despite the existing regulations, there are quite a lot of cases of non-declaration of the income received from the rental of real estate, the implementation of mechanisms to identify all cases requires large resources and costs. In other words, it turns out that not all taxpayers calculate and pay taxes in the cases, order and amount defined by the legislation, violating the principle of joint obligation of the tax system.

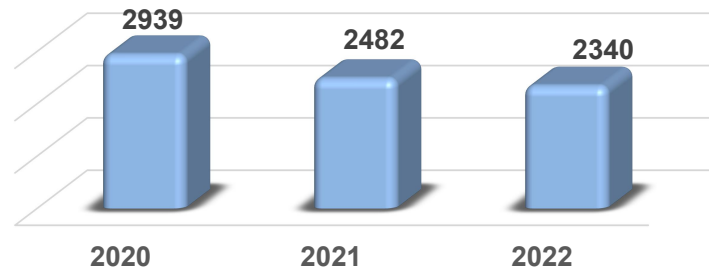
**Table 1.** The number of transactions for renting apartments and individual residential buildings in the real estate market of the Republic of Armenia by year<sup>1</sup>

Property type	2020 year	2021 year	2022 year
Apartment	2119	1695	1761
Individual residential building	820	787	579
<b>Total</b>	<b>2939</b>	<b>2482</b>	<b>2340</b>

A study of the residential rental market shows that in 2020-2022 there is a decrease in the number of registered lease agreements.

Meanwhile, the growth in demand for apartment rentals during the study period (due to the influx of foreigners in 2022, in particular citizens of the Russian Federation, Ukraine and Belarus to Armenia) and supply (including due to newly commissioned residential buildings) also implies an increase in actually concluded lease agreements. Therefore, it can be assumed that market participants avoid entering into a lease agreement in accordance with the current legislation.

<sup>1</sup> Analysis of the real estate market of the Republic of Armenia, 2020-2022



**Graph 1.** Data on rental transactions in the real estate market of the Republic of Armenia by years

In order to solve the problematic issues, to introduce more effective mechanisms in the tax system, we propose to implement changes in the following 3 directions:

1) Simplify the system of declaring the remuneration contract.

❖ Create a new application, including a mobile one, to facilitate registration for the lessor. The contract concluded with the appendix will have legal force and will be available for the interested state bodies, as a result of which there will be no need to visit the Cadastre Committee. Based on the available information, the tax authority will be able to automatically complete the tax calculation.

❖ As an alternative option, apply the tax collection mechanism based on the patent (certificate) (example of the Russian Federation). In particular, the persons renting the apartment acquire a license in advance, depending on the rental period, for a certain constant, fixed amount. In case of implementation of this system, there will be no need to submit additional calculations. Another alternative option could be to determine the amount of tax based on the value of the real estate (example of India). In other words, we have the exact amount of tax estimated based on the value of the apartment.

2) Establish certain privileges for the lessors and tenants of the property.

❖ Provide a real estate tax abatement or refund to the lessor for income tax paid.

❖ The state reimburses the tenant a certain part of the utility payments for the first 2 months or transfers a lump sum as an advance payment.

❖ Adopt the principle of zoning, if the property is located in provinces, reduce the monthly 10% to 5% tax rate, and exempt property owners from taxes in border areas.

3) Apply strict liability measures.

❖ Equate non-declaration of income from real estate rental to illegal business activity or undocumented supply of goods, applying the measures of responsibility established for these violations.

❖ Establish special controls for non-resident citizens, for example, when entering RA and leaving the territory of RA, if a non-resident citizen has lived in RA for more than a certain period of time, he must show his rental agreement and how much rent he paid.

**Conclusion.** Thus, we can state that tax reforms should imply, on the one hand, easing of tax pressure and solving fundamental problems for business, and on the other hand, transparency of taxpayers' activities for the state and exclusion of opportunities for tax evasion. The implementation of reforms in the tax system should not be limited only to the improvement of tax legislation. Those reforms should also include the implementation of operational control over compliance with the requirements of existing laws and the implementation of steps aimed at the prevention of shadow economic transactions that are not taxed and illegal, informing the general public about the dangerous consequences of tax offenses for the economy, and raising the level of their legal awareness.

Thus, we believe that the procedures developed on the basis of the recommendations in the article will make it possible to achieve the clarity and simplification of the tax legislation, as well as the improvement and efficiency of the tax administration, creating the necessary economic conditions for the development of investment and innovative activities in individual sectors of the economy, as well as promoting provision of services, production of goods, use of financial resources in the direction of expansion and renewal of socio-economic development programs.

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**Knkush MOVSISYAN**

**Legislative and legal support of the tax system of the Republic of Armenia**

*Key words:* tax legislation, taxation principles, tax reforms, cashless transactions, real estate lease.

The article is dedicated to the study of legal acts regulating tax relations and principles of taxation. The latter has shown that the principles of the tax system are sometimes not observed or not fully observed when implementing legal acts regulating tax relations. Most of the problems of the tax system are, as a rule, the result of the ambiguity and inconsistency of the regulatory framework. For this purpose, the article also carried out a study of the mechanisms for solving similar problems applied in different countries and presented recommendations for solving a number of legislative problems based on international best practices. As a result, the tax principles regulating tax relations will be preserved, the shadow economy will decrease, tax revenues will increase, making it possible to achieve the clarity and simplification of tax legislation, as well as the improvement and efficiency of tax administration.

## PROSPECTS TO IMPROVE THE CURRENT STATE OF FINANCING THE FIELD OF CULTURE IN ARMENIA

**Karen KHOJOYAN**

Ph.D. in Economics, Associate professor, ASPU, Department of EM

Key words: cultural sector, cultural services, cultural programs, financial resources, volume of state funding, structure of state funding, forms of state funding

**Introduction.** It is well known that the sphere of culture is of particular importance for the life activity of the society. It solves complex problems of ideological and social service of the society, which are aimed at its spiritual development, meeting cultural demands. Culture has a special role in the life of the Armenian people, not only in terms of the general level of civilization, but also in terms of national preservation. Therefore, the creation of favorable conditions for the development of national culture, especially the financial support of the state and the private sector for the cultural sector, has become a priority issue. However, the relatively small volumes of public and private financial resources provided to the cultural sphere of Armenia limit the possibilities of the state structures, cultural organizations and cultural figures regulating the sphere to take steps in line with the global cultural processes, to preserve the valuable things that have been handed down for centuries, and to create new ones.

There are certain problems facing the financing of the RA culture sector, related to its insufficiency, the limitation of the scope of applied forms. In this case, the need to expand the mentioned funding opportunities, expand the range of applied forms, choose and apply effective forms of culture preservation, especially the requirements for development and rational use of budget funds, in line with the strategic goals of culture development, especially state funding (taking into account the dominance of the latter in the total volume of funding of the culture sector) occurs. In this context, the analysis of the current state of funding in the RA culture sector and the clarification of ways to improve it become relevant.

The purpose of the article is to identify the ways to improve the current state of funding of the RA culture sector.

The tasks of the article are to analyze the trends characterizing the current state of state financing of the cultural sphere of our republic, to identify ways of expanding the range of possibilities and forms of this and non-state financing.

**Methodology.** In the article, the methods of scientific abstraction, comparative and graphic analysis, combining the historical and the logical were used. The method of scientific abstraction assumes that in order to assess the current state of state funding of the RA culture sector, non-essential or secondary factors should be ignored. The applica-



tion of the method of combining the historical and the logical, its combination with the method of graphic and comparative analysis, made it possible to study the historical trends in the above-mentioned financing during the last five years and draw conclusions with a certain logic.

**Scientific novelty.** Ways to improve the current state of funding of the RA culture sector were revealed.

**Literature review.** The problems of financing the culture sector have been recognized by prominent economists, including S. Shishkin [Shishkin, 2003, 108], A. Tolmasova [Tolmasova, 2003, 83], Galutsky [Galutsky, 1996], and many others. However, individual problems related to the improvement of current state of funding of the culture sector of the Republic of Armenia have not been studied in the necessary depth. The problems of improving the current state of funding of the culture sector of Armenia were discussed in the relevant documents of the state funding of that sector, but the proposed ways of solving them are limited by general judgments and need additional study.

**Analysis of the current state of funding of the RA culture sector.** The possibilities of state funding of the RA culture sector can be assessed as a result of the analysis of its current state. The share of allocations to cultural services provided by the RA state budgets of RA 2018-2022 in the total volume of expenditures of the relevant budgets was less than 1%; the indicated indicator was calculated in accordance with Article 2 of RA Laws on State Budgets of RA 2018, 2019, 2020, 2021 and 2022 and 7, as well as in Article 2 of the RA Law on the RA State Budget for 2019, 2020, 2021 and 2022 and on the basis of the relevant indicators described in Table N2 of the RA 2019, 2020, 2021 and 2022 State Budget Implementation Report, which is significantly lower compared to other social sectors. In particular, the share of planned expenditures on education, healthcare, and social protection of the RA 2022 state budget in the entire volume of budget expenditures was 8.8%, 5.6%, and 26.6%, respectively. The calculations were made based on the data reflected in table N2 of the summary description of the state budget execution report. For comparison, let's also note that the share of culture and art in the total sum of budget expenses of developed European states reaches up to 2.5% [Nauchnoe izdanje, 2020, p.113]. The share of allocations from the RA state budget to the sphere of culture is, as a rule, quite small, which is not enough to solve the problems of cultural development. Financial resources received from the state budget are mainly aimed at the preservation and protection of cultural organizations and values. However, today the priority task of financing should be not only preservation of culture, but also development.

