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ABSTRACT

of the dissertation for the degree of Doctor of Philosophy

**THE ROLE OF FISCAL REGULATION IN MAINTENANCE
OF MACROFINANCIAL STABILIZATION**

Speciality: 5301.01 – Domestic fiscal policy and public finance

Field of science: 53 - Economic sciences

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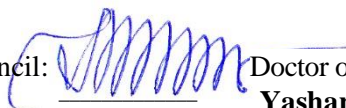
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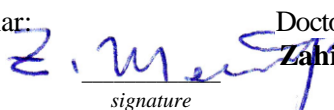
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GENERAL CHARACTERISTICS OF DISSERTATION

Actuality and study degree of the subject. In the context of growth of the global economic threats and changes in mechanisms of the global economic system, the economic processes and relations become more complex and deep. For that reason there are required reasonable models and mechanisms of the fiscal policy of the state, more effective measures of the fiscal regulation for maintenance of the country stability at the macroeconomic level. By means of the fiscal regulation such complex and systematic measures are developed and implemented by the use of which the state can impact on maintenance of the macrofinancial stability. First of all among the main priority tasks there is analysis of the problems of the macrofinancial impact of the crisis on all sectors of the national economy, issues of economic security maintenance by means of development of effective system of analysis and forecasting of economic security, problems of increasing the elasticity of financial resources with the help of the budget system, tax policy, national projects and others. In the context of globalization and especially as the result of global financial crisis and economic instability, the role of fiscal regulation in maintenance of macrofinancial stabilization of national economics significantly grew. Besides, in connection with the Covid-19 pandemic completely new challenges and requirements for financial institutions emerged. Moreover, in connection with the liberation of the occupied territories from the Armenian invaders, new strategic targets were created on the way to intensification of development and diversification of national economics in Azerbaijan on the account of revival and restoration of the liberated territories. Newly created economic regions – Garabagh and Eastern-Zangezur economic regions – can become a favorable springboard for development and realization of more effective tax and fiscal mechanisms and tools, as well as they will contribute for maintenance of the fiscal policy effectiveness in the regions of the country.

Under these conditions, it is necessary to study fundamentally the existing problems of the financial system in the country, its main components, mechanisms, as well as it is required to research the compliance of fiscal mechanisms with current global economic challenges - all these stipulates the relevance of the selected topic of the dissertation.

The problems of finances, financial system and regulation mechanisms were expressed in the works of classics and founders of economics, the scientists and researches of modern times. Even in socialist Azerbaijan, the scientists of the country had been researching financial aspects; however, this was of an ideological nature and promoted the reliability of the union budget system. With the restoration of independence, Azerbaijan needed a deep study of the problems of the financial system and its fiscal mechanisms already as a sovereign state. The fiscal regulation and its role in maintenance of macrofinancial stability, the impact of these processes on the budget and tax situation of the state were researched by a number of economic researches. Thus, such scientists as Alekberov A.A., Mammadov Z.F., Sadigov M.M., Kalbiyev Y.A., Bagirov M.M., Hasanli M.Kh., Atashov B.Kh., Aliyev Sh.T. and others studied these problems under modern conditions.

Research of the conceptual basis, theoretic aspects and essence of the fiscal system were expresses in the works of such foreign scientists and researches as Smith A., Ricardo D, Vickrey W, Petty W., Boisguilbert P., which researched such important economic category as 'taxes' in their works. The problems of formation of the effective fiscal policy and the possibility of its impact on macroeconomic stability were reviewed in the works of Feldstein M., Laffer A., Keynes J., Minsky H. and others. The mentioned above aspects and problems were also reviewed by such researches and scientists as Haydar Y., Kudrin A., Yasin Y., Illarionov A., Rjevskaya T., Panfilov V., Zaykov V., Kaurova N., Paul A, Lukyanova A., Shvecsov A. and others.

However the tendencies of the current financial system and the importance of fiscal mechanisms stipulates its significant improvement and development of the maximum effective mechanisms of financial system and such fiscal tools which are able to maintain the financial stability in the country under the conditions of global economic challenges. The complex of the mentioned above problems and issues demands the further deep study and development of new approaches to solution of these problems.

Targets and goals of the research. The main aim of the dissertation work is study of the factors influencing the macroeconomic stability of the economics by means of the fiscal regulation mechanisms. Based on the dissertation work structure we were solving the following issues:

- Study of the theoretical and methodological basis of the macrofinancial stabilization of the country by reference to global economic processes;
- Research of the rationality and effectiveness of the tax tools with the aim of maintenance of the macrofinancial stability through its renovation and congestion by the tools of the fiscal regulation;
- Consideration of features and specific characteristics of stabilization policy of the country under current conditions;
- study of efforts of the state to maintain the sources and factors of the financial stability in the country, ensuring the growth of GDP;
- research of importance of the budget regulation mechanisms and its influence on the macroeconomic situation in the country;
- implementation of the assessment of the current tax potential and its role in macrofinancial system;
- review of the financial stabilization problem in the country as one of the strategic goals of the state economic policy, analysis of the complex and system measures on financial stabilization and effective use of the state financial resources;
- identification of role of the tax services of the country in complex system of fiscal mechanisms;
- development of effective mechanisms on strengthening of macrofinancial stability and fiscal regulation in the context of strategic road maps of Azerbaijan Republic and etc.

The object of the research is fiscal regulation in Azerbaijan Republic.

The subject of the research is interventions and impact which the fiscal regulation proceeding in Azerbaijan Republic has sway with the maintenance of macrofinancial stabilization of the country.

Research methods. The works of national and foreign authors on fiscal regulation problems, as well as main legislative and normative legal documents identifying the key macrofinancial and fiscal component of the economics were taken in the capacity of methodological foundation. Besides, as part of the study different economic methods were used extensively: the method of systematic analysis, the method of comparative analysis and synthesis, the method of statistical analysis based on macroeconomic indicators of Azerbaijan Republic on the state tax and budget policy situation.

Main provisions brought up for defense. In the context of the main results expressing the scientific novelty, the following provisions of the dissertation work are brought up for defense:

1. The main aspects of theoretical foundations and different views on the problems of state financial policy, and especially the role of fiscal regulation are reviewed as a strategic task under conditions of continuation of the negative results of the financial crisis in the world and continuing global crisis – the Covid-19 pandemic;
2. The balancing problems of the state financial policy are reviewed in the context of modern economic realities and maintenance of macrofinancial stability in the country in modern times;
3. The main base on strengthening of the financial stability and diversification of the economics includes efficiency of the fiscal mechanisms and tools;
4. One of the main issues is maintenance of the tax elasticity differential in accordance with strategic targets on economic development of the country and strengthening of its reliability under conditions of growth of the global threats;
5. In the context of the structural and institutional reforms and in the period of diversification of the economics in the country it is demanded to change the mechanisms of tax authorities work and tax legislation, aimed to maintenance of the tax regulations visibility and fiscal instrumentarium of the operational capability;
6. One of the main strategic tasks is transition of the current mechanisms of the state regulation of the financial system on the new stage and enhancement of the fiscal mechanisms role in maintenance of optimization of the tax incomes and efficiency of use of the financial resources;
7. One of the main problems is rationale for foundational components of the fiscal mechanisms and tools on optimal maintenance of macrofinancial stability in the country on a short-term and long-term horizon, and others.

