

Formation of tax system as major tool of economic growth model of Azerbaijan



Musayev Akif Farhad oğlu*

Doctor of Economic Sciences, professor,
correspondent member of ANAS
(Azerbaijan National Academy of Sciences)

Abstract

Purpose - analysis of tax policy formation with the purpose of regulation of economic growth of the state.

Methodology - the methodology of Dynamic Panel was used with the aim of econometric assessment.

Findings - the tax policy can successfully regulate and stimulate economic growth, for these purposes qualitative innovative reforms in tax system formation are more efficient than traditional quantitative ones.

Restrictions/limits - more profound analysis is required for more profound analysis of tax amortisation.

Practical implications - possible ways of qualitative (*innovative*) reforms are investigated: purposeful tax privileges, accelerated amortisation.

Originality and scientific value - the innovative reforms in formation of tax system are investigated.

Keywords: *tax system, tax policy, tax innovations, econometric assessment, model of economic growth of Azerbaijan.*

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*Ministry of Taxes of the Republic of Azerbaijan, AZ1073, Landau st.16, Baku
akif.musayev@taxes.gov.az

1. Introduction

Community development is reflected both in statistics and in macroeconomic indicators. However, high rates of economic growth do not always reflect the appropriate level of growth in living standards. Striving to maintain high growth tempo requires a high level of technical progress and productivity factors.

Due to the change of global challenges and risks, a need for a new model of macroeconomic development is generated, which would embrace a high-quality macroeconomic management (*optimal fiscal and monetary policy*) [1].

2. The model of economic development of countries exporting energy during post-crisis period

The crises in the global economy enable countries reveal their vulnerabilities, and help to develop long-term anti-crisis measures. Actual practice of the global crisis covering two thirds of the Earth's hemisphere, proved that everyone suffers from the impact of the crisis, even those countries that are exporters of energy. As a result of it, the volatility of energy prices establishes the basis for macroeconomic risk in above-mentioned countries. This volatility creates an unrythmical budget expenditures, $\frac{3}{4}$ of which falls on oil revenues, so the country should get rid of the resource dependence and diversify the economy to improve its position in international trade [2].

The proposed model includes a macro-economic optimal design of institutions that create and regulate the economy based on the principles of market economy. The state acts as a stabilizer of the economy, creating opportunities for expanding the private sector and household savings. Government expenditure in both developed countries and developing countries, especially in the form of capital, should raise the productivity of capital and labor resources. In terms of expenditures taking into account the income of the economy, fiscal policy should be sustainable. The crises contribute to the creation of structural changes of government spending as well, as in times of crisis, fiscal stimulus in the form of social packages rise. We should consider that fiscal policy should always be in the harmony with the monetary policy. Higher social package supports the growth of aggregate demand and price levels. Such a macroeconomic policy coordination creates an environment for balanced macroeconomic and helps to maintain macro-fundamental balance.

In addition to the diversification of economy and fiscal stability, efficient macro-economic management enables to create an investment environment for major corporations and small and medium-sized businesses, which in its turn will contribute to the expansion of budget revenues. This understanding forms the chain between the state apparatus, private sector and institution.

The states rich in natural resources need to develop human capital, which in its turn improves the institutional environment and removes from the “resource trap”.

In such cases, the main elements of economic growth model will be as follows [1]:

1. Improving the human and socio-cultural capital with the introduction of high standards of secondary and higher education.
2. Creating the necessary infrastructure and business environment for private sector development.
3. The development of financial markets and financial tools to attract investment capital into the state.
4. Creating the harmonization of monetary and fiscal policies, in particular the use of fiscal (*optimal tax policy*) stabilizers, regulating cycles of the economy.

3. The design of new model of optimal tax policy: Using tax policy to support economic growth

Tax policy is one of the main tools of such as regulation and economic growth. Traditionally, the tax system is perceived as a fiscal tool, however this tool can be used as a stimulant.

If the tool in the policy itself were rates, now targeted benefits replaced them. These include:

- accelerated amortisation,
- investment tax credit,
- partially deductible investment for Scientific Research and Experimental Development (*SRED*).

Many states have wrongly believe that rates are more flexible tool of tax regulation. The founder of this idea is A.Laffer. According to Laffer’s theory, after the growth of the tax burden will surpass maximum, capital will go into the banking sector, which in its turn will slow down the economic growth.

In fact, we observe the converse effect. While in developed countries in total investments 50% of deductions fell to the share of own profit, presently more than 60% [3] fell to the share of amortised deductions. With the regime of accelerated depreciation and tax benefits income tax rate should not be low, otherwise residual income will be allocated to dividends. It indicates that investment will not be increased by reducing interest rates, and the overall level of economic growth will not change.

Tax measures can be divided into two types [3]:

1. Extensive (*passive*). Passive type includes simple reduction of rates. The state makes this deficiency simply a gift in the form of profits not encouraging people to invest. Statistical studies indicates that in such cases no more than one third of the additional revenue is directed to investing, the rest fall to the share of consumption.