The 2018-2022 period is of particular interest in order to get a complete picture of allocations from the RA state budget to the sphere of culture. Analysis of the degree of implementation of planned allocations from the RA state budgets according to the recreation, culture and religion sector and cultural services group programs and the dynamics of ac-

tual allocations each year compared to the previous one. Thus, in 2018, AMD 25.3 billion were allocated from the state budget for the implementation of programs in the field of recreation, culture and religion, making up 97.3% of the planned expenses. Compared to the previous year, the expenses of the sector decreased by 2.7%, which is mainly due to the decrease of expenses in the field of museums, exhibition halls, art, political parties, non-governmental organizations, trade unions. About 13 billion drams were allocated to the programs of the cultural services group, making up 97.3% of the planned amount. In 2018, the mentioned expenses decreased by 6.3% compared to the previous year (due to the reduction of expenses for museums, exhibition halls and art), and their specific weight in the volume of expenses of that sector - by 2.1% (making up about 51.4%) [State budget implementation report, 2019]. In 2019, about AMD 33.6 billion were allocated from the state budget for the implementation of programs in the field of recreation, culture and religion, making up 94.0% of the planned expenses. Compared to the previous year, the expenses of the sector increased by 32.8%, which was partially due to the 30.4% increase in the financing of cultural services group projects (although the actual expenses for the mentioned services were 92.9% of the planned ones, and that the share of expenses in the total volume of actual allocations from the state budget in 2019 decreased by 1.1% compared to the previous year, amounting to 50.4%) and mainly due to the increase in expenses for recreation, religion and sports (34.9%) [State budget implementation report, 2020]. In 2020, AMD 33.62 billion were allocated from the state budget for the implementation of programs in the field of recreation, culture and religion (slightly AMD 0.07 billion more than last year), making up 94.8% of the planned expenses. Allocations to cultural services amounted to AMD 20.1 billion or 94.1% of the planned amount, which is AMD 3.2 billion more than last year (which happened due to the increase in allocations to almost all types of the mentioned services). In addition, the specific weight of the specified allocations in the total volume of expenditures for recreation, religion and sports increased in the same period (by 9.4%, making 59.8%) [Summary budget execution report, 2021]. In 2021, AMD 30.4 billion were allocated from the state budget for the implementation of programs in the field of recreation, culture and religion (a slight decrease of AMD 0.22 billion compared to the previous year), making up 97.5% of the planned expenses. Allocations to cultural services amounted to AMD 15.6 billion or 96.5% of the planned amount, which is 4.5 billion drams less than last year (which happened due to a decrease in allocations to certain types of services). [State budget implementation report, 2022]. In addition, the share of the specified allocations in the total volume of expenditures for recreation, religion, and sports decreased in the same period (by 8.5%, making 51.3%). In 2022, AMD 43.9 billion (AMD 13.5 billion more than last year) were allocated from the state budget for the implementation of programs in the field of recreation, culture and religion, making up 97.6% of the planned expenses. Allocations to cultural services amounted to AMD 17.7 billion or 96.0% of the planned

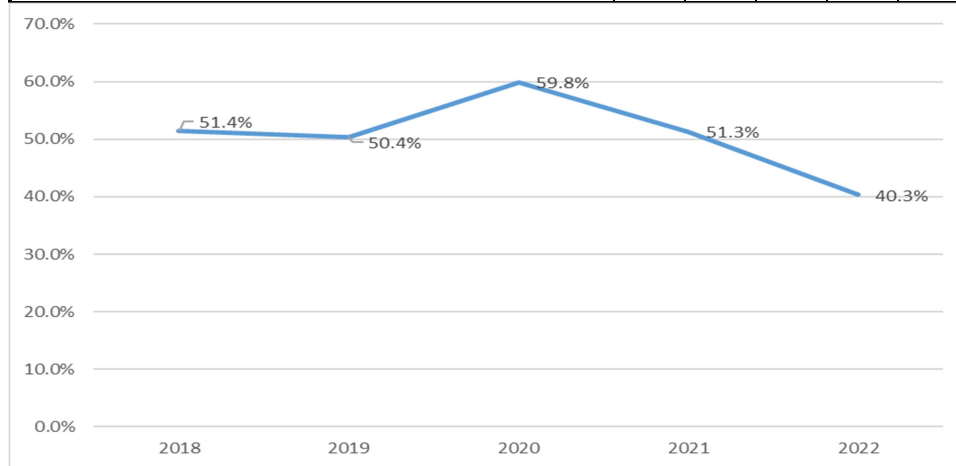
amount, which is AMD 2.1 billion more than last year (which happened due to the increase in allocations to almost all types of the mentioned services) [State budget implementation report, 2023]. However, the specific weight of the specified allocations in the total volume of expenses directed to recreation, religion and sports decreased in the same period (by 11.0%, making 40.3%).

Thus, the actual allocations from the RA state budget according to the recreation, culture and religion article and the cultural services included in it in 2018-2022 mainly had an increasing trend, except for 2020-2021. The above trends are evident from the data in Table 1 and Figure 1 below.

**Table 1.** Actual allocations from the RA state budget according to the recreation, culture and religion article and the cultural services included in it (billion AMD)

[The table is compiled by the author, based on: www.parliament.am. Republic of Armenia 2018, 2019, 2020, summary descriptions of the state budget implementation report for 2021 and 2022, tables N2. RA National Assembly Budget Office, Yerevan, 2018, 2019, 2020, 2021, 2022]

The actual allocations from the RA state budget according to the recreation, culture and religion article and the cultural services included in it (million drams)	2018	2019	2020	2021	2022
1. Peace, culture and religion	25,3	33,5	33,6	30,4	43,9
2. Cultural events	13,0	16,9	20,1	15,6	17,7



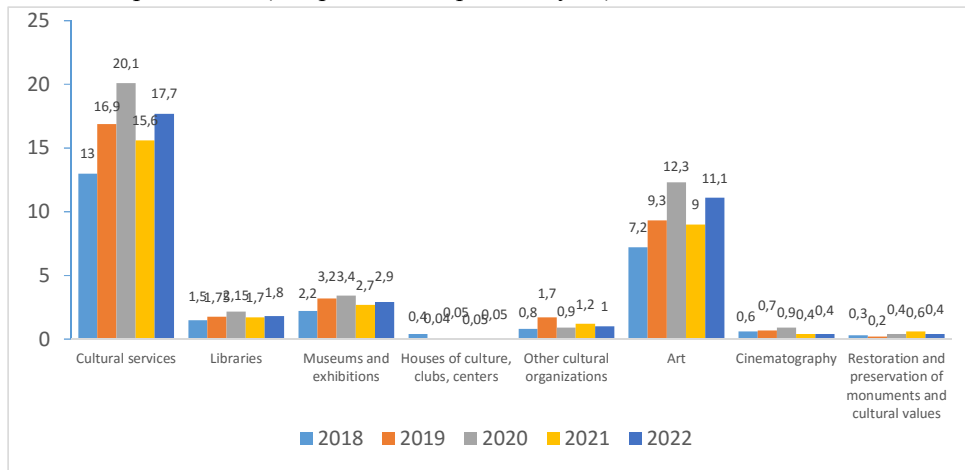
**Figure 1.** The share of allocations of cultural services from the RA state budget in the total volume of allocations to the recreation, culture and religion article (2018-2022)

(The diagram is compiled by the author, based on: www.parliament.am. 2018 2019 and 2020 , summary of the state budget implementation report for 2021 and 2022, tables N2. 2019, 2020, 2021, 2022, 2023]

2018-2022 is also of particular interest. The analysis of the degree of fulfillment of allocations for cultural services and their separate groups from the RA state budget. As a result of the analysis, it turns out that during the mentioned period, the actual allocations

from the RA state budget to cultural services were not implemented in the planned amount each year: by 2.7%, 7.1%, 5.9%, 3.5%, respectively. who and by 4%. It is related to the fact that the actual allocations for all services in the mentioned years are smaller than planned [Report on state budgets implementation, 2018-2022]. A clear idea of the dynamics of actual allocations (2018-2022) from the RA state budget to cultural services and its above-mentioned groups can be obtained by judging from chart 2.

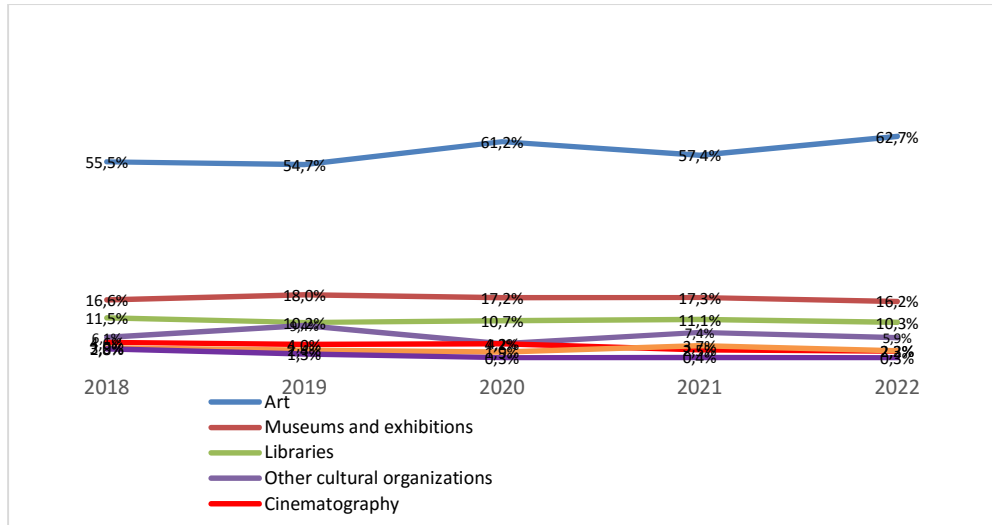
Actual allocations from the RA state budget to cultural services increased in 2019 and 2020 compared to the corresponding figure from previous year (due to the increase in allocations for almost all services during that period, except for culture houses, clubs and centers in 2019, restoration and preservation of monuments and cultural values, and in 2020 allocations to other cultural organizations). In 2021, compared to 2020, the specified allocations decreased by AMD 4.5 billion, due to the decrease in expenses for a significant part of these service groups, but in 2022, compared to the previous year, they increased by AMD 2.1 billion. The latter happened mainly at the expense of allocations to art, partly to libraries, museums, and exhibition halls. In other words, the actual allocations from the RA state budget for cultural services in 2018-2022 have mostly increased, except for 2021 (compared to the previous year).



**Chart 2.** Dynamics of actual allocations from the RA state budget to cultural services included in the recreation, culture and religion sector by individual services (2018-2022)

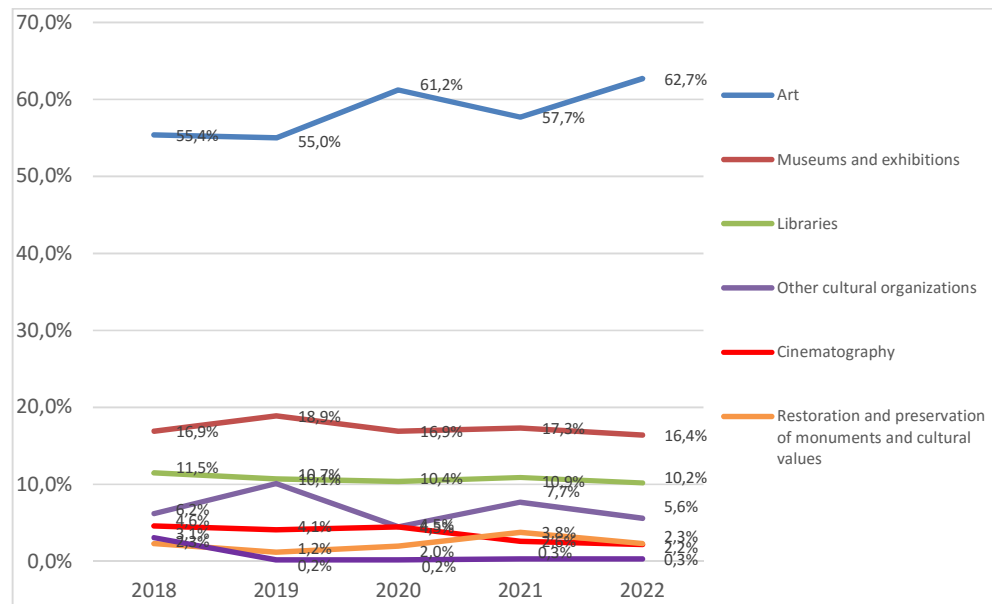
[The chart was compiled by the author, based on: www.parliament.am. Republic of Armenia 2018 2019 2020, summary descriptions of the state budget implementation report for 2021 and 2022, tables N2. RA National Assembly Budget Office, 2019, 2020, 2021, 2022, 2023]

In order to complete our understanding of the planned and actual allocations from the state budget for cultural services, the structure and dynamics of these allocations in 2018-2022 are of particular interest, which is seen from the 3rd and 4th charts, respectively.