Scientific novelty of the dissertation work lies in formation of the modern scientific view, substantiation of the theoretical and methodological instruments and approaches to the role of fiscal regulation in maintenance of macrofinancial stabilization in the context of the global economic challenges. The other key aspects of the scientific novelty are

described as following:

- On the basis of the theoretical materials and views there is given an author approach to identification of the essence of financial stability and its functions, its importance taking into account the balancing of the state finance policy in the modern economic realities;
- There are revealed the main advantages and efficiency of the fiscal mechanisms and tools in maintenance of enhancement of economics reliability and growth in the country, in financial stability strengthening, enhancement of the taxable base and in strengthening of the taxpayers' liability;
- The endogenous and exogenous factors influencing the financial stability in the country were systemized and substantiated by their development via block-schematic diagram;
- There is calculated the indicator reflecting the level of income sensibility on taxes toward the changes on macroeconomic level, which is connected with efficiency of functioning of the whole state - tax elasticity differential in Azerbaijan during 2010-2020;
- With consideration to the sufficient transformation and making many amendments of the current Tax Code there is substantiated development and confirmation of the more optimal institutional and structural changes of the Tax Code, as well as improvement of the legislative base to stimulating function of the fiscal regulation and maintenance of transparence of the current tax mechanisms;
- There is substantiated the efficiency of the role of fiscal regulation in the field of balancing of the financial system taking into account the state impact and market economy mechanisms with the aim of maintenance of optimal correlation of the tax revenues and forecasted indicators of the budget in the country;
- There is developed and substantiated the block-scheme diagram of the priorities and perspectives of strengthening the role of the fiscal regulation in maintenance of macrofinancial stabilization of Azerbaijan in short-term and long-term future.

Theoretical and practical essence of the research. The main provisions and outputs of the dissertation work can be of interest to scientists, specialists, researchers, as well as managers of financial subjects and enterprises under current conditions. The materials of the research can be

used in preparation of the lectures, text books and manuals on such disciplines as 'Financial Markets', 'Taxation System', 'Taxes and Taxation', 'Tax Administration', 'Taxation System of Foreign Countries' and etc.

Approbation and appliance. The main content of the dissertation work was expressed in the publications of 16 scientific articles and thesis of the author, 5 of which are published abroad. The research results are presented in the 'Important aspects of the macrofinancial stabilization of the country under globalization conditions' report, which was published in the materials of the V International Scientific Practical Conference 'Modern concepts of the scientific researches' (Moscow August 29-30, 2014); in the 'Macrofinancial stabilization of the country under conditions of financial crisis' thesis published in the Materials of the 'Stable economic development. Problems and Perspectives' International Scientific Practical Conference (Sumgait State University, April 27-28, 2016); in the 'Importance of the fiscal regulation in maintenance of the economic growth of the country in the context of modern realities' report published in the materials of International Scientific Practical Conference on the topic 'Economic growth and social welfare' dedicated to the 60th anniversary of the Economy Institute of the National Academy of Science of Azerbaijan (ANAS, Economy Institute, October 18, 2018; in the 'Priorities of maintenance of the macrofinancial stabilization of Azerbaijan in the context of strategic road maps' report published in the materials of the Republic Scientific Conference on the topic 'Strategy of the economic growth in Azerbaijan' (Azerbaijan State University of Economics, December 24, 2019); in the 'The mechanism of the income levelling of population with the help of different taxation systems' thesis published in the materials of the IV Republic Scientific Conference of Young Researches (Azerbaijan University, April 9, 2021), in the 'Stabilization role of the tax policy in maintenance of economic activity in the regions' report, published in the materials of the Republic Scientific Conference on the topic 'Regional Economics: Modern aspects and topical issues' (Sumgait State University, April 22-23, 2021), and in the 'Assessment of the pandemic impact on the macrofinancial stability of the economics in Azerbaijan' thesis, published in the materials of the V International Scientific Practical Conference 'Development of the science and practice in the globally changed world in the context of the risks'

(Russia, Moskow, July 26, 2021). Besides, the results of the dissertation work are reviewed and accepted for the further implementation and use in the education process of Azerbaijan University (the signed implementation act dated after April 18, 2019). Moreover the results of the dissertation are presented and accepted for use in the processes of implementation of the fiscal mechanisms and tools towards the Educational Centre of the Tax Ministry of Azerbaijan Republic (the letter dated after October 5, 2018).

Name of institution where dissertation has been implemented.

Dissertation has been implemented at Azerbaijan University.

The total volume of the dissertation. The volume of the dissertation is 258 487 symbols with cover, contents and introduction (7 245 symbols), chapter I (67 289 symbols), chapter II (70913 symbols), chapter III (57235 symbols), conclusion (12 983 symbols) and a list of literature (25 058 symbols). The number of symbols in the dissertation is 210 018 without a list of literature.

THE STRUCTURE OF THE DISSERTATION WORK

Introduction

Chapter I. Theoretical and methodological basis of macro-financial stabilization of the country

- 1.1. Theoretical basics of macro-financial stabilization of the country
- 1.2. Methodological approaches to ensurance of macro-financial stabilization by means of fiscal regulation
- 1.3. Global experience on identification and realization of stabilizing government policy

Chapter II. Analysis of the modern macro-financial position and assessment of fiscal regulation in Azerbaijan

- 2.1. Analysis of the fiscal regulation role in improvement of the macro-financial position of the state
- 2.2. Modern situation of budget regulation in the context of ensurance of macroeconomical stability of the country
- 2.3. Assessment of taxable capacity and its role in macro-financial system in Azerbaijan

Chapter III. Priorities and perspective directions of fiscal regulation in the Republic of Azerbaijan

3.1. Priorities of macro-financial stabilization ensurance in the country in the context of strategic road maps

3.2. The ways of performance improvement of the tax office in the system of fiscal regulation

3.3. Perspectives of fiscal policy improvement in Azerbaijan under modern conditions

Conclusion

References

MAIN PROVISIONS BROUGHT UP FOR DEFENSE:

1. The main aspects of theoretical foundations and different views on the problems of state financial policy, and especially the role of fiscal regulation are reviewed as a strategic task under conditions of continuation of the negative results of the financial crisis in the world and continuing global crisis – the Covid-19 pandemic.

The founder of the classic theory Smith A. deemed that the reasons, which disrupt economic stability, can be objective and subjective, for example: war, government, nation laziness and the others. He developed the particular provisions on the essence of the financial state, defined the expenses and income of the state¹. The scientific investigations of the other representative of the classic political economics Ricardo D. reveal the reasons of interrelation between the government finance and economic system development, which are about the solution of main problems on original accumulation, and further the competitive market system². Besides, in relation to macroeconomic stability, opinions of Canes J.M. gave prominence. He stated that one of the essential matters intrinsic to market economy is its instability³. The scientist Say J.B. came to definition of stability: the economy's strength, which ensures the balanced consuming capacity, and observance of the principles of the economic liberalism⁴. The other scientist Minsky H.P. formed scientific view on 'financial bubbles' and crises as the facts appearing by the impact of change of the markets structure and modification of its participants'

¹ Smith, A. *The Wealth of Nations* / A. Smith – 617 p.

² Ricardo, D. *On the Principles of Political Economy and Taxation* / D.Ricardo. – 1817. – 589 p.

³ Keynes, J.M. *General Theory of Employment, Interest and Money* / J.M.Keynes. – Stellar Editions; 2014. – 169 p.

⁴ Say, J.-B. *Traité d'économie politique* / J.-B. Say – 1803. – Paris: Calmann-Lévy Éditeur.- Les fondateurs. – 572 p.

behavior⁵.

The role of fiscal regulation are reviewed as a strategic task under conditions of the negative results of the financial crisis in the world and continuing global crisis – the Covid-19 pandemic – and consist of: firstly, each state needs to assess objectively its financial resources, opportunities, currency reserves, and to form an optimal macrofinancial policy with respect to perspectives; secondly, the fiscal regulation in these processes acts as a necessary tool of effective management of the finances in the country; thirdly, the fiscal regulation contributes the maintenance of financial stability of the country with the maximum efficient allocation of financial resources and fourthly, the fiscal regulation forms necessary conditions and regulations for optimization of the income and expenditure of the state budget.