2. Active(s) of targeted destination. Active(s) include :

- ❖ policy of accelerated amortisation;
- ❖ a partial deduction of cost from income for industrial growth;
- ❖ deduction of investment costs from the taxable base over several years if they are prioritized for economic growth;
- ❖ provision of the tax credit, enabling deduction from the amount of the accrued income tax of the investment costs;
- ❖ deduction of expenses for SRED;
- ❖ active use of tax incentives for businesses operating in economically backward regions;
- ❖ for small enterprises (*the number of employees not exceeding 50*), partial or complete exemption from tax in the case of reinvestment of profits.

The advantage for the state is not providing benefits in advance, but by execution of conceived ideas. In these circumstances, the state will benefit by not reducing the rate of income tax but keep it at a high level to stimulate the activity of enterprises in the right direction.

It is also necessary to consider the tax depreciation. Typically, tax depreciation implies depreciation allowed for deduction from the income tax base. However, if we consider the tax depreciation in terms of the investment behavior of enterprises, we should pay attention to “The theorem on the neutrality of taxes”, by American economist P.Samuelson. This theorem states that: “The economic cost will be invariant with respect to the income tax rate, then and only then, when the tax depreciation will be equal to the economic one”. [4]. The neutrality of the system with respect to investment means a system that does not distort the investment behavior of enterprises.

As an example of target benefits we can present tax exemption for the production of agricultural products in the country.

Let’s have a look at the data in details (*Table 1*) on the dynamics of production of industry within five years, agricultural products and the dynamics of the GDP.

Table 1. The increase in production for last year in percentage

Indicators / Year	2005	2006	2007	2008	2009
Industry	134	137	124	106	109
Agricultural Products	108	101	104	106	104
Gross Domestic Product (GDP)	126	135	125	111	109

As we see, growth tempo of industry is significantly ahead of growth tempo of agricultural products. It should be noted that the growth rate of agriculture during this period was stable.

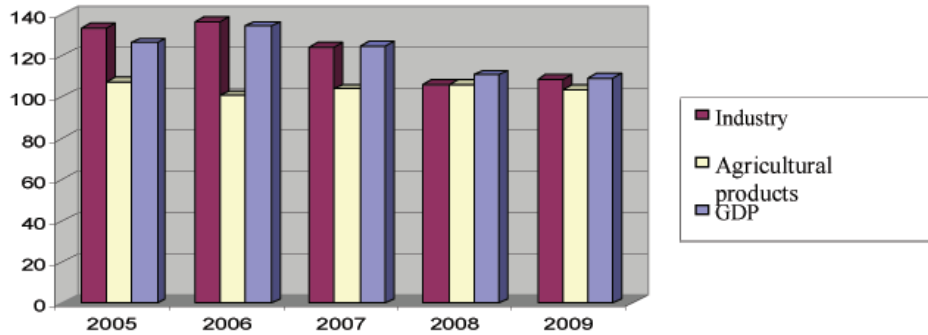


Figure 1. The increase in production for last year in percentage.

If we consider the number of unprofitable agricultural enterprises, as well as the level of profitability (*Table 2*) in agriculture in 2003-2004, it is unlikely to attract additional investment in this area in the case of a significant reduction of the overall tax rate.

Table 2. Financial performance of agricultural enterprises

Indicators / Year	2003	2004	2005	2006	2007	2008	2009	2010
Number of farms	1783	1715	1782	1733	2098	2258	2392	2043
Loss, %	25,4	17,1	11,4	12,3	10,1	8,8	8,9	8,5
Profitability, %	0,2	5,1	9,1	8,5	14,9	15,8	21,4	16,7

Considering tax burden on GDP, it's necessary to take into account the structure of earnings. For instance, the tax burden of Azerbaijan's GDP was less than 20% but up to the year 2008 most of the tax revenue was comprised of profit tax of legal entities, since 2008 revenues from other types of taxes has significantly increased, in particular on VAT.

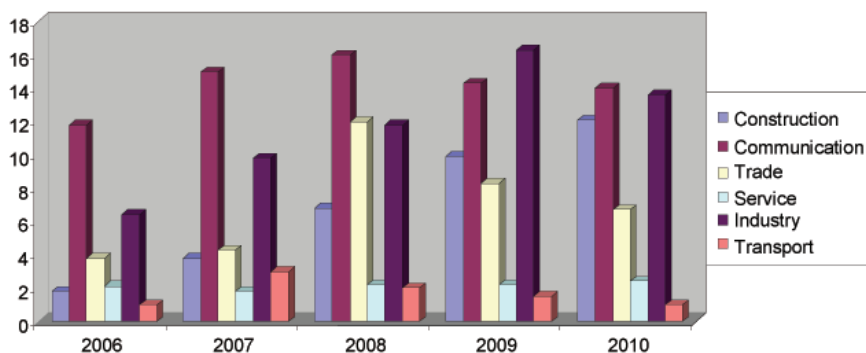


Figure 2. Specific weight of VAT (in %) (VAT / GDP by sectors)

As t figure shows, the share of the tax burden on VAT in production is more than it is in services.