**Figure 3. RA 2018-2022. The share of individual services in the total volume of allocations for cultural services from the state budgets (%)**

[The chart is compiled by the author, based on: www.parliament.am 2018 2019, 2020, 2021 and 2022 state budget implementation reports, tables N2: National Assembly Budget Office, 2019, 2020, 2021, 2022, 2023]



**Figure 3. RA 2018-2022. The share of individual services in the total volume of actual allocations to cultural services from state budgets (%)**

[The chart is compiled by the author, based on: www.parliament.am 2018 2019, 2020, 2021 and 2022 state budget implementation report, tables N2: National Assembly Budget Office, 2019, 2020, 2021, 2022, 2023]

It is obvious from the graphs that in the above-mentioned years, the share of art in the structure of the planned and actual allocations of the RA state budget for cultural services was incomparably high, accounting for more than half. In fact, more financial resources have been earmarked for art than, say, for libraries and museums. Art, by its very nature, is distinguished by the saturation of events. Museums, exhibition halls and libraries followed art in terms of the proportion of the state budget allocations and actual allocations in the mentioned time period, which was contributed, in particular, by the introduction of new technologies and innovations that gained momentum in these institutions in recent years. Other services were characterized by a relatively small share of allocations from the state budget. According to the specific weights, the groups of services mentioned above were followed by the groups of services related to other cultural organizations, cinematography, restoration and preservation of monuments and cultural values, houses of culture, clubs and centers (except for the group of services related to houses of culture, clubs and centers in 2018 from the state budget actual allocations, the specific weight of which in terms of all cultural services in the structure of such allocations was more than the share of the group of services for the restoration and preservation of monuments and cultural values, due to the greater non-implementation of the allocations planned for that group). As it can be seen, the planned and actual budget allocations for the cultural sector in 2018-2022 according to individual cultural services were characterized by a pronounced disproportion, which is mainly due to the adopted policy of the state for financing the cultural sector and the priority of the existing problems related to each of these services. At the same time, it should be noted that although the specific weight of all groups of cultural services in the specified period in the structure of the planned and actual allocations of the RA state budget for these services increased and decreased, this did not reflect on the same general picture of the succession of individual groups of cultural services according to the specified share.

In terms of completing our understanding of the structure of allocations to cultural services provided by the state budgets for 2018-2022, the study of the structure of allocations for each of the above-mentioned groups of these services is essential in terms of capital costs related to the overhaul and construction of cultural facilities (taking into account that the officially published statistical information in which capital expenditure is limited to that part only). Such a study allows to get an idea of the ratio of current and capital costs in the structure of the said allocations to a greater or lesser extent. The observation of the structure of these allocations shows that, in the case of most cultural services, the capital costs related to the maintenance and construction of cultural objects are absent or have a low percentage in the above-mentioned structure. Thus, in the case of libraries, other cultural organizations and cinematography, the capital costs related to the overhaul and construction of cultural objects for the specified period are absent in the structure of allocations from the state budget directed to these groups of cultural services,

and in the case of museums and art, their share was very low in the structure of the corresponding allocations. Thus, in the case of the museum and exhibition services group, the specific weight of the specified costs in 2016, 2017 and 2018 was 7.9%, 14.6%, 4.2%, respectively, and in the case of the arts, it was 6.4%, 1.2%, 0.2%, respectively. And here, in the case of individual groups of services, the capital costs related to the overhaul and construction of cultural objects in 2016-2019 prevailed in the structure of allocations from the state budget aimed at cultural services. Thus, in the case of cultural houses, clubs and centers, in 2016, 2017, 2018, the specified share of expenses was 77%, 88.3%, 88%, and in the case of the group of services for the restoration and preservation of monuments and cultural values, it was 63.4%, 61.6%, 63.2%, respectively. [Calculations are made in the N2 tables of the respective N1 annexes of the RA laws on the state budgets of RA for 2016, 2017 and 2018 (section 08-02-01 to 08-02-07)] (presented specific weights are limited to the years 2016-2018, because for the following years, the decoding of allocations from the state budget to the above-mentioned cultural services or cultural programs implemented from 2019 according to the articles of the economic classification of costs in the relevant official documents is missing, and in this case it is not possible to clarify the ratio of current and capital costs in the structure of allocations to each of these services or programs). As can be seen, the share of the above-mentioned capital expenditures in the structure of allocations from the state budget directed to the relevant groups of cultural services sometimes increased, sometimes decreased, i.e. variable trends were observed due to the cultural policy adopted by the state.

Until now, the analysis of the current state of state financing of the RA culture sector has been presented. However, in addition to state funding, cultural organizations acting as state non-profit organizations and dominating the sector are also financed by extrabudgetary funds, and non-state cultural organizations by their own and involved funds. In addition, the mentioned extra-budgetary funds are generated from patronage, charity, provision of paid cultural services, the implementation of entrepreneurial activities provided for by their charter, income from property rental. Taking into account that currently a significant part of cultural organizations strives to increase their incomes due to the provision of the mentioned services and the implementation of activities, as well as the rental of property, an annual increase in the incomes generated from them is expected.

Information of a summary statistical analytical nature regarding the volume of extra-budgetary financing in terms of the entire culture sector and its separate directions, as well as the own and involved funds of non-state cultural organizations, is not presented, considering that such information is not officially published. Meanwhile, a complete picture of the current state of state funding of culture can be made in the presence of the mentioned information (regardless of the predominance of state funding of the culture sector). In this case, having the mentioned information acquires special importance.

*Ways to improve the current state of funding of the RA culture sector.* Regarding the development of the RA culture sector and the effective use of budget allocations aimed at it, the use of forms of state financing consistent with them, in accordance with the strategic goals of cultural development, is particularly important. In connection with this, first of all, it is necessary to note that simple, pre-calculated funding for the maintenance of cultural organizations does not solve the problem of cultural development. Regarding the effective use of budget funds aimed at the development of culture, the role of financing the annual grant cultural programs implemented by the order of the Ministry of Culture of the Republic of Armenia in a competitive manner is particularly important. It is meant to ensure the operation of a transparent and competitive system of distribution of state funds, the balanced development of various fields of art, to give impetus to creative and perspective projects, to contribute to the worthy presentation of Armenian culture and modern art on international platforms. The sectoral scope of the competitive selection of these programs is: video and media, performing arts, folk arts, books and writing, cultural heritage and education. The financing of the above-mentioned grant cultural programs is aimed at giving priority to the cultural policy and strategic priorities adopted by the state, as well as co-financed, targeted and long-term effective programs. In addition, depending on the direction, compliance with the stated priorities and the volumes of the presented budget, the programs can be partially or fully financed.

In the state financing of cultural programs, a special place should be allocated to the implementation of long-term national and target-complex cultural programs (including the financing of capital expenditures, especially in the case of the overhaul of historical and cultural monuments of strategic importance), within the framework of special purpose transfers.

The forms of state financing of the cultural sector are not limited to those mentioned. Taking into account the limited possibilities of increasing the volume of state funding to the culture sector in the near future, perhaps the use of forms of culture funding with the participation of the state, that is, with joint funding, can be considered more promising. First of all, we are talking about the joint financing of the cultural sector with the partnership participation of the state and non-state, corporate sponsors, and its promotion. It is necessary to take into account that both the mentioned sponsors and the state can benefit significantly from this cooperation. Thus, private companies can attract budgetary resources to their projects, use bank loans and receive state guarantees in connection with project implementation, form a positive image of the company, and also significantly reduce risks. The goal of the state administration bodies will be to ensure the further development of the territories and their infrastructures, to increase the quality of life there, to attract funds from sponsors and to reduce budget costs. Joint financing of the cultural sector with the partnership participation of the state and non-state, corporate sponsors



may refer to jointly implemented cultural projects, with a certain ratio of budgetary and sponsorship funds in the total volume of funding. Effective implementation of marketing and management (especially PR and financial management) in non-commercial cultural organizations is particularly important for the implementation of the mentioned joint financing, which will promote the involvement of private sponsorship funds.

The joint participation of the state and regional bodies of the government in this financing with the participation of the state of the culture sector of RA can be considered a rather effective form of joint financing, that is, joint financing from the central and municipal budgets, which can be aimed at financing individual cultural organizations and investment projects. Such financing will allow for more efficient spending of budget funds of different levels, strengthening control over their rational use. In particular, the state budget can finance the replenishment and maintenance of library and museum funds, and the community budgets can finance the costs of maintaining buildings, paying for utility services, and paying service staff.

Taking into account the rather uneven territorial distribution of allocations to culture from the state budget in the republic, the very low share of allocations aimed at the implementation of regional cultural development programs in the total volume of state financing of culture, the provision of subsidies to community budgets can be considered as a prospective form of state financing of culture. At the same time, the implementation of target-complex programs for the development of marze culture with the participation of the state in the order of co-financing will significantly contribute to the development of culture in the region and the solution of its financing problems.

The possibilities of state funding of the RA culture sector can be expanded also by using its indirect forms, related to the application of tax benefits to those who offer goods and services of cultural significance. Separate tax privileges applied in the case of the culture sector in foreign countries are almost absent in our republic. The most common tax relief for cultural organizations in the mentioned countries is the exemption of the goods and services they offer from profit tax, value added tax, property tax or the application of a lower rate of these types of taxes to them. For example, in Belgium, the value added tax levied on art objects has been reduced from 19% to 6%, but in Ireland, the mentioned type of tax is not applied to books. Works of art owned by non-commercial cultural organizations are exempted from property tax [Shishkin, 2003, 108].

These privileges towards financial donors, benefactors, sponsors of culture are manifested mainly in the form of turnover tax, profit tax, personal income tax privileges, and in this case, the money donated by them for the purpose of the development of culture and art, support of cultural activities, is deducted from the amount subject to turnover, profit and income taxation, respectively [Tolmasova, 2003, 83].