2. The balancing problems of the state financial policy are reviewed in the context of modern economic realities and maintenance of macrofinancial stability in the country in modern times.

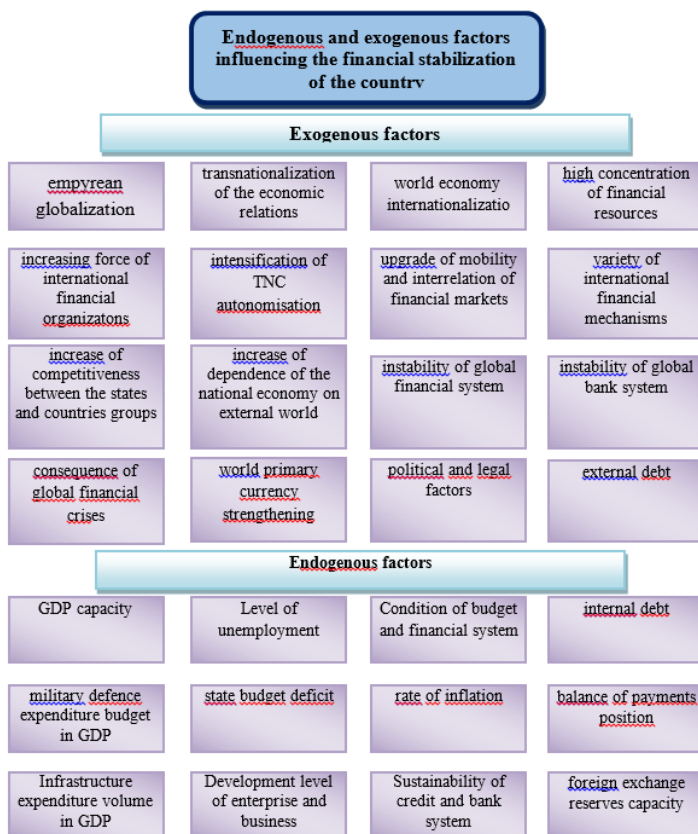
In the context of modern economic realities, it is necessary to solve the problems of balancing the financial policies of the state and thereby strengthening macroeconomic stability in general. In addition, the structure and mechanisms of the budget and tax systems should be reformed. First of all, there is demanded the provision of systematic approach to diversification of budget revenue, increase of level of social economic development of the country and subjects' activity financing the state budget. At the same time it is required to significantly increase the efficiency of budget expenses with transfer of the priorities to the direction of stimulation processes with the aim of increase of economic activity of population in the country. In this context, it is advantageous to specify the reasons of the crises. Professor Mamedov Z.F. notes that it is possible to mark the following reasons of the financial economic crisis: 1) separation of the financial sector from the real economics; 2) underestimation of risks by market participants themselves in an effort to maximize their profits and 3) underestimation del credere risks by the credit rating companies⁶. Based on the mentioned above scientific approaches it can be mentioned that macro-financial stabilization of the

⁵ Minsky, H.P. *Stabilizing an Unstable Economy* / P.H.Minsky. – 2008. – McGraw-Hill. – 436 p.

⁶ Mammadov Z.F. *Financia crisis and anti-crisis policy* / Mammadov Z.F. – Germany – Palmarium Academic Publishing, 2013 – 141 p.

country covers the ensurance of effectiveness of all the factors of economic development, different elements and vector approaches to economic policy of the state, rationality and stability of the main mechanisms of economic safety system in the country.

It is worth to be mentioned that he financial stabilization of the country demands the balance of different endogenous and exogenous factors to come along with the global economic relations (Pic 1)

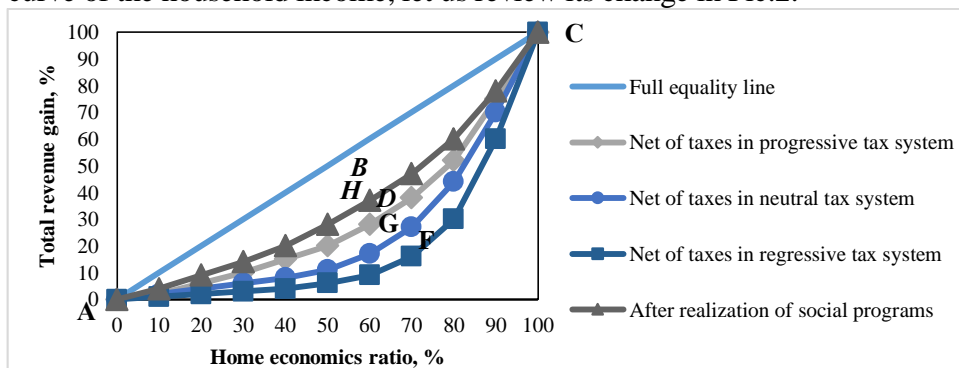


Pic.1. Block scheme of endogenous and exogenous factors influencing the financial stabilization of the country (*prepared on the basis of research materials*).

3. The main base on strengthening of the financial stability and diversification of the economics includes efficiency of the fiscal mechanisms and tools.

It is possible to develop and adapt a distinct stabilizing and fiscal

policy optimal for the country by investigation the budget tax systems of different countries according to availability of related and specific features, by comparing the historic periods and scenarios of development of economic and financial systems of these countries. The fiscal policy embodies maneuvering of state expenses and tax proceedings for leveling-off of the negative directed economic upticks. For this reason, we deemed it advisable to review the dynamics of the main macroeconomic indicators of the country: GDP, incomes and expenses of the state budget and population, inflation, employment, unemployment, and poverty in the context of interrelation with fiscal policy of the state. Thus, let us consider the principle of equality and justness by means of variation of Lorentz curve in different taxation systems and on application of social programs. From knowledge of Lorentz curve is ratio cumulative curve of the household income, let us review its change in Pic.2.



Pic. 2. Lorentz curve, covering tax liability in different taxation systems⁷.

From pic.2. we can analyse that on application of the neutral system of tax liability, inequality in society remains the same as if taxes were not withdrawn at all. In the picture, we can see that bisector *ABC* expresses a hypothetically balanced distribution of income. The interpretation of *ABC* is that a given percentage of households receive a corresponding percentage of all income: %10 of all households %10 of all income, a half of all households – a half of income and etc. The curve *AGC* expresses the in equation position in economics before the tax withdrawal (or after withdrawal on neutral taxation system) or Lorentz curve directly. In this

⁷ Lorenz, M.O. *Methods of Measuring the Concentration of Wealth. Publications of the American Statistical Association, 1905, №9, p.209-219.*

case, the interval between *ABC* and curve *AGC* covers the degree of income inequality in economics. Hereafter the curves *ADC*, *AFC* and *AHC* expresses the inequation position of income consequently after tax withdrawal in progressive taxation system, regressive taxation system, and after realization of different types of well-formed social programs⁸.