To estimate the econometric specification of the tax burden [5] on VAT and real GDP, the following equation is revealed:

$$y_{it} = \beta_0 + \beta_1 y_{it-1} + \beta_2 tb_{it-1} + \mu_i + v_{it}$$

Here:

y_{it} - the natural logarithm of real GDP in the sector and in time t.

tb_{it} - tax burden on VAT in the sector and in time t.

μ_i - stable efficiency, inherent in this sector.

v_{it} - indicates the error (*imprecision*).

β_0 - indicates an autonomous level of GDP, that is, what is the GDP in period t, if the influence of other factors equals zero. The influence of this factor may not be meaningful if the model is properly formulated.

β_1 - indicates the influence of GDP in the period of ($t-1$) on GDP in the period of t. I.e. reflects the lag effect of previous year.

β_2 - indicates the effect of tax burden on VAT in the sector and in time t.

For the econometric estimation Dynamic Panel methodology has been used. It should be noted that Dynamic Panel methodology used to estimate the stable efficiency is based on the methodology of Arellano and Bondun.

This methodology is based on the instrumental variable approach, GMM (*Generalized Method of Moments*).

Estimation results are as follows:

	Coefficient	Standard error	t statistics
y_{it-1}	0.879	0.0397	25.13
tb_{it-1}	-0.003	0.0004	-8.14
All coefficients are statistically significant at the 5%			

As you see from the table, GDP by sector reflects the high one-year inertia (*dependence on the previous year's indicator*). On the other hand, the high level of tax burden on VAT for the last year, had a negative impact on GDP in the same sector in a year. The severity effect of the burden on the VAT impacts not only the indicators of this year, as well as the indicators of the next one. It also shows that increasing the tax burden by 1% leads to a decrease in GDP by 0.3%.

This analysis makes an impression that currently the level of the VAT burden is high, and it restrains the rate of development of the economy not only this, but the following year.

Industrial areas enable to compensate VAT, which creates a basis for reversal of the burden. Of course, consumption doesn't present such an opportunity. From the other hand, it's necessary to implement proper distribution of norms of consumption and investment to maintain a stable equilibrium of the economy. It is possible to control and regulate this process due to the VAT. The model shows that, the increase of tax burden leads to GDP decrease by 0.3%. In its turn it leads to a reduction in final consumption in GDP and in investment promotion, which affects the development of the economy in the long run. But we should not believe that, the further increase of burden will increase investment and contribute to the development of the economy. The norms of investment and consumption shall comply with the state of the economy and the level of production capacity.

Implementation of these objectives makes necessary the introduction of innovative tax system.

4. Innovative development of tax system

Depending on the nature of changes, the evolution of the tax system can be viewed in two aspects [6]:

- change of quantitative parameters of tax system. This aspect has not very strong effect on the tax burden of taxpayers and does not imply qualitative changes in the system of tax institutions (*including the methods of tax administration*).
- qualitative changes of tax system: introduction and abolition of specific (*not creating bureaucratic difficulties in identification or payment*) taxes, renewal of taxation rules and tax base, identification of methods of tax administration.

The reality is complicated by the fact that the analysis of reforms does not allow to assess the extent of the complexity and levels of expenses regardless of its direction.

By implementing tax innovations we can observe the change of tax revenue to the state budget, it can also be associated with the introduction of targeted tax incentives.

Particular attention [7] should be paid to the development of schemes of tax evasion. This applies both to existing taxes, as well as to changes that will occur as a result of the introduction of innovative reforms.

Taxpayers and their interrelation with tax institutions (*reflected by tax revenues to the budget*) also are the elements of tax system. Accordingly, the activities of companies and individuals associated with the payment of taxes, tax planning and tax evasion should be considered as the part of the tax process.

It is necessary in the practice of tax regulation to introduce monitoring of the tax (*and the wider economic, financial*) innovation of the state and the corresponding counter-innovation of the taxpayer to identify the efficiency of tax administration and to reveal the "gaps" in the legislation.

Implementing reforms in the tax system one should be aware that the tax system depends not only on the internal, but also on external factors. For instance, reducing the profit tax rate has the effect until there is capital flow to the country from outside. However, the financial crisis beginning in 2008 has shown that as the period of intense flow of foreign capital was over, the states with the lowest rates of income or profit tax suffered more than others.

Requirements for these innovations in the system of taxation institutions of income must be significantly high. The innovations must:

- simplify tax system;
- form easily countable tax function;
- ensure high tax efficiency (*the ratio of tax revenue to the taxpayers' expenses to pay taxes*).

It is necessary to prevent evasion of income tax and value added tax, particularly through the illegal export of resident capital and over-interest paid on foreign loans.

The tax reforms may include in future:

- taxation of imports of services;
- prohibition of privileges, stimulating capital export.

5. Conclusion

The state economy reacts to both internal and external impacts. The tax system is one of the major tools of economic regulation, and stimulation of its development as well. The most important thing to consider in implementation of reforms is the impact of these reforms to market players, to the market itself and to the state as well. Reforms of the tax system should serve the economy growth. If before we could expect to increase the efficiency through increasing or decreasing the tax burden, presently a greater effect is obtained by qualitative reforms that stimulate the development and at the same time regulate it.

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