Among the tax privileges applied in the case of the culture sector in our republic, perhaps we can mention the value added tax defined by Article 64 of the RA Tax Code (in the case of the provision of training services by children and youth aesthetic centers, music, painting, art and fine arts educational institutions), by Article 230 of the same code. Privileges related to the payment of the specified real estate tax (in the case of lands of historical and cultural significance and state-owned buildings of such significance), as well as in the case of charities in general [RA Tax Code, 2016, 1259]. Meanwhile, in the case of the culture sector, the need for tax benefits is due to the uniqueness of creative work and the special social significance of its result. In addition, the share of tax receipts from the culture sector to the state budget in the total volume of these budget receipts is very small and in this case, the application of tax benefits to paid services provided by the organizations of the sector (in various manifestations, in particular, exemption from payment of VAT or profit tax or reduction of their rates) is significantly will not affect the reduction of the specified volume. At the same time, the application of the mentioned privileges will indirectly expand the possibilities of funding from the state budget of the culture sector. As for the appropriateness of future implementation of the state funding of the RA cultural sector in specific volumes and directions, it should be determined based on the development strategy of the mentioned sector.

Along with the state funding of the RA culture sector, the expansion of non-state funding opportunities is important. The extra-budgetary funds of cultural organizations acting as state non-commercial organizations and dominating the field can be increased from sponsorship, charity, the provision of paid cultural services, the implementation of entrepreneurial activities provided for by their charter, property rental, and the financial resources of non-state cultural organizations, mainly from the provision of the above-mentioned services at the expense of increasing revenues. In addition, increasing the volume of funding from sponsors can be achieved through sponsorship activity, effective fundraising work of cultural organizations with potential sponsors, the generation of sponsors' interest in the cultural projects or events offered by them, and the increase in income from paid services, according to the study of the cultural services market, its segments. as a result of the right choice, the formation and promotion of consumer requirements and demand for these services, ultimately, effective marketing activities.

**Conclusions.** As a result of the research, the following conclusions were made:

- The current state of state financing of the RA culture sector is characterized by its insufficiency, partial financing of expenses, mainly current expenses. The mentioned funding is mainly aimed at the preservation of cultural organizations and values and is not enough, especially, to solve the problem of cultural development. In this case, it is particularly important to expand the possibilities of state financing of the cultural sector, to choose the forms of financing aimed at the development of culture, which will enable

more effective use of budget funds in accordance with the strategic goals of cultural development.

- From the RA state budget to cultural services in 2016-2020. the dynamics of actual allocations were characterized by variable trends and, in general, it did not have a positive impact on the expansion of state funding opportunities for culture;

- From the RA state budget to the culture sector in 2016-2020. in the structure of planned and actual allocations, the share of art, then museums, galleries and libraries was incomparably high. For other services, that indicator was comparatively small. The striking asymmetry of the mentioned structure is, first of all, due to the policy adopted by the state, the priority of the existing problems according to the services, and at the same time it indicates the insufficient state funding for a significant part of the cultural services.

- The solution to the problem of the development of the cultural sphere and the expansion of its state financing possibilities, even if in the future, will be possible in the event of an increase in the share of the country's budget revenues and budget allocations to the said sphere. Along with that, it is necessary to keep in mind that the expediency of long-term state financing of the entire field of RA culture and according to its directions is determined based on the development strategy of the field.

- We believe that the possibilities of state financing of the RA culture sector can be expanded by using such effective forms of financing that are not yet widespread in our country, such as joint financing of culture with the participation of the state, financing of long-term national and target-complex cultural programs, indirect financing of the culture sector. the forms.

- Along with the state funding of the RA cultural sector, the expansion of non-state funding opportunities is important. The extra-budgetary funds of cultural organizations acting as state non-commercial organizations and dominating the field can be increased from sponsorship, charity, the provision of paid cultural services, the implementation of entrepreneurial activities provided for by their charter, property rental, and the financial resources of non-state cultural organizations, mainly from the provision of the above-mentioned services at the expense of increasing revenues. In addition, increasing the volume of funding from sponsors can be achieved through sponsorship activity, effective fundraising work of cultural organizations with potential sponsors, the generation of sponsors' interest in the cultural projects or events offered by them, and the increase in income from paid services, according to the study of the cultural services market, its segments. as a result of the right choice, the formation and promotion of consumer requirements and demand for these services, ultimately, effective marketing activities.

- A complete picture of the current state of funding of the RA culture sector can be made in the presence of officially published summary statistical information on the volume of extra-budgetary funding of the entire culture sector and its separate directions, as well as the own and involved funds of non-state cultural organizations.

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**Karen KHOJOYAN**

**Prospects to improve the current state of financing the field of culture in Armenia**

*Key words: cultural sector, cultural services, cultural programs, financial resources, volume of state funding, structure of state funding, forms of state funding*

The article is devoted to the analysis of the current state of funding of the RA culture sector and the identification of ways to improve it. Taking into account that the financing of the mentioned sector is characterized by the dominance of state financing, therefore the article focused on this financing. The current state of state financing of the RA culture sector is characterized by its insufficiency, partial financing of expenses, mainly current expenses. The mentioned funding is mainly aimed at the preservation of cultural organizations and values and is not enough, especially, to solve the problem of cultural development. In this case, it is particularly important to expand the possibilities of state financing of the cultural sector, to choose the forms of financing aimed at the development of culture. The solution to the problem of the development of the cultural sphere and the expansion of its state financing possibilities, even in the future, will be possible in case of increasing the share of the country's budget revenues and budget allocations to the said sphere. Along with that, it is necessary to keep in mind that the expediency of long-term state financing of the entire field of RA culture and according to its directions is determined based on the development strategy of the field. It is proposed to expand the possibilities of state financing of the RA culture sector by using such effective forms of financing that are not yet widespread in our country, such as joint financing of culture with the participation of the state, financing of long-term national and target-complex cultural programs, indirect forms of financing of the culture sector. Cultural organizations acting as state non-commercial organizations and dominating the sector can expand the possibilities of non-state financing of culture through sponsorship, charity, provision of paid cultural services, implementation of entrepreneurial activities, property lease, and non-state cultural organizations mainly due to the increase in income from the provision of the above services, as a result of effective fundraising and marketing activities.

## ECONOMICALLY EFFICIENT CACHE FRIENDLY ADJACENCY LIST FOR GRAPH PROCESSING ALGORITHMS

**Arman MARTIROSYAN**

Doctor of Science, Professor, YSU

**Rafayel KHACHATRYAN**

R&D Engineer, NPUA, MA

ICTEI, Chair of Microelectronic circuits and systems

**Rafayel VEZIRYAN**

Junior Researcher, NPUA, MA

Informatics and applied mathematics faculty

Keywords: data structures, computational efficiency, cache optimization, adjacency list, graph

**Introduction.** Graphs are a fundamental part of computer science and various scientific fields. They are used in numerous applications, from social networks to electronic design automation. Efficient graph representation is important for modern algorithms, especially in economical contexts [Wang, 2022, 1-6], where resource-efficient implementations play a significant role by reducing the resource consumption. This is essential in environments where computing resources are a high priority. There are many representations of graphs as data structure. One of these types is adjacency list: it is a collection of linked lists which shows the connection of source and destination vertices. Adjacency lists are more memory-efficient than adjacency matrices because they only allocate memory for vertices with at least one edge in the graph. However, traditional implementations of adjacency lists do not fully use the features provided by modern CPUs, such as the cache line. Our design of Adjacency List is cache friendly and is keeping the main structure of traditional implementation. The main idea is derived from C#'s dictionary implementation for hash tables, which uses one array combining all data that should be in linked lists. Our results show that cache friendly implementation of Adjacency list outperforms it in lookup and insertion operations.

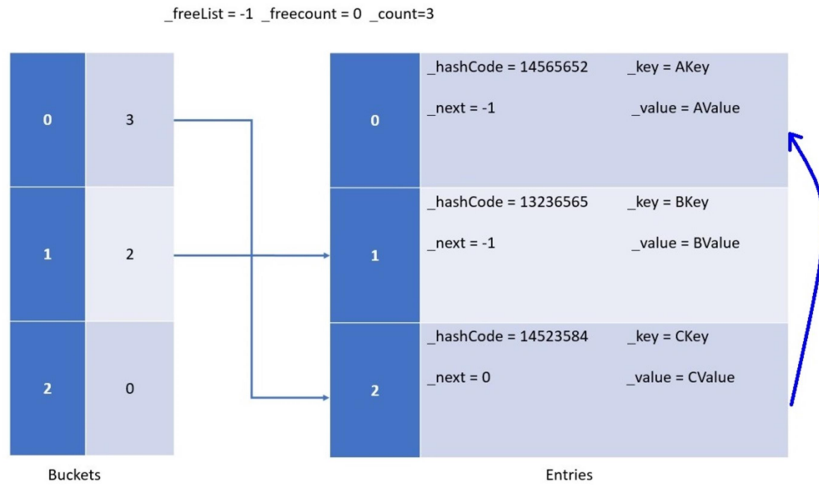
**Literature review.** The effective representation of graph data structures is a challenging problem nowadays. There are a few fundamental simple implementations of graphs [Berge, 1964, 186-187]. One of these is Adjacency list [Cormen et al., 2009, 610-613], which instead of Adjacency Matrix [Cormen et al., 2009, 610-613] requires less memory. Traditional adjacency list structures often lead to a high number of cache misses. This is primarily due to their non-linear memory allocation, which disturbs the efficient utilization of the cache. There are many optimal cache friendly variants of graph representations, but we will discuss data structures which are at most keeping graph's adjacency list structure. There are several representation techniques such as DCRS [King et al., 2016, 61-80] and PCRS [Wheatman et al., 2018, 1-7], which use the CRS (Compressed Sparse Row) technique to effectively represent graph data structure. Another approach is to imp-

lement adjacency list keeping stacks instead of linked lists [Yadav et al., 2013, 1-5]. Although it was more effective than traditional implementation, stacks will be separated from each other in heap memory. Our solution is based on C#'s Dictionary data structure implementation [Microsoft] which is done by keeping two separate arrays, which will collect the graph data in two contentious memories.

**Methodology.** Our methodology is based on cache friendly data structure design. We modified the adjacency list implementation mechanism to be more cache friendly but kept this structure. Our approach is based on C# programming language's Dictionary data structure design technique, which is modified version of hash table's separate chaining structure. They are used to separate vectors instead of list and vector combination and do mapping mechanism of linked list with vector indexes. By using this technique, we will be modifying graph's adjacency list representation by making him cheche friendly and keeping his structure.

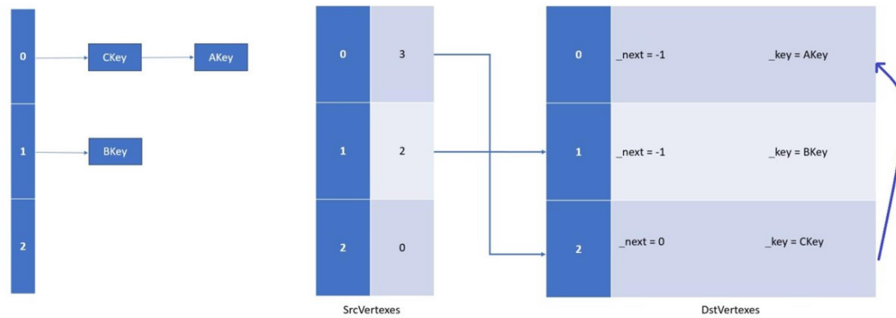
**Scientific novelty.** In nowadays the importance of high efficiencies algorithms plays the big role in the market products, which are supporting business and giving the computing more efficient. One of the base data structures that is used in big percentage of algorithms theory are graphs and their efficient representation is a challenging problem. We have designed and implemented a new representation for adjacency list data structure for graphs, which is more efficient than traditional representation due to its cache friendly representation. In addition to that this structure keeps the adjacency list's main structure.