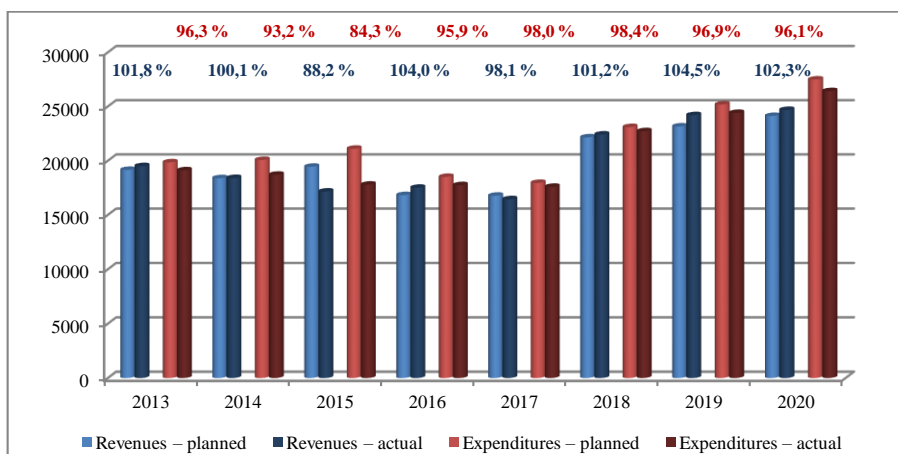
In Azerbaijan, state budget revenues for 2010-2020 increased by 2.3 times and composed 26,1 billion manat, and the expenses increased by 2,2 times and composed 26,4 billion manat with share in GDP % 36,5. Besides, it is known, that transfer deeds out of State Oil Fund of Azerbaijan compose considerable proportion in the structure of the state budget revenue – by the year 2000 the transfer deeds share increased and composed % 49,4 of the total income of the budget or in other words 12,2 billion manat⁹. Such a high share of transfer deeds of SOFAR bears evidence of ‘oil dependence’ of the economics in Azerbaijan and necessity for taking effective measures on diversification of the economics at an early date.

Hereafter, the important indicator of the budget system of the country is budget execution and control over it. Thus let us review the statistics of the Ministry of Finance of AR on state budget execution in the country for the period of 2013-2020 (pic.3).

As we can see from pic. 3 we can see that the state budget revenue in 2020 exceeded by %2.3, and the expenses exceeded by % 96,1. In the budget revenue structure for 2020 the State Tax Office under the Ministry of Economy receipts composed 7387,2 mln. manat with the % 102.7 execution, % 75.6 (5585.1 mln.manat) of which is the non-oil sector. Also the State Customs Committee of AR receipts into the state budget composed 3938,2 mln. manat, and it is % 8,2 more than planned.

⁸ Isayeva A.S. *State tax regulation of population's revenues and expences: / dissertation of Ph.D. in Economics. / Moscow, 2015. – 217 p.*

⁹ *Azerbaijan Republic State Oil Fund. Annual report, 2020. Baku. – 67 p.*



Pic.3. State budget execution of Azerbaijan for the period of 2013-2020 – planned and actual value (prepared on the basis of Ministry of Finance of AR – <http://www.maliyye.gov.az/static/105/dovlet-budcesinin-icrasina-dair-operativ-melumat>)

4. One of the main issues is maintenance of the tax elasticity differential in accordance with strategic targets on economic development of the country and strengthening of its reliability under conditions of growth of the global threats.

Hereafter it is necessary to pay attention on such economic indicator as tax burden (tax load). This relative amount expresses the level, measure and degree of the economic constraint of the taxpayer as a result of diversion of these funds from other methods of use, i.e. the tax burden is the share of GDP that is at the disposal of the state through the tax mechanism. The indicators of tax share in GDP for the period of 2005-2020 in Azerbaijan are given in Figure 1.

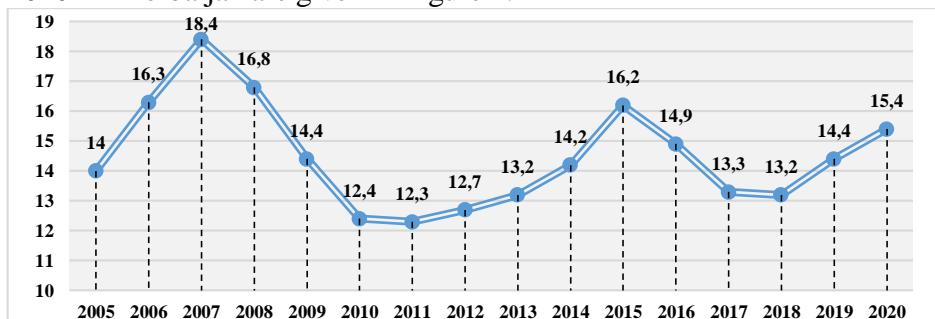


Figure 1. Share of taxes in GDP for the period of 2005-2020 in Azerbaijan, %
(prepared by the author on the basis of SSCAR – <http://www.stat.gov.az.>).

As we can see from Figure 1, the relative share of all taxes in GDP of the country for the researched period increased by % 1.4 and composed % 15.4 in 2020.

We think it expedient to review the indicator expressing the level of income sensibility on taxes with reference to the changes on macroeconomic level, which is relevant to the effectiveness of functioning of all the state¹⁰. Let us review the tax elasticity coefficient (C_e):

$$C_e = \frac{\Delta TP}{TP} : \frac{\Delta EI}{EI},$$

where: **TP** – initial or basic level of tax proceeding (groups of taxes, types or all taxes in aggregate; **EI** – initial or basic level of economic indicator (GDP, national income or gross value added and etc.)

This coefficient shows the percentage change in tax revenues while changing of the key economic indicator by one point. If $C_e = 1$, then the share of tax revenue in the defining indicator has not changed. If $C_e > 1$, the taxation system is flexible: tax revenues grew at a faster pace than the economic growth, i.e. tax revenue ratio in economical indicators grows. Such an indicator can also be in the case if the total sum of all realised revenues increased in economics sharply. If $C_e < 1$, then the taxation system is unflexible: tax revenue ratio decreases. It's generally accepted that the best for the economics of the country is when the coefficient is less or equal to 1. If we consider the GDP indicator as the key economic indicator, then the tax elasticity coefficient for Azerbaijan for 2010-2022 will be like this (Table 1 and Figure 2).

Table 1. Tax elasticity coefficient for Azerbaijan for 2010-2020.

Indicator	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GDP, mln. manat (EI)	35 601,5	42 465,0	52 082,0	54 743,7	58 182,0	59 014,1	54 380,0	60 425,2	70 337,8	8009 2,0	8189 6,2	7243 2,2
Nominal GDP, in % to the previous year ($\Delta EI/EI$)	-	19,28	22,65	5,11	6,28	1,43	-7,9	11,12	16,4	13,87	2,25	-11,6
Tax proceeding, mln. manat (TP)	5128, 2	5266, 8	6395, 3	6975, 0	7654, 2	8370, 2	8791, 3	9031, 0	9356, 2	1058 7,3	1175 5,1	1115 1,4
Percent change of tax proceedings, in % to the previous year ($\Delta TP/TP$)	-	2,7	21,43	9,06	9,74	9,35	5,03	2,73	3,6	13,2	11,0	-5,1
Elasticity coefficient of the taxation system (C_e)	-	0,14	0,95	1,77	1,55	6,54	-0,64	0,25	0,22	0,95	4,89	0,44

¹⁰ Chernenko D.A. Flexibility coefficient as a method of assessment of economic factors impact on ta revenue: macro- and micro-level // *New university. Economics and law*, No. 11-12, 2014.– p.1-4.