**Analysis.** Let's start with C#'s Dictionary implementation mechanism. C#'s Dictionary is analogous to the traditional hash table Separate Chaining data structure. Instead of keeping pointers to linked lists, it uses two arrays. The first array stores the indexes of the second array's elements plus one. The second array illustrates the linked list mechanism by keeping all data in one contiguous memory. Now let's illustrate the main working mechanism for element insertion in a hash table and its structure. In Figure 1, the main structure of a Dictionary is illustrated. The keys of C and A elements make a collision, and as can be seen in the figure, the element with index 2 in the entries vector points to the 0th element by its `_next` member. If we add a new element, the sizes of the vectors will be increased, and the new element will first be added to the entries vector. Then, if no collision was made, the new index will be kept in the buckets vector with the index of the entries element plus one. If there is a collision, the new element's `_next` member will point to the element to which the bucket's index is pointing, and the bucket's index will be changed to the new element's index in the entries vector plus one.



**Figure 1.** C#'s Dictionary Structure

The same technique will be used in the graph's adjacency list representation. Instead of keeping linked lists for each vertex, we will use two vectors, one for source vertexes and second for destination vertexes. When we will add the new edge, by adding new vertex to source vertex, we will add the new element in destination vector and if source vertex points to another vertexes, just set the new element's next member to index in which is pointing source vertex, and update source vertex as new element's index plus one.

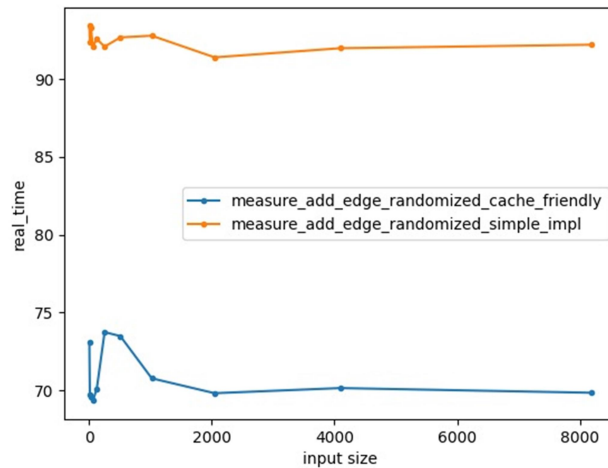


**Figure 2.** Adjacency List and 3Cache Friendly Adjacency List

In Figure 2 is illustrated traditional adjacency list structure and cache friendly adjacency list structure. Instead of A, B and C keys will be vertex numbers.

We have designed and implemented our proposed graph representation and tested it using Google's benchmark library. The analysis is node on creating and inserting ele-

ments in graph, the comparison is done on simple adjacency implementation and out cache friendly adjacency list's representation.



**Figure 4.** Performance Analysis of addEdge operation

The analysis shows that we outperformed by 29.71 percents.

Our proposed data structure shows significant computational savings. By reducing CPU time and using memory effectively, it reduces energy and consumption which is become to economic savings and keeps the global initiatives for energy efficiency.

**Conclusions.** In this paper we have discussed graph data structure's adjacency list implementation types and proposed our design to cache friendly adjacency list keeping the adjacency list's structure. Our design is based on C#'s Dictionary implementation mechanism, which tries to replace the linked list with vector with additional indexes for implementing the pointer mechanism in linked list. By storing the data in contiguous memory, we have improved the efficiency of our data structure, making it more economically efficient. The cost-effectivity of our data structure leads to less energy consumption which is critical to nowadays economics and is staying the high priority important aspects for researchers. Future research will focus on discussing more effective mechanisms for graph representation and modifications to graph algorithms based on these representations.

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**Arman MARTIROSYAN, Rafayel KHACHATRYAN, Rafayel VEZIRYAN**  
**Economically efficient cache friendly adjacency list for graph processing algorithms**  
*Key words: data structures, computational efficiency, cache optimization, adjacency list, graph*

Graphs are a fundamental part of computer science and various scientific fields. They are used in numerous applications, from social networks to electronic design automation. Efficient graph representation is important for modern algorithms, especially in economical contexts, where resource-efficient implementations play a significant role by reducing the resource consumption. This is essential in environments where computing resources are a high priority. There are many representations of graphs as data structure. One of these types is adjacency list: it is collection of linked lists which shows the connection of source and destination vertices. Adjacency lists are more memory-efficient than adjacency matrices because they only allocate memory for vertices with at least one edge in the graph. However, traditional implementations of adjacency lists do not fully use the features provided by modern CPUs, such as the cache line. Our design of Adjacency List is cache friendly and is keeping the main structure of traditional implementation. The main idea is derived from C#'s dictionary implementation for hash tables, which uses one array combining all data that should be in linked lists. Our results show that cache friendly implementation of Adjacency list outperforms it in lookup and insertion operations.

## MODERN APPROACHES RELATED TO THE MANAGEMENT OF SOCIO-PSYCHOLOGICAL SERVICES

**Jemma BAGHDASARYAN**

Ph.D. applicant, lecturer of URARTU University

Key words: older people with mental health problems, gerontopsychology, mental problems, social and psychological services, alternative forms of service

**Introduction.** In the last decade, in many countries, including the Republic of Armenia, in addition to the regular treatment, great significance has also been attached to the issues of restoring mental health and ensuring social integration, creating alternative services provided to people with mental health problems, and developing existing services. Social and psychological services for older people with mental health problems are provided by institutions of the Ministry of Labor and Social Affairs and the Ministry of Health, as well as non-governmental organizations. And it is very important that the approach to determining the need for services and the standards for providing services are unified. Although significant progress has been made in the study of problems associated with the mental health of older people, much remains to be done to better understand these problems and find appropriate interventions, searching for forms and methods of providing them with appropriate psychological and social services.

It is well known that the qualitative and quantitative characteristics of mental processes change with age. The most socially significant changes are observed in the emotional sphere, personality traits and character. With the old age accentuated personality traits become sharper, the ability to empathize decreases, and the emotional sphere shifts to the area of negative emotions. Many years of experience and observation have shown that a significant number of people with mental health problems, after completing several courses of treatment, no longer need treatment, but only need care and adaptation in the society, development of self-care abilities and learning some basic skills that will allow them to live without outside help. However, people with mental health problems, having psychological and social problems are rarely ready to live independently.

**Methodology.** A number of studies have been conducted to determine the social, psychological and health services needs of older people with mental health problems. The studies were carried out using the Camberulian Needs Assessment Questionnaire (CANSAS), the Camberulian Needs Assessment Questionnaire modified for use in care institutions, the Psychopathological State Assessment Questionnaire and the Demographic Questionnaire adapted to the situation in Armenia. The studies were conducted in all institutions of the system of the Ministry of Labor and Social Affairs (8 institutions) and the Ministry of Health of the Republic of Armenia (8 institutions) providing round-the-clock care and treatment of people with mental health disorders.

The research was carried out using a survey method with both older people with mental health problems and service personnel in social and medical institutions. Meetings and discussions were held with representatives of the RA Ministry of Labor and Social Affairs and the RA Ministry of Health, as well as with public organizations providing social and psychological services to elderly people in need. According to this methodology, people with mental health problems who completed a needs assessment as a result of our study were divided into appropriate groups, which will enable better targeting of services provided. The research base also included statistical data, analysis of international-national (local) legal acts on this issue, and data from conducted research.

**Literature review.** Data from specialized literature indicate that mental disorders are detected in 40-70% of elderly and old people, but only one tenth of them are registered with psychiatric patients, i.e. the low appeal of these patients for psychiatric help leads to low detection of mental disorders in them. [Jacoby & Oppenheimer, 2001, 94-102], [Stewart - Hamilton, 2010, 203, 240]. This is due to the need to organize appropriate consultative, therapeutic and psychological assistance, the need to develop mental health services and bring assistance closer to the population, the need to develop new forms of it that go beyond the traditional specialized psychiatric service, the need to combine the efforts of psychiatrists and general medicine doctors, as well as psychologists and social workers [Tataryan, 2008, 1-3], that is, with the development of gerontopsychiatry, as one of the pressing problems of modern psychiatry, British scientists devoted their work to the need to take measures to improve living conditions and life expectancy of older people. [Jacoby & Oppenheimer, 2001, 94-102].

Older people are more likely to suffer from mental illness due to age, social status, health condition, loneliness, and other psychological complications. During a survey in the “Nork” general boarding house, almost all the residents surveyed noted that staying in a boarding house was associated with restrictions on their usual lifestyle, creating a painful feeling, difficult experiences due to the absence of a familiar environment and close people. And all this cannot but be important both in the deepening of intellectual disorders, disorders of cognitive processes, and behavior and the appearance of mental disorders at a later age [Tataryan, 2008, 1-3]. Not to mention the fact that general boarding homes often house and serve elderly people with mental health problems that were identified with age after their admission. In boarding houses and boarding houses of a general type there is no specialized psychiatric care, including medication. Based on this, it is advisable to consider the issue of creating special gerontopsychiatric departments at such institutions. In a survey of 420 elderly and senile people attending the day department of one of the Moscow social service centers, depressive spectrum disorders of a non-psychotic level of a periodic or constant nature were identified in 70.3%, which indicates a high prevalence of mental disorders of a non-psychotic level in late age. Active identify-

cation of such disorders will become possible as a result of the creation and functioning of such new out-of-hospital forms of gerontopsychiatric care as gerontopsychiatric, gerontological, geriatric offices in general somatic clinics and social service centers. [Polishchuk, 2018, 1-3]. Even a brief consideration and analysis of all the above data indicates the widespread prevalence of borderline mental disorders in late life and emphasizes their great medical and social significance.

In Armenia, some work has been done to create services adequate to the needs of people with mental health disorders and mental problems, in particular, boarding homes and day centers of various models, as well as strengthening dispensary control in the direction of training psychologists, psychiatrists and social workers. The first day center, the purpose of which was to provide psychological and social rehabilitation services to people with mental health problems for their socialization, was created in Armenia in 2000 by the Mental Health Foundation. The center was created taking into account international experience and different models and situational analyzes in Armenia. When organizing the day center a number of features were taken into account: therapeutic environment, rehabilitation (individual rehabilitation plan), accessibility, etc. This center became an exemplary model for Armenia, but was closed in 2010 due to lack of funding.

The goal of the mental health field as a whole is to keep people mentally healthy. This is reflected in the Concept for the provision of care services and alternative forms of social services for persons with mental health problems approved by RA Government from September 13, 2013 N 36 and the program of activities for the implementation of the Concept for 2013-2017. [The Concept, 2013, 3-15].

**Scientific novelty.** The existing system of services provided to older people with mental health problems cannot cover the full range of their socio-psychological needs and cannot ensure the targeting of such services. Based on this, there is a need to introduce new approaches to determining the need for certain services and, accordingly, introduce new service models. Assessing the individual capabilities and needs of older people with mental health problems using specially developed tools adapted to our situation, needs assessment questionnaires (CANSAS) can become a new approach in determining the need for services, developing standards for the provision of services, introducing new types of services and developing interdepartmental and intersectoral work.

**Analysis.** According to the state concept, the main problems of the sphere are that the issues of care and social services for the mentally ill and people with mental disorders are not fully regulated by law, the shortage of specialists in the field of mental health: psychiatrist, psychologist, social worker, occupational therapist, social teacher, art therapist, etc., lack of specialized nursing homes or day centers for elderly people with mental disorders. The concept pays attention to such important issues as the need for round-the-clock and day hospital care for people with mental health problems, the elderly, as well

as children and adolescents with mental disabilities, the insufficient number of community day centers that meet the needs of people with mental problems, and limitations on the provision of services at home, restrictions on services for people with mental disorders in a temporary shelter for the homeless, etc., lack of accompanied housing for people with mental health problems, lack of employment and rehabilitation centers for adolescents and young people with mental health problems, etc.. Availability of the above problems indicates that families with a member with mental health problems are often left alone with their problems after the relative is discharged home from a psychiatric institution.

It should be noted that some of these issues have already been resolved. Thus, regulations have already lifted restrictions on the provision of services for people with mental health problems at home, and a corresponding department has been created in the home care service. There are examples of assisted living and new day centers. Relevant decisions have been made, including organizational ones, and a legal framework has been developed aimed at improving psycho-social assistance. However, issues that need to be resolved remain. This is a matter of personnel training: these are gerontopsychologists, psychiatrists, and social workers. This is an acute shortage of specialists both in psycho-neurological boarding homes and in psychiatric hospitals, especially if they are in remote areas of the republic. This is the introduction of modern approaches to the process of assessing and organizing the provision of services, interdepartmental interaction.

Back in 2016, the Armenian Psychiatric Association and the Ministry of Labor and Social Affairs of the Republic of Armenia developed a methodology for assessing persons with mental health problems in accordance with their physical and mental health condition, self-care ability, social skills and abilities, and, accordingly, a methodology for determining groups of persons who need certain living conditions, services and care. [Sukiasyan et al., 2018, 5-16]. The study was conducted using the following tools adapted to our situation:

- 1) Camberley Needs Assessment Questionnaire (CANSAS);
- 2) Short Camberulian Needs Assessment Questionnaire (CANSAS) (modified for use in residential care settings);
- 3) Psychopathological State Assessment Questionnaire; 4) Demographic questionnaire.

The Camberulian Needs Assessment Short (Modified) Questionnaire (CANSAS) includes the following questions: about accommodation (are you satisfied with the living conditions), food (can you prepare food), housekeeping, taking care of yourself, day-time activities, physical health, Psychotic symptoms, health problem and treatment information, psychological depression, safety for yourself, safety for others, alcohol or drug use, child care, education (reading, writing, comprehension, and arithmetic difficulties), using a speech therapist, using transportation, spending money, and more.

The study also used a supplemental questionnaire to the Camberul Short Questionnaire for Needs Assessment, which provides a detailed understanding of a person's needs. For example, housekeeping was determined by the following questions:

Are you able to do household work?

Someone is helping you

- It becomes difficult to take care of the apartment [if 0 (yes) or 9 (no/not known) there is no need to continue];

- What kind of help does he/she get from his relatives or friends in taking care of the apartment?

- What support does the local services office provide in housekeeping?

- What support does he/she need from local services in housekeeping?

- Beneficiary's opinion about the services.

A mental health assessment chart was also developed. Necessary blank data has been filled.

The use of these tools was carried out by persons with appropriate professional education who passed an initial short course.

Based on the developed methodology, an assessment of the needs and abilities of people with mental health problems registered for admission to care facilities and care facilities was carried out.

With the mentioned methodology and tools, an interview was conducted with 1010 beneficiaries and caregivers in all institutions providing round-the-clock care in the republic:

- Vardenis neuropsychological boarding house
- Sevan psychiatric hospital
- Regional neuropsychiatric dispensary of Syunik
- "Nork" psychiatric center
- "Avan" mental health center
- Nor Kharberd specialized orphanage
- "Nubarashen" psychiatric center
- Armash health center named after Hayrikyan
- Gyumri Mental Health Center
- Lori regional neuropsychiatric dispensary
- Vardashen shelter for homeless people
- Nork boarding house
- Gyumri boarding house
- Boarding house number 1 of Yerevan

The research was carried out using a survey method with both older people with mental health problems and service personnel in social and medical institutions. Meetings and discussions were held with representatives of the RA Ministry of Labor and Social Affairs and the RA Ministry of Health, as well as with public organizations providing social and psychological services to elderly people in need.

According to this methodology, people with mental health problems who completed a needs assessment as a result of the above study are divided into the following five groups:

1) Beneficiaries included in the first group do not have (at the time of the survey) troubling mental health problems, do not pose a danger to themselves or others, have sufficient social skills for independent living and can receive services in supported / accompanied housing or care houses for up to 8 people, where observation by a local/district psychiatrist will be organized, both for people with mental disorders living in their own homes, and the services of a social assistant/case manager will be provided in solving everyday problems;

2) Beneficiaries receive services in supported housing/accompanied living or care houses for 8-16 people;

3) Beneficiaries who require 24-hour supervision/care but remain independent and who can still receive services in a care facility. Beneficiaries included in this group, in case of consistent and persistent social and psychological rehabilitation, can be transferred to the second group;

4) Beneficiaries require constant intensive care and can continue to receive services in this institution;

5) Beneficiaries included in group 5 need active treatment and clarification of the diagnosis, despite the fact that they have been previously assessed. Only after this it will be possible to assess their true needs and the necessary conditions for receiving services.

According to the results of the conducted studies:

- 752 people (73%) need to receive care in existing institutions;

- 216 people (21%) can live in round-the-clock care homes designed for 3-16 people in terms of their mental, physical condition and maintenance of household skills and have a great potential to integrate into society to lead an independent life in the future.

A study conducted using this method in the Vardenis neuropsychological boarding house, the center for helping people with mental disorders "Dzorak" and specialized orphanages (Kharberd and Izmirlyan) showed that 14 people (group 1) can live in supported/accompanied housing, 25 people (group 2) can live in care homes for 8-16 people or receive care in small homes with 24-hour supervision.

For beneficiaries who, according to the evaluation criteria, can receive services in Vardenis, it is advisable to separate those with mental and psychiatric problems and also those with more severe problems from those with milder ones.

As a result of an assessment of the needs of 1316 dependents conducted in 24-hour care facilities in 2022 [Study of the need for social services among elderly citizens of Armenia, 2016], it was founded that:

- 25.4% or 334 people in their current state can already receive services outside institutions,
- 49% or 641 people need round-the-clock supervision/care, but at the same time they maintain their independence and can continue to receive services in a care facility, and in case of consistent rehabilitation work, they can be transferred to their facility,
- 22% or 291 people need constant intensive care,
- 4% or 48 people need active treatment.

A study on the results of the transformation of social services, mental health services, in which large psychiatric institutions are gradually replaced by alternative services, such as short-term care homes, community day care centers and other services, showed a positive dynamic. And this is not only the development of social skills, serious steps towards socialization, this, which is very important, served to strengthen family ties.

The best examples of such centers in Armenia are the community house in Spitak, where 16 people with mental health problems live, and the group houses of the "Jermik Ankyun" foundation, the number of which has already reached 3, and the number of residents - 30.

All surveys conducted show that beneficiaries in psychoneurological boarding homes and psychiatric clinics in most cases receive services that do not meet their needs and capabilities.

In order to target persons with mental health problems to the appropriate organizations providing them with psychological and social services (both public and non-governmental sectors), it is necessary to continue to develop methods for providing assistance and social services to people with mental disorders in accordance with their diagnoses, severity of the disease, retained abilities and general condition, it is necessary to continue the work to ensure the targeting of the services provided, it is necessary to create a system of dynamic mapping of such services.

International documents and recommendations indicate that the most effective care for mental illness is comprehensive, based on a holistic, "biopscho-socio-cultural" approach to assessment, treatment and care of the patient, provided by competent, knowledgeable professionals, supported by appropriate informed members of families and communities, is flexible, tailored to individual needs, responsive to them (for example, provided in



culturally appropriate ways in the home or other appropriate settings), and delivered by a multidisciplinary team. [UN Department of Economic and Social Affairs, 2008, 93-105].

**Conclusions.** It is expedient to carry out a complex geriatric and gerontological assessment of an elderly person using the principles and approaches of the International Classification of Functioning and Health (ICF, adopted by WHO in 2001). The result of such an interdisciplinary diagnostic process for determining functionality, as one of the main determinants, can be the development of a complex of medical, psychological and social measures, the creation of a coordinated action plan aimed at long-term support of an elderly person, providing him/her with the necessary targeted services, and adapting the social service system for elderly people.

Currently, deinstitutionalization is an important stage in the transformation of social services and mental health services, in which large psychiatric institutions are gradually replaced by alternative services such as short-term care homes, community day centers and other services.

One of the new effective forms of adaptation to independent living can be considered assisted living. The best examples of such centers in Armenia are a community home in Spitak, where 16 people with mental health problems live, and group homes of the Jer-muk Ankyun Foundation, the number of which has already reached 3, and number of residents 30.

Organizing a biopsychosocial assessment of the condition of people with mental health problems and providing them with targeted, high-quality services requires, first of all, the availability of professional personnel. This requires intersectoral work on training and re-training of personnel: psychologists, psychiatrists, geriatric psychiatrists, social workers and other specialists.

As part of the provision of comprehensive social services, it is necessary to support family members of people with mental disorders in obtaining free psychological, social, legal and counseling assistance. Increasing family intensity can have a positive impact on their socialization.

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**Jemma BAGHDASARYAN**

**Modern approaches related to the management of socio-psychological services**

*Key words: older people with mental health problems, gerontopsychology, mental problems, social and psychological services, alternative forms of service*

The article discusses measures aimed at improving management processes in the provision of social and psychological services to people with mental health problems, as well as measures necessary to improve the social and psychological state and stabilize the mental condition of people with mental health problems. The emphasis is mainly on organizing this process, on issues of a comprehensive assessment of the needs and capabilities of this group of people and providing them with targeted measures and social services, adequate to their capabilities, aimed at developing their social activity. Attention is paid to the issues of psychological and social adaptation of older people, which is currently relevant for the entire society, and its solution is mainly the strategic task of gerontopsychology. The current state of the system of mental health and social protection services is presented from the point of view of the need to create alternative forms of services. Based on advanced international experience and work carried out in Armenia, the article pays attention to the importance and necessity of introducing and developing new forms and types of psychological and medical-social assistance to people with mental health problems. Data from studies both conducted by the author and those conducted on his initiative are presented. Conclusions are drawn and recommendations are made on the measures necessary to improve the social and psychological state of people with mental health problems.