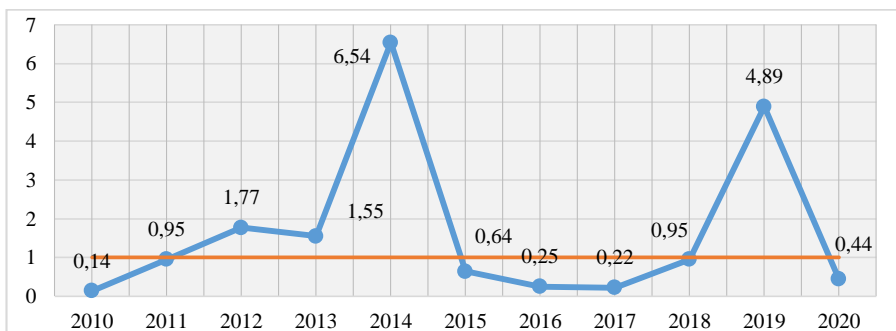


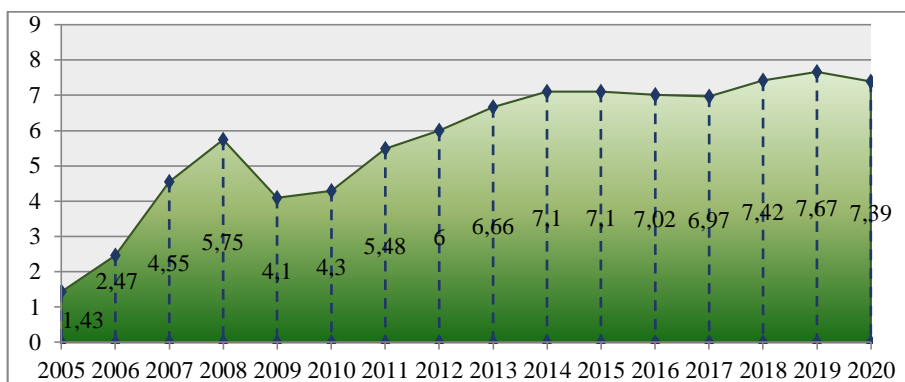
Figure 2. Dynamics of the change of elasticity coefficient of the taxation system in Azerbaijan for 2010-2020 (prepared on the basis of SSCAR – <http://www.stat.gov.az>.)

Based on the Table 1 and Figure 2 we can come to conclusion that in 2012, 2013, 2014 and in 2019 ($C_e=1,77$; 1,55; 6,54 and 4,89 accordingly) the tax system of Azerbaijan was flexible. This means the more rapid growth of tax revenues in comparison with the GDP growth. We consider that elasticity of the tax system in 2019 was associated with fundamental changes in Tax Code in 2018 and 2019, related to escalation of tax management measures also. In 2020 the coefficient of elasticity composed 0.44, and this means that the tax system was not flexible, and the share of tax revenues into GDP of the country decreased.

5. In the context of the structural and institutional reforms and in the period of diversification of the economics in the country it is demanded to change the mechanisms of tax authorities work and tax legislation, aimed to maintenance of the tax regulations visibility and fiscal instrumentarium of the operational capability.

Hereafter in Picture 4 there are given the indicators of tax and other revenues into the budget of the country during the period of 2005-2020 through the State Tax Office under the Ministry of Economy of AR.

In the Picture 4 it is expressed that for the investigated period the total volume of tax revenue increased 5.2 times in 2020, but in comparison with the previous year the recession by %3.8 is observed as the result of significant deceleration of business activity because of the COVID-19 pandemic. Hereafter the structure of state budget incomes for 2005-2020 is given (Table 2).



Pic. 4. Information about the tax and other revenues into state budget in 200-2020, billion manat (prepared on the basis of State Tax Office under the Ministry of Economy of AR –<http://www.taxes.gov.az>).

Table 2. Structure of state budget income in 2005-2020 (mln. manat)

	Total income	Personal income tax	Corporate tax	Land tax	Property tax	VAT	Excise taxes	Trading tax	taxes related to foreign economic activity	Other taxes	Other incomes
2005	2055,2	317,4	355,4	15,3	40,4	599,9	141	53,5	205,2	28,1	299
2006	3868,8	407,3	1360,5	18,5	55,8	737,8	187,4	100,2	139,3	40,9	821,1
2007	6006,6	588,6	2457,7	27,1	72,3	1179,2	402,9	123,2	293,2	68,6	793,8
2008	10762,7	627,2	2862,3	30,6	112,9	1910,9	486,9	147,7	449,7	96,8	4037,7
2009	10325,9	581,9	1329,2	26,2	66,2	2012,8	485,1	121,9	418,1	86,8	5197,7
2010	11403,0	590,2	1429,9	35,3	101,8	2082,5	514,9	130,1	291,8	90,3	6136,2
2011	15700,7	715,7	2134	35,3	103,9	2222,7	480,2	129,8	433,1	140,6	9305,4
2012	17281,5	813	2252	30,6	105,1	2366,9	531,5	125,8	592,5	157,6	10306,5
2013	19496,3	859,7	2374,8	33,1	125,1	2710	593,3	121,5	675,2	161,5	11842,1
2014	18400,6	980,3	2302,7	35,4	141,3	3119,6	797,3	116,2	684,7	192,7	10030,4
2015	17498	982,5	2211,1	48,7	148,2	3454,7	647,8	116,1	934,5	247,7	8706,7
2016	17505,7	1145,7	1983,2	50,3	174,7	3623,5	625,1	110,3	861,2	457	8474,7
2017	16156,7	1040,3	2285,9	50,4	178,6	3668,6	612,6	111,1	903,0	505,7	7160,5
2018	22508,9	995,9	2499,7	50,6	182,2	4287,6	728,6	137,4	1143,7	561,6	11921,6
2019	24398,5	952,1	2546,0	50,0	212,6	5185,1	854,7	133,8	1343,2	477,5	12643,4
2020	26075,4	1151,0	2351,7	40,8	186,8	4818,3	898,2	130,2	1160,6	413,8	14924,0

Resouse: <http://www.stat.gov.az>.

Thus, the budget income in 2020 in comparison with 2005 increast almost 12.7 times and composed 26.1 billion manat in 2020, therewith the VAT in the total volume of the tax revenue was the main in 2005 with the share of % 29,2 and remans to be the main in 2020 with the share of % 18,5. According to the revenue volume the second one is corporate tax with the

relative share of % 17,3 in 2005 and % 9,0 in 2020.

Hereafter we would like to conduct regressive four-way analysis of dependence of X variables, taking as initial data the state budget revenues as a whole (Y) and the indicators of personal income tax (X₁), tax on income (profit) of legal entities (X₂), value added tax cost (X₃) and miscellaneous income (X₄).

<i>Regression statistics</i>							
Multinomial R	0,99994						
R-square	8628						
Normalized R-square	0,99989						
Constant error	7259						
Canvass dispersion analysis	0,99985						
	9898						
	83,4038						
	4419						
	16						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>F significance</i>		
Regression	4	7,45E+08	1,86E+08	26763,53	7,54E-22		
Balance	11	76518,21	6956,201				
Total	15	7,45E+08					

	<i>Coefficients</i>	<i>Constant error</i>	<i>t-statistics</i>	<i>P-signification</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Y-crossing disposal variable X 1	-69,9378597	89,45441	0,7818	0,450817	-266,826	126,95	-266,826	126,95
disposal variable X 2	1,28333257	0,208341	6,1598	7,11E-05	0,824777	1,741888	0,82478	1,74189
disposal variable X 3	1,08662333	0,044575	24,377	6,34E-11	0,988514	1,184733	0,98851	1,18473
disposal variable X 4	1,56503638	0,042423	36,891	7E-13	1,471664	1,658409	1,47166	1,65841
	0,98009384	0,009949	98,516	1,47E-17	0,958197	1,001991	0,95820	1,00199

As the result of regression analysis the mathematic model is received:

$$y = 1,28x_1 + 1,08x_2 + 1,57x_3 + 0,98x_4 - 69,9$$

This shows that while constant disposal variables X₂, X₃, X₄ increase of personal income tax revenue (X₁) by 1 manat will cause the increase of total revenue of the state budget (Y) by 1,28 manat. Consequently, corporate (revenue) tax (X₂) causes the increase of total state budget revenue by 1,08 manat, increase of VAT (X₃) – by 1,57 manat, increase of other revenues (X₄) - by 0,98 manat. The fact that P-

signification of the X_1 , X_2 , X_3 , X_4 factors is lower than 0,05 indicates that our factors are tolerance factors.

In the figure 3 the dynamics of the relative shares of the budget forming taxes to the total volume of the budget revenue for 2005-2020.

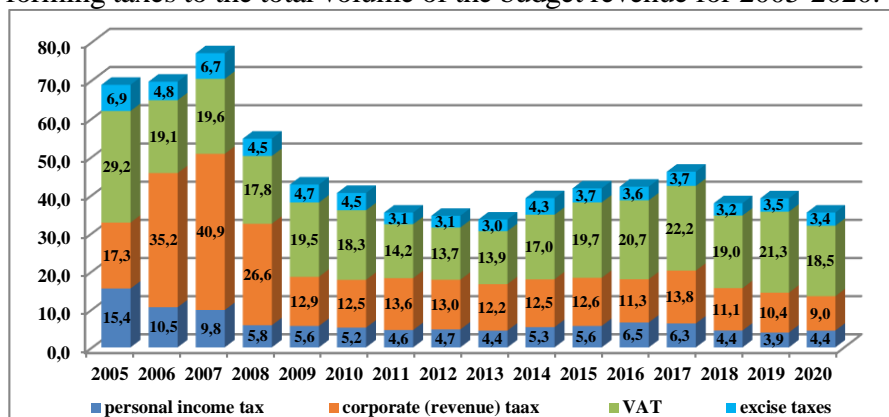


Figure 3. The share of main taxes in the budget revenue of the country for 2005-2020, % (prepared on the basis of research materials).

6. One of the main strategic tasks is transition of the current mechanisms of the state regulation of the financial system on the new stage and enhancement of the fiscal mechanisms role in maintenance of optimization of the tax incomes and efficiency of use of the financial resources.

Besides, the importance of the strategic approaches to macroeconomic stability of the country in long-term period should be mentioned. The factors and specific feature of steady-state competitive economy formation in Azerbaijan are considered in the documents of Strategic Road Maps of the republic. The strategic aims developed in the maps are targeted to transition of the current models of economic development of the country to the higher stage, which will boost the competitiveness of the country economy and its place in the economic rating of the world countries¹¹.

In accordance with the Strategic road maps on national economics and main economy sector of AR approved by the Decree of the President of AR dated after December 6, 2016, the first strategic aim was creation of

¹¹ Strategic road map on national economic perspectives of Republic of Azerbaijan // approved by the Decree of the Prezident of Republic of Azerbaijan dated after December 6, 2016. Baku, – 111 p.

the fiscal stability and formation of such monetary policy, which was based on the floating currency exchange¹². Strategic innovation of the researched direct / functional approach, more exactly of combination of the monetary and fiscal policies is substantiation and implementation of the ‘golden rule’, the main aim of which is constriction of fiscal expansion as the result of diminishing of financial resources in the country. Let us mention that therewith previous economic model of the fiscal enhancement in the country the infrastructure network was enhanced, extensive material and technical basis for the market development was formed, and especially, social situation of the population got better qualitatively¹³. If in present-day developments the state budget income directly depend on stagger of oil revenues, then using the ‘golden rule’ principle accepted between State Oil Fund and Ministry of Finance, stabilization of the state income is outlined by the way of balancing the volume of transfers to the budget of a certain amount of money, which will influence the increase of state expenses safety from oil prices. The following base priority of the first aim of the road map is formation of the mechanism of the mid-term expenditure framework including the more effective disposition of state funds from the budget of the country among and in the sectors of economics, and also the strengthening of liability of each several subject, using the financial assets from the budget. Besides, the effect-oriented budgeting mechanism was also substantiated in the strategic road maps. Its essence is that the state is oriented not so much on its own financial resources, but more on priority programs and strategic directions and etc. Besides, with the aim of development of risk free credit-and-monetary policy and increase of fiscal stability, the parameters of the budget rule with reference to international experience were approved and established.

Therefore, a number of important and priority directions for improving the legislative framework of Azerbaijan were resolved after acceptance of the ‘maps’: transition from passive to active tax policy is provided, efficiency of tax incentives and tax exemptions is assessed, international experience on transition to the system of preliminary tax statement was studied, the share of non-cash payments is increased,

¹² *Review of economic reforms in Azerbaijan. Strategic road maps on national economics and key sectors of economics* – URL: <http://ecoreform.az>.

¹³ Gasimli V.A. ‘Golden Rules’ of Road Map: [e-resource] / URL: <http://regionplus.az/rw/articles/view/6112.58>.

complex measures in the sphere of e-audit were taken, the efficiency of tax administration, control and mechanisms for investigating cases of tax evasion is increased, and etc.

After the dual devaluation of national currency – manat – in 2015 there were skeptical analyzes and approaches to the rapid revival of the main directions of the economy of the country and provision of stability on the macro-financial level. However, the state managed to deal with problems in the macrofinancial environment, implementing the new regulating and control mechanisms of the financial directivity and implementing the appropriate steps on stabilization of financial and credit system of the country. The tax office increased the flow of financial assets into public purse by means of increase of transparency and objectivity of financial and accounting reporting. As the result in recent years Azerbaijan is on high positions in the rating of international organizations. Thus, in recent years Azerbaijan significantly improved the position in the rating of the World Bank group – Doing Business – 2020 – and placed in 34th place with an indicator 76,7. Let us also mention that as a result of 2020 according to ‘Getting Credit’ indicator, prepared by the specialists of World Bank, Azerbaijan took the first place among 190 countries of the world (for comparison in 2019 the country took 21st place, and in 2018 году – 122nd place).

In case of reasoning from the period since the adoption of the strategic road maps, then for 2017-2021 in spite of global disruptions Azerbaijan was able to provide the dynamism and stability on many indicators, to create breeding ground for diversification of the national economic in the filed of interference of the global threats and risks. Thus, for the period of 2016-2021 the Nominal GDP of the country increased by almost 30 billion manat, concurrently the volume of nominal growth of the non-oil-and-gas GDP composed 17.1 billion manat ot %57 of the total growth of nominal GDP, nominal growth per head of population composed almost % 44 and at year-end 2021 composed more than 9 thousand manat. For the reviewed period the increase of state budget revenue composed % 50.8 or 8.9 billion manat, and the volume of expenses increased by % 49.5 and composed almost 9.5 billion manat. As to execution of main aims and priorities of development of the financial services market, this indicator composed also % 80 of the taken measures

with the parallel strengthening of fiscal stability on the account of acceptance of the mid-term expenditure framework. The system and effective tax reforms directed to business support are implemented in tax liability field, the stimulating tax advantages for the subjects of small and medium-sized business were accepted and etc¹⁴.

7. One of the main problems is rationale for foundational components of the fiscal mechanisms and tools on optimal maintenance of macrofinancial stability in the country on a short-term and long-term horizon, and others.

Let us mention the fiscal measures of response to COVID-19 shock taken by Azerbaijan: in 2020 1985.6 mln manat from the state budget was released for the measures on control and mitigation of COVID-19 coronavirus pandemic in Azerbaijan¹⁵. According to the order of AR President dated after Mart 19, 2020 in direction of tax stimulation of the economic activity safety in the country a number of measures in taxation was taken¹⁶. Besides, the amendments considering the tax discrimination for the subjects of business in pandemic conditions were adopted in Tax Code. In accordance with the amendments the tax discrimination for the business on the amount of 67 mln. US Dollars in Covid-19 pandemic was accepted, and also a number of other privileges was accepted: payers of the simple tax received the privileges in amount of % 50, and the income tax payers - in amount of % 75.