**THE KEY DIRECTIONS OF THE STRATEGY AIMED AT OVERCOMING  
DEVELOPMENT DISPARITIES IN THE FIELD OF  
PUBLIC ADMINISTRATION**

**Nairi SARGSYAN**

Ph.D. in Law, Doctorate applicant, Institute of Economy RA NAS

Key words: community, territorial development, development disparities, public administration

**Introduction.** The economic growth of any country, as a rule, requires the development of directions and mechanisms for overcoming the disparity in the development of community units, which are necessary in order to solve the problems of the development policy of territorial units. This policy includes fiscal, territorial finance management, regulation of the tax system, formation of community finances, investment programs, creation and provision of various services, the solution of which, in connection with the strategy for overcoming the disparity in the development of local communities (SODDLC), requires an assessment of the development environment of territorial units, the level of capacity utilization, resource provision, as well as public administration support. Overcoming the disparity of regional development has become a concept of purposeful activity aimed at a coherent activity of the development goals.

From this point of view, it is important that each of these directions of activity is evaluated and guided by certain standards of development and levels of management (local self-government and state). In the economic system of any country, the purpose of the functioning of the management levels for the implementation of the SODDLC policy is to provide the prerequisites for the complex and sustainable development of territorial units, so that all units have opportunities for balanced development. Achieving that goal requires justifying the directions of balanced development of the territory, conducting the fiscal policy of the SODDLC and choosing such criteria for the management of this overcoming, which reflect the effectiveness of the creation and use of material and financial resources for organizing the activities of regional associations.

**Methodology and literature review.** The theoretical basis for solving the problems presented in our article was the main provisions, viewpoints and concepts, models and methods of the classic and modern theories of public administration, economics, jurisprudence, the reforms in the global practice of public policy, the studies of Armenian and foreign researchers in the field of public administration. The information basis for the study was the laws and legal acts of the RA and foreign countries, the publications and official statistic bulletins of the RA, international organizations (International Monetary Fund, World Bank), as well as the assessments of various experts. In the course of the study, accounting methods were also used. In the study, the data from various organizations were considered, which refer to the interplay between public administration and ter-

ritorial self-government, were used. It's the best way to learn, design, and develop.

Methodological and practical issues of public administration in Armenia under the new conditions after gaining political independence related to local administration were discussed by A.Sh. Harutyunyan [Harutyunyan, 2005], E.H. Ordyan [Ordyan, 1998], T.N. Manaseryan [Manaseryan, 2013], V.B. Bostanjyan [Bostanjyan, 2019] and many others. At the same time, many problems of the formation of the public administration system need the development of new and more effective approaches.

**Scientific novelty.** As a result of the study, a number of theoretical and practical results were obtained. From the point of view of increasing the efficiency of public administration, the necessity of recording human, natural, production and financial resources in local communities and their purposeful use was substantiated. The cause-and-effect relationships between the decline in the efficiency of territorial administration and the asymmetry [Mardaryan, 2006] of development have been revealed.

**Analysis.** Now the problems of regulating the stabilization of the financial situation of community associations are being emphasized and brought to the fore. For this reason, territorial policy [Dunn, 2004, 112] has become an integral part of the policy of balanced economic development, the activity of which is represented by the SODDLC and is carried out under the conditions of complex and functional operation of financial and fiscal systems. The expansion of this operation contributes to introducing changes in the order of drawing up the financial balance sheets of territorial associations, and partly in the structure of financial resources. In that regard, we consider it appropriate to provide a certain part of the income tax and profit tax collected in the territory of the communities to the budget of the territorial union. The volume of community budgets, as prerequisites for the balanced development of communities, is still very small and cannot act as a tool of the SODDLC.

The financial system of regional associations includes budgets of communities, financial resources of organizations subordinate to communities, transfers allocated from the state budget, subsidies and funds from other sources. The state budget grants to communities amounted to 22 AMD billion compared to 7.6 AMD billion in 2000, and 10.6 AMD billion in 2004<sup>1</sup>. Subsidies given to communities from the state budget were made for the purpose of financial equalization of territorial associations. In our opinion, grants should be given on a different basis, reflecting regional differences in financial needs, and additional grants should be allocated to communities that are tax-deprived and require balance between revenue collection capacity and financial costs.

Ensuring the SODDLC requires cooperation, integration, regulation of resource and

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<sup>1</sup> www.armstat.am

financial relations between territorial associations, improvement of fiscal activities. Now, a fiscal policy has been formed, which resulted in an uneven distribution of income, restrictions on the application of financial leverage.

At present, the fiscal policy related to the SODDLC is neither tax nor budget oriented. In that regard, the fiscal policy should take into account the optimal distribution of the tax burden between the types of taxes, the increase of the specific weight of indirect taxes, the definition of tax benefits, the amount of coercion, the tax bases and the need to allocate subsidies [Anderson, 2003, 35]. The fiscal policy of RA still does not function as a condition of the SODDLC, this policy does not ensure the stratification of the general level of taxation between regions, does not regulate the ratio of total tax revenues and GDP of the regions. In this regard, it is necessary to improve the functional activity of the fiscal system in order to regulate the formation of the revenue structure of all municipalities, to justify the revenue base of the municipal budgets and the efficiency of taxation. SODDLC should be considered from the point of view of fiscal policy, in order to establish the basis of this policy, firstly, SODDLC provides prerequisites, as well as features of taxation object, base, rate and provision of tax benefits.

Second, to justify the importance of the tax activity of the fiscal system and the subsidies allocated to the municipal budgets in the process of the SODDLC. Thirdly, to define the norms of expenditures from the municipal budgets, according to the costs of overcoming the inequality of their development or the implementation of proportional development problems. Fourthly, to condition the SODDLC on the right choice of the methodology of state regulation of the development of regions, for which the environment of the development of the region and the prerequisites of its formation should be taken as a basis, which should be evaluated based on the application of the features of the fiscal policy. Fifth, to condition the SODDLC on fiscal reforms, which refer to the improvement of the tax base, the rate, especially the privilege, and the existing regulations for the elimination of the tax. Sixth, it is expedient for SODDLC to equalize the total amount of subsidies allocated to communities with the normative costs of the communities' budgets and their total tax revenues.

The solution of many problems of the SODDLC represents serious complications, which are largely related to the use of the features of the functional activity of the fiscal system. One of the features of the fiscal policy is the optimal level of the tax rate, and the other part is the financial support of the budgets of the communities.

From this, it follows that the fiscal system becomes a powerful tool, for this the tax policy needs to be considered from the perspective of a new resource factor and the mechanism of its influence. Second, the tax policy should be derived from the experience of the SODDLC, taking into account the optimal ratio of direct and indirect taxes, which is related to the regulation of the tax system and burden distribution. Thirdly, it is neces-

sary to form the tax policy not only for the solution of fiscal problems, but also especially for the stabilization of the SODDLC and balanced development of communities. Of course, fiscal issues concern the development of mechanisms for regulating tax rates, which are related to overcoming the disparity in the development of regional associations, the management of which should be carried out by the state and local self-government bodies, taking into account first of all the financial security of the development of communities, their own budget revenues, overcoming the disparity of development subsidies allocated for second, based on the issuance and circulation of community loan bonds, to develop the approaches and mechanisms for the formation of the investment-lending system (ILS) in the communities. Third, for the purpose of balanced development of regional associations, the enlargement of communities should be emphasized, which is one of the ways of distribution of urban and rural communities by marzes, administrative territorial division and concentration of financial resources for community development. Community enlargement can increase the importance of municipal securities in generating revenue and financing budget deficits [Nazaryan, 2005]. This issue becomes more significant when we look at it from the point of view of collection of the planned revenues of the budgets of the communities, the level of which is very low in rural communities and is 50-55 percent of the planned. As a means that the development of communities will happen unevenly. In this regard, the need for the formation and development of the community bond market is highlighted, which will help communities have sources of financing and opportunities for balanced development. The establishment of the municipal bond market is important not only for the purpose of financing the deficit of the municipal budgets, but also for the formation and operation of the municipal loan system and the investment-lending sector included in it. In this regard, the innovation activity of large associations is emphasized, which requires the creation of a spatial and regional environment for innovation [Potusek et al., 2003, 56-61], which includes organizational, legislative and socio-economic, competitive and investment environments, which are directly related to the organization of SODDLC processes. In this regard, it should be taken into account for the balanced development of the regions.

- the microeconomic level of investment-innovation processes, taking into account the economic significance of consumption and export of innovation,
- the volume and structure of investment in innovation and the influence of financial leverage on the proportionality of the development of associations in the region,
- the development of a system of comparable indicators for the assessment of the balanced development of regions, the influence of investment-innovation activities on that balance,
- the financial resources of innovation of associations of regions and their proportional sources,
- approaches, concepts of evaluation and selection of investment-innovation projects.

- the creation of a national center of innovation can organize the financing of innovation and determine its importance for the formation of the symmetry of the development of regional associations.

It is also advisable to use leasing funds as financial resources for the RA HMADAH.

- interest in leasing activities in the republic continues to grow. The processes lead to an increase in the number of leasing companies, foreign leasing companies express a desire to enter the local market, which in turn causes the need to create a favorable climate for leasing business in the republic.

- by encouraging leasing activities (including tax incentives), the state can significantly reduce budget allocations for financial investments,

- technological re-equipment of the republic's industry, in our opinion, should be carried out through the creation of leasing companies and joint ventures,

- the adoption of decisions on the creation of leasing companies can be evaluated and conditioned by a number of circumstances, including the availability of equipment acquisition programs and the necessary minimum financial resources, the degree of validity of leasing transactions, the possibility of attracting additional credit resources and setting a profitable leasing margin,

- as well as the reliability of guarantees given to leasing companies,

- the activity of leasing companies should be based on certain principles: purposefulness, lack of collateral, long-term nature, flexibility, availability of funds,

- the mandatory availability of collateral required by financial institutions in exchange for providing credit resources to companies is currently one of the main obstacles to increasing investment risks and providing loans for borrower companies,

- in terms of the initial amount of financial capital, it is more realistic for commercial banks to be the founders of leasing companies in the republic,

- the following sequence of activities of the leasing company was proposed: risk assessment of the investment-leasing project, discussion of the terms of the application for the supply of machinery, economic-legal and technical expertise, development of guarantee schemes, negotiation with the supplier and development of the most favorable purchase conditions, receipt and control of insurance guarantees.

**Conclusions.** The attraction of foreign investments is an important source of financing for maintaining the symmetry of development of regional units.