Besides the global challenges related to the covid period and decrease of the oil prices at world markets it is important to mention also the situation formed in the country after the Great Victory of Azerbaijan in 44-day war on restoration of territorial integrity. Despite the additional load on state in military goals, the economics of the country did not almost decrease its growth rate, and restoration of Azerbaijan lands open new opportunities for prosperity and strengthening of Azerbaijan in South Caucasus as well as in global scale by means of reintegration of liberated

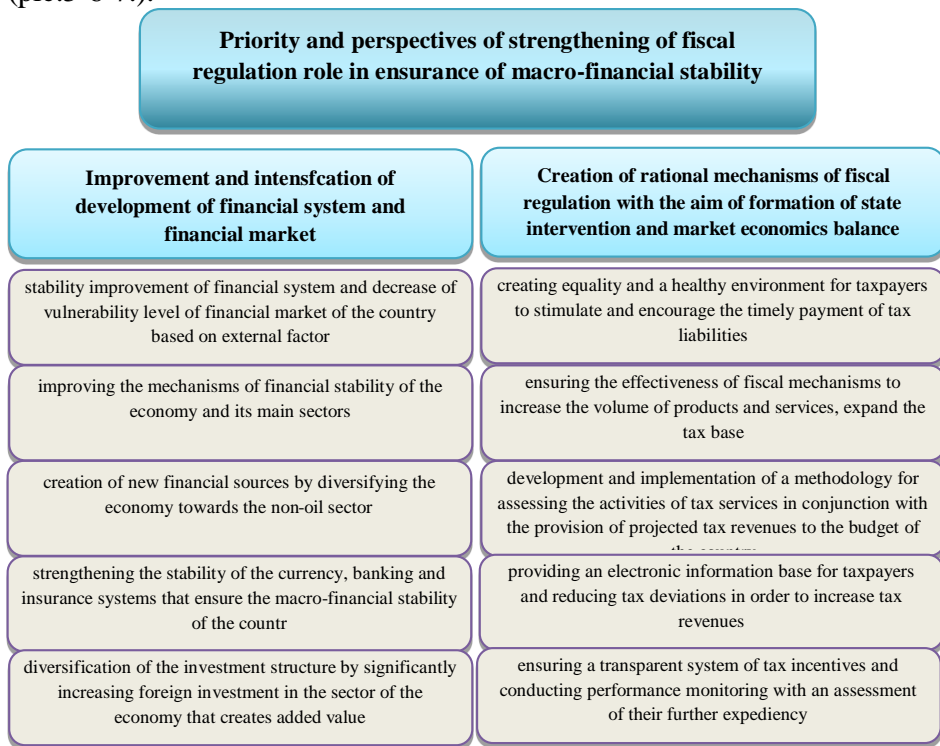
¹⁴ Monitoring and Assessment report on strategic road maps on the national economics and main sectors of economics in republic of Azerbaijan on 2017-2022. Azerbaijan Republic Economic Reforms Analysis and Communication Center – 121 p. https://ereforms.gov.az/files/review/pdf/az/syx_hesabat_2021-12-27.pdf.

¹⁵ Information on the implementation of the state and consolidated budget of the AR for 2020 - <http://www.maliyye.gov.az/scripts/pdfjs/web/viewer.html?file=/uploads/static-pages/files/6024d93a7f106.pdf>.

¹⁶ Order of the President of the Republic of Azerbaijan on the reduction of the negative impact of the coronavirus pandemic (Covid-19) and its sharp spikes, occurring in the world energy markets and shares of the Republic of Azerbaijan, the economy of the Republic of Azerbaijan// – Mart 19, 2020. – Baku.

lands to the economics of the country. And also in accordance with the strategic aims on restoration and revival of the territories of Azerbaijan liberated from Armenian occupants, the National Priorities of the social economic development till 2030 were specified¹⁷.

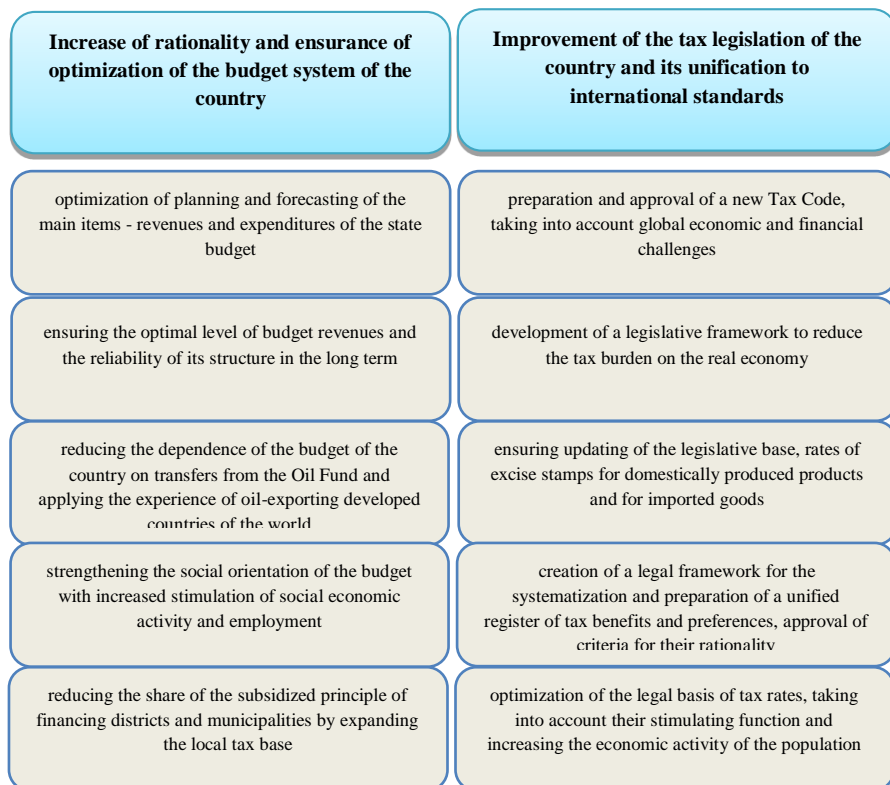
The research materials give opportunity to systemize the author approaches to identification of priorities and perspectives of the fiscal regulation role in ensurance of macro-financial stabilization in Azerbaijan (pic.5-6-7.).



Pic. 5. The block-scheme of priorities and perspectives of fiscal regulation role increase in ensurance of macrofinancial stabilization in Republic of Azerbaijan
(prepared on the basis of reseach materials).

¹⁷ Statement of the President of the Republic of Azerbaijan on the approval of 'National priorities of social economic development: Azerbaijan 2030'. February 2, 2021 – <https://ru.president.az/articles/50474>.

**Priorities and perspectives of fiscal regulation role
increase in ensurance of macro-financial stability
(continuation)**



**Pic. 6. The block-scheme of priorities and perspectives of fiscal regulation role
increase in ensurance of macro-financial stability in Republic of Azerbaijan
(prepared on the basis of research materials).**

Priorities and perspectives of fiscal regulation role increase in ensuranec of macro-financial stability (continuation)

Ensuring transparency of sources of taxation, reliability of reporting and improving the tax culture of taxpayers

ensuring the formation of a favorable tax environment, increasing the responsibility of taxpayers for the timely fulfillment of tax obligations

expanding the scale of educational, training and other activities to strengthen the discipline and educational level of potential taxpayers

intensification of activities on the use of modern technologies to expand the information and technical base and simplify various procedures for taxpayers

ensuring a significant expansion of the list of services and consultations, as well as practical assistance to taxpayers

development, application of a methodology for assessing the risks of tax evasion and ensuring a deep improvement of the mechanisms of tax audits and tax control

Pic. 7. The block-scheme of priorities and perspectives of fiscal regulation role increase in ensurance of macro-financial stability in Republic of Azerbaijan (prepared on the basis of research).

Main summary and conclusions of dissertation work:

1. First of all, it is necessary to ensure the stability of financial system and financial markets in the country and etc. This is conditioned by consequence of the conducted economic and institutional reforms in the country with the aim of increase of the living conditions of population of the country, creation of new work places, renovation of the production structure on the account of high technologies, development of knowledge-intensive industries of the economics, acquisition of new world markets and decrease of dependence of the national economics on the oil factor.
2. It is necessary to accelerate the formation of more welfare conditions for

taxpayers, i.e. to ensure the conceptual approaches of society and state to the problems of tax liability and payment of taxes. We consider that without formation of such kind of atmosphere, carrying out of any, though optimal, reform on improvement of fiscal mechanisms will not give necessary effect. Hereafter, it is considered to be necessary to identify and implement the concrete methodology on implementation of objective assessment of employees, and in a whole, divisions of the tax service in the ongoing work and activity on coverage of the existing taxable base in the country and fulfillment of direct obligations of functional and professional duty to collect and pay taxes.

3. We consider that it is necessary to ensure the diversification of the budget revenues with planning of continuous revenue growth. The population of the country should feel the positive impact of the economic growth and conducted reforms, economic development model of our country, which differs with social profile. For this reason the budget of the country should be positive, dynamically growing and should meet the pace of social and economic development of the country in the context of increase of its competitiveness and image in the world scale.
4. With the aim of ensurance of functionability of the implemented mechanisms and tools of fiscal regulation it is necessary to improve the current tax legislation in the direction to its unification to international standards, as far as despite of in last few years the structural and institutional reforms are implemented consequently and the renovation of the current mechanisms of the tax office operation continues, the necessity of conduction of deeper renovation of the tax legislative base for provision of financial stability of the country in modern times still remains.
5. To our opinion there is considerable necessity in increase of transparency of source of taxation, consistency of financial and accounting documentation reports of the tax payments, tax liabilities with reference to healthy increase of the tax culture of taxpayers. The tax payments should be implemented timely, on the legal basis and not in a compulsory manner.
6. We have a propensity for elasticity and timeliness of the tax system, efficiency of the key tools for fiscal policy can essentially contribute to

balancing of the growing expenses of the account of diversification of revenues of the budget by means of enhancement of tax basis, stimulation of the enterprise and business subjects, increase of financial discipline, increase of accountancy and timely implementation of the tax payments.

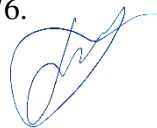
7. We believe that, financial and tax policy in Azerbaijan should be formed specifically in the context of national interests and on the basis of strategic directions of development of national economy and its features, but considering the elements of acceptable leading global experience, it is necessary to improve the investment climate and to provide the maximum effective safety of the investors' interests by means of creation of new tax stimulus and support of the current ones.
8. It is necessary to strengthen the measures and increase the quality of tax control by means of increase of the total tax discipline, and it is required to create more rational and stimulating mechanisms on formation of tax basis, tax payment procedure, which caused minimization of the tax evasion and non-payment risks cases.
9. As a result of the Great Garabagh Victory in 2020 and liberation of original Azerbaijani territories from armenian occupation, new opportunities were opened for economics of the country. To our opinion, in order to increase the stability of economy and strengthen the position of the country in the empyrean it is necessary to:
 - Create the conducive conditions for investment attraction to Garabagh, therewith modeling the buoyancy and increase of volumes of financial flows in the country;
 - Regenerate the agro-industrial complex with implementation of the more multifunctional innovation technologies including 'smart' technologies into the industrial processes;
 - Use the reach touristic and recreation resources with the possible creation of touristic recreational special economic zones and touristic clusters on the basis of these resources with the aim of enhancement of tax basis and diversification of the tax revenues;
 - creation of new capacities of primary and processing industry on the basis of considerable reserves of mineral resources, especially the mining industry and construction materials production, which will have multiplicative effect contributing to strengthening of macro-financial

component of development of newly created Garabagh and the Eastern Zangazur economic regions, and economy of Azerbaijan in a whole.

The main content of the dissertation is expressed in the following publications:

1. Актуальность фискального регулирования в обеспечении макрофинансовой стабилизации // Audit. Bakı: –2014, № 3, –s.25-29.
2. Важные аспекты макрофинансовой стабилизации страны в условиях глобализации / V Международная научно-практическая конференция «Современные концепции научных исследований». Россия, Москва: –2014, №5, –с.116-118.
3. Макрофинансовая стабилизация и ее теоретические аспекты // “Maliyyə və uşot”, Bakı: –2015, №6, – s.36-40.
4. Вопросы обеспечения макрофинансовой стабилизации и фискального регулирования экономики// İpək Yolu, Bakı: 2015, №3, s.55-60.
5. Теоретические основы макроэкономических механизмов стабилизации экономики// «Научное обозрение», Россия, Москва: –2015, №21, – с.295-299.
6. Макрофинансовая стабилизация страны в условиях финансового кризиса / “İqtisadiyyatın davamlı inkişafı. Problemlər, perspektivlər” Beynəlxalq Elmi Konfransı. SDU. 27-28.04.2016, –s.381-383.
7. Вопросы совершенствования финансово-экономических аспектов налогового механизма по стабилизации и роста экономики страны // “Audit” jurnalı, Bakı: –2016, №4, –s.22-28.
8. Анализ и оценка современного состояния фискального регулирования и макрофинансового положения в Азербайджане // Elmi əsərlər, AMEA İqtisadiyyat İnstitutu, Bakı: –2018, №1, –s.245-251.
9. Важность фискального регулирования в обеспечении экономического роста страны в контексте современных реалий / AMEA İlinin 60 illiyinə həsr olunmuş “İqtisadi artım və ictimai rifah” Beynəlxalq Elmi Konfransı, Bakı: –2018, –s.221-226.
10. Стратегические задачи стабилизационной политики Азербайджана в контексте мирового опыта// USA, Philadelphia. ISJ Theoretical & Applied Science. 2018. Issue:08. Volume 64.-p. 90-100.
11. Приоритеты обеспечения макрофинансовой стабилизации Азербайджана в контексте стратегических дорожных карт / “Azərbaycanın iqtisadi inkişaf strategiyası” Respublika Elmi Konfransı,

- Bakı: UNEC, – 24.12.2019, II cild. – s.98-103.
12. Механизмы реформирования фискальной политики Азербайджана с целью стимулирования развития ненефтяного сектора / “Azərbaycanın tranzit potensialının iqtisadi inkişafda rolu” - Respublika elmi konfransı. SDU: – 22-23 oktyabr 2020, –s.185-189.
 13. Вопросы эластичности налоговой системы Азербайджана в условиях глобализации // Научное обозрение: теория и практика. – 2020, №5, –с.811–821.
 14. Механизм выравнивания доходов населения с помощью различных систем налогообложения / “Gənc tədqiqatçıların IV respublika” Elmi-praktiki konfransı, AU. Bakı: –09.04.2021, –s.144-146.
 15. Стабилизирующая роль налоговой политики в обеспечении экономической активности в регионах / «Regional iqtisadiyyat: müasir aspektlər və aktual məsələlər» Respublika elmi konfransı. SDU. – 22-23.04.2021, –s.229-234.
 16. Оценка влияния пандемии на макрофинансовую стабильность экономики Азербайджана посредством налогообложения/ V международная научно-практическая конференция «Развитие науки и практики в глобально меняющемся мире в условиях рисков. Россия, Москва: –26 июля 2021 года, –с.193-197.
 17. Актуальные проблемы и объективные реалии мирового опыта в восстановлении освобожденных от оккупации территорий/ IX Международная Научно-Практическая Конференция «Развитие науки и практики в глобально меняющемся мире в условиях рисков».– Россия, г.Москва. 28.03.2022. с. 277-286.
 18. Вопросы организации и развития финансово-банковской инфраструктуры в Карабахском и Восточно-Зангезурском экономических районах Азербайджана/ Proceedings of the 3rd International Scientific Conference «Foundations and Trends in Modern Learning» (August 10-11,2023). Berlin, Germany, 2023 - с.76-81.
 19. Актуальные вопросы обеспечения финансовых услуг на освобожденных территориях Азербайджана/ III международная научно-практическая конференция. Diversity and inclusion in scientific area. Варшава, Польша. 6-8.08. 2023 - с. 71-76.



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