In order to promote the inflow of foreign investments, in countries like Armenia with a transition economy, especially with small volumes of minerals, the development of a unique substructure of the physical, social and market economy is also important. As the experience of newly industrialized countries shows, if initially the inflow of foreign investments in these countries was determined by the favorable policy towards foreign investors, then the infrastructure factor became crucial later. The development of

substructure unique to the market economy in Armenia is the area to which a less systematic approach has been shown. Thus, we believe that along with a certain level of establishment of the financial and banking system, there is still enough work to be done to develop insurance services and other non-banking financial institutions in Armenia, particularly pension funds, brokerage organizations, investment funds, venture, leasing and consulting companies. These sub-structures contribute to creating such environments for the balanced development of regions as competitive ones.

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### Nairi SARGSYAN

#### **The key directions of the strategy aimed at overcoming development disparities in the field of public administration**

*Key words: community, territorial development, development disparities, public administration*

As a result of the analysis of the indicators of individual associations of RA territories and marzes, it was revealed that although the processes of shareholding in RA were fast, but due to the lack of innovations and investments, the companies could not enter the competitive field. Currently, marzes are taking very slow steps to move to the stage of development of competition based on innovations. Among the main reasons for this are the long-term freezing of production capacity, the breakdown of the structure, the termination of the SODDLC and the decline in the natural volume of production, as well as the lack of cooperation and integration of companies and the decline in exports. In this regard, the balanced development of regional associations requires the development of sectoral and regional programs for the development of competition, taking into account the provision of equal conditions of competition in the markets.



**MODERNIZATION OF CIVIL SOCIETY AND SOCIAL PARTNERSHIP  
ACHIEVED AS A RESULT OF PUBLIC POLICY: AN OPPORTUNITY FOR  
MARKET ECONOMY'S GROWTH**

**Armen MELIKYAN**

Ph.D. applicant, Department of PPS, PAA RA

**Vardan BOSTANJYAN**

Doctor of Science, Professor, YSU

Key words: social partnership, public policy, civil society, democracy, modernization, competitive social model

**Introduction.** The article briefly attempts to consider public policy as a means for the transformation of traditional-hierarchical social partnership, which is possible if the public becomes more aware of their rights, and in public life, civil society is formed in different interest groups. Civil society creates an opportunity for the transformation of the old work environment, as a result of which modern models become vital, which contributes to the valorization of the identity of interest groups in the market economy and the prevention of possible abuses. In particular, the use of new technologies in the work environment increases the level of education and the public becomes more self-sufficient.

Our study refers to a number of models of public-state relations and gives preference to the cooperative model, which is considered the best for effective dialogue between the state and civil society. The circulating liberal model contains the danger of chaotic situations, it is unacceptable to minimize the role of the state, and the control model is a direct path to totalitarian or authoritarian management systems. Considering the existing civil society as a guarantee for efficient social partnership, we believe that in order to overcome the institutional, substantive crisis, self-sufficient and educated work collectives can create real opportunities to curb abuses and create an effective working environment.

**Methodology.** A number of scientific materials were studied during the work. A comparative method applied, commonalities were pointed out between the formation of civil society and the increase of resource-creating capacities of social partnership, as a result of which the efficiency of public administration was also increased. Using the systemic method, the problem was considered as an interconnected set of a number of elements and the idea of the need for institutional and general solutions was put forward as a result of functional-analytical works.

**Literature review.** Transformations in public policy are due to the fact that it does not matter what kind of intervention a person lives in. [Ebzeev, 2017, 7]. Sociologist Manuel Castel believes that in the modern world, traditional social hierarchical models are disintegrating [Castells, 2010, 494]. Cooperation between the state and civil society replaces the classical models of public administration [Sekirina, 2018, 2-3]. Juan J. Linz and

Alfred Stefani believe that civil society can include all social strata [Linz et al., 2011]. Civil society is an association of non-political elements and individuals who have private goals and interests [Mamut, 2002, 94]. Baranov and Polyanskaya assign key importance to trade unions in social partnership [Baranov et al., 2017, 4].

***Scientific novelty.***

- Due to the public policy, the traditional-hierarchical social partnership model inherited from the USSR should be transformed into an equal partnership model.
- To achieve the transformation of social partnership through the civil society, to appropriately consider the cooperative model in RA.

***Analysis.*** At the core of public policy is man. In general, a person is created to be a part of the public environment, and it does not matter to him what kind of world he lives in [Ebzeev, 2017, 7]. One of the problems of the effectiveness of public policy or public administration is the ineffectiveness of the policy, as well as the inability to make and implement decisions in the management system, the insufficient level of service provision. Emphasizing the human factor in the effectiveness of public policy, at the same time, we think that sometimes the effectiveness of management is related to the need to use coercive policies, because laziness in human nature and a negative attitude towards one's own work can have a significant impact, and it is necessary to force, control, direct, so that it is possible to achieve the goals of public administration. For example F. Herzberg argued that in order to understand the nature of management, one must follow the motivations of people's behavior [Killen, 1981, 93].

Herzberg's approach is acceptable in itself, because the development of the working environment stems from the level of interdependence between the person and the work. Noting the changes made in the philosophy of management, sociologist Manuel Castell finds that in the modern world, hierarchical, traditional social models are disintegrating [Castells, 2010, 494]. In the new post-industrial reality, new societies using information technologies intensively are forming. Digital technologies, social networks all over the world stimulate globalization processes, which makes the gap between the public and traditional management models inevitable. According to the Russian researcher E. Sekirina, the open government model, where the state and civil society cooperate, is coming to replace the classical models of public administration [Sekirina, 2018, 2-3].

In political perceptions, the concepts of "civil society" and "state" were identified for a long time, and only T. Hobbes and J. In Locke's works, "civil society" is presented to reflect the historical development of human society and shows the fairness of individual freedom [Rastimeshina et al., 2012, 2]. Civil society can include various social movements (women's groups, religious groups, organizations of intellectuals, etc.). Juan J. Linz and Alfred Stefani consider that civil society can include all social strata, from trade unions to business groups, journalists or lawyers [Linz et al., 2011, 26]. In another work,

Alfred Stefani believes that civil society is the domain of public life that lies between state institutions on the one hand and families on the other, members of civil society voluntarily associate with others to engage in the full variety of public activities, and civil society is relatively independent from the state [Stefani, 2011, 38]. L. S. Mamut believes that civil society is an association of non-political elements and individuals who have private goals and interests [Mamut, 2002, 94]. The existence of unavoidable private interests makes it worthwhile to develop approaches comparable to the interests of the state, so that it is possible to transform painful conflicts into a cooperative environment, ensuring pluralism and reconciliation of interests. During the ongoing relations between non-governmental organizations and the state, there are controlling, liberal, and sometimes conflicting ones. and factorial models [Hovhannisyan, 2017, 6].

We think that factor models can be more beneficial for states, thanks to which public policy can be more effective. The first model predicts total control of the state over public life, where pluralism is excluded, civil and political life is under the hierarchical influence of the state. It can be a dangerous extreme to completely pay tribute to the liberal model. The liberal model, paying tribute to the idea of absolute freedom, weakens or nullifies the state's presence in public life, ensuring both the constant danger of creating conflicting phenomena and the emergence of chaotic events. Dialogue, cooperation and mutual control between the state and CSOs are characteristic of the cooperative model, which is considered preferable. In the case of this model, the civil society is free to act both as a critic and as a collaborator. For the implementation of effective public policy in RA, we think that the critical-participatory model is desirable, where illogical aspirations are counterbalanced and restrained, and the mechanism of public pressure works effectively, on the other hand, representation and participation of the state is guaranteed. In our opinion, the civil society in RA should be anchored in an environment where it will have legal levers to establish control over the state apparatus and tools to update the political system. However, one should not be carried away by such illusions that the civil society can replace the political system, in the best case, the civil society can feed the political system, if professional personnel potential has been formed there. In the analysis of the role of the state, A. Solovyov's claim, according to which one of the ways of interaction between the state and civil society can be the construction of partnership relations, where the state should encourage the manifestation of civil activism, while maintaining a distance to maintain relations with civil society [Solov'ev, 1996, 6].

Social partnership is one of the important spheres of civil society, where relations are built for the choice of capital management methods, and the state is involved here as one of the parties in the formation of relations, aiming to ensure fair redistributions. Therefore, public policy can be qualitatively transformed when the stakeholders of social partnership cooperate more effectively, which will create a qualitatively new culture of coo-

peration in public life, modernizing the inefficient formats of existing relations between the state, employers and labor collectives.

**Conclusions.** Social partnership in traditional forms had hierarchical models, where the advantages of the state or employers over labor collectives were emphasized. As a proof of what was said, we consider Y. Korna's opinion, that the "paternalistic" model of social partnership was implemented in the USSR. The central government assumed responsibility for the economic and social situation and at the same time pretended to use its tools that seemed appropriate for the given situation [Kornai, 1990, 588]. With another approach, which was put forward in the 50s of the 20th century, in particular, H. Brown placed the social responsibility on businessmen, who had to align their strategic plans as much as possible and at their own discretion with the goals of society and the professed value system approaches. Both of these approaches show that in the past we were dealing with programmed management models, where the so-called public policy was theoretically and practically absent. According to Russian researcher A. Yatsenko, social partnership should theoretically be structured in such a way that it can solve a large number of problems, involve a large number of participants who ensure the stability of current relations, act according to the logic derived from laws and be based on the interests of employers and employees. [Yatsenko, 2018, 2]. Baranov and Polyanskaya assigned central importance to trade unions in social partnership, emphasizing their level of institutionalization, number, quality, concluded agreements, etc. [Baranov et al., 2017, 4]. Observing the approaches of different authors, we may conclude that the formation of civil society institutions within social partnership, particularly the strengthening of trade unions, will promote the opportunities of social and economic development of RA, forming self-sufficient labor collectives, which will be intolerant of irresponsible decisions of the state and owner-businessmen.

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**Armen MELIKYAN, Vardan BOSTANJYAN**

**Modernization of civil society and social partnership achieved as a result of public policy: An opportunity for market economy's growth**

*Key words: social partnership, public policy, civil society, democracy, modernization, competitive social model*

In the article, during the discussion, he emphasized the exclusion of discriminatory treatment of individual groups in social partnership through public policy, because public policy is associated with increasing the efficiency of management, which implies increasing savings and capacity within social partnership, expanding social responsibility, ensuring social justice, rights etc. From the point of view of solving the socio-economic problems in RA, the introduction of the factor model was worthwhile, to demonstrate its importance, we performed a comparative analysis. The article briefly presented the essence of civil society, presented the opinion of some authors on the importance of creating self-sufficient public institutions. The existence of a natural contrast in the relations between the civil society and the state was emphasized, and at the same time the need to combine interrelated interests, which makes the need for a civilized dialogue inevitable. The formation of cooperation platforms was important for ensuring the normal course of economic relations. The modernization of the traditional relations formed between the state-employers and labor collectives was worthwhile. I think that a model of social partnership should gradually be formed in RA, which will replace the paternalistic model inherited from the times of the USSR, and will involve a large number of people from within employers and labor collectives.