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Sensitivity Thresholds of Countries with Transitional Economies: The Case of Armenia

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Abstract

The analysis of sensitivity thresholds of economy enables to identify the critical characteristics of key economic processes of transition from quantity to a new economic quality. The complex investigation of sensitivity thresholds of economy conduces to the identification of their interrelations. Since uncertainty intervals are present in economy, it is possible to present only the interval forecast of sensitivity thresholds. The sensitivity threshold of economic indicators occurs when the probability of transition to a new economic quality substantially increases in this or that sphere of economy. The study of sensitivity thresholds is especially important for a country with transitional economy as only the threshold values of key economic indicators make the effective realization of market economy potential possible. The sensitivity thresholds of economic processes create benchmarks of economy that decisions made, must correspond to.

Keywords: Sensitivity thresholds; Economic indicators; Interrelated factors; Transitional Economy

Introduction

The achievements in fiscal and monetary policies, privatization, fight against corruption and in other aspects of economic policy will not entail essential qualitative changes, if the critical values of key characteristics of economy are not attained. The improvement of the situation with this or that economic indicator does not mean that a qualitative change has automatically occurred in the economic sphere that is characterized by the indicator, and the sensitivity threshold is overcome.

In the present conditions of global and regional economic situation, the main factor of economic security is homeostasis¹, that is, a sustainable development without fluctuations that can represent a serious threat. The ability to withstand external shocks is an important condition for the development of economy. The slowdown of economic growth, moreover, the significant decline, may lead to negative qualitative changes in economy and have an irreversible character. For the estimation of economic homeostasis, it is expedient to research thresholds of transition from quantity to a new economic quality.

Sensitivity Thresholds of Transition from Quantity to a New Economic Quality

In small-developed countries the ratio of exports to GDP is at least 30%², since it is evident that their markets are small and exports become crucial factor. The coordination of economic programs targeted not only to the growth of exports but also to the achievement of 30% export-GDP ratio result, and defining the corresponding objectives, mechanisms, risks and possibilities of their counteractions become the most important factor of economic homeostasis especially in such countries. Only in that case, there is a high probability of overcoming the 30% critical point, and exports would fully play the role that is indispensable for substantial positive qualitative changes in economy.

The effectiveness of reforms increases if they are realized firstly in state apparatus. Here, the principle "start with yourself" is decisive. It is necessary to raise the incentives of work in the public system of management, the quality of work and the level of wages. This is possible even without substantial growth of state budget, due to its structural changes. However, the quantity will give a new

¹ Homeostasis (a Greek word ὁμοιοστάσις from ὁμοιος-identical, similar and στάσις-stagnation, immobility) - self-regulation, the ability of an open system to maintain stability in its internal state through coordinated reactions.

² <http://data.worldbank.org/indicator/NE.EXP.GNFS.ZS>

quality and will be effective and anti -corruptive only in case a system solution is presented. Taking into account the international experience, we formulate the given condition: the growth of wage of civil servants becomes effective if simultaneously the mechanisms of estimation are specified legislatively, and the methods of responsibility control, accountability and publicity of results of their work are amplified.

Inefficiency, moreover the manifestations of corruption, initially should be minimized. This is largely more effective than consciously or unconsciously to allow risks of corruption and only after that to control and, to some extent, identify the misuse. For a long time, the necessity for anti-corruption expertise has been maturing, particularly, the acts regulating economic activity.

The authors of "Strategies-2020" assess the premium of corruption on values of products 15% in Russia, and on real estate even from 25 to 30%³. Taking into account the fact, that the transition countries are situated closely to each other in the classification of the corruption perception index of Transparency International⁴, and they all occupy ranks below the 100th place (Armenia is in the 94th place) among 174 countries, one can assume that the increase of corruption is nearly on the same level in those countries.

With maximum possible corruption perception index of 100 points, for the majority of countries with transitional economies the value of that index is not higher than 36 scores. The countries of Northern America, the majority of countries of Western Europe and the rapidly developing countries are situated on the list of the first 25 positions with indexes not lower than 70. The absolute majority of Eurozone countries occupy the positions not lower than 50 with index of 53 or more. It is significant that only Greece among Eurozone countries with

³ <http://diepresse.com/home/wirtschaft/international/749470/Mit-%20halbwahrheitenamScheideweg?v1backlink=/home/wirtschaft/index.do>

⁴ <http://cpi.transparency.org/cpi2013/results/>

index of 36 points is situated clearly below others (with the rank of 80). From this aspect, not just the process of fighting against corruption but also overcoming the estimate of 50 of corruption perception index as soon as possible, should be the benchmark for the countries with transition economies. Only in case of achieving the given critical threshold, we can speak about qualitative changes in the fight against corruption.

It is natural that the rise in civil servants salaries attracts public attention. However, with the growth of state budget, not always distinctly substantiated, weakly controlled, and having the degree of high subjectivity, costs increase, whose effectiveness is relatively difficult to estimate. Therefore, the necessity of clarifying the methods of control and estimating effectiveness of certain budget articles is obvious. A significant increase of effectiveness of budget structure is of great importance. The problems of state tasks can be solved by rationally reallocating saved funds. The optimization of revenues and costs plays an important role in improving the quality of the budget.

It is necessary, in Armenia, to accelerate the taxation reform both in terms of adjusting rates and tax administration in order to revive the economy and significantly lower the level of monopolization of imported goods and encourage the diversification of exports as well. The value added tax (VAT) in Armenia is the highest in the region, besides, unlike the set of countries in the region, the lower rate is not applied⁵. It is appropriate to reduce the VAT rate from 20 to at least 18%, and for some products even lower. Taking into account that these measures should stimulate the economy, budget losses (especially in the long run) are not expected. The reduction of indirect tax, restraining downturn, stimulates the economy and has anti-inflationary influence. Moreover, the reduction of the VAT from 20 to 18% conducting to a significant stimulation of economy is also

⁵ Ernst & Young (2013); Gaidar Institute for Economic Policy (2009)

necessary for convergence of tax rates in the region. Although the VAT in Armenia is the highest in the region, the tax/GDP ratio is about 23% .This shows again that the high rate of the given indirect tax does not provide an acceptable tax/GDP ratio, consequently, a complex regulation of tax system, as a whole, is required.

Some changes are required in the system of customs oriented to the improvement of trade balance. In comparison with developed countries, tax on real estate and land tax have reserves for differentiated growth. These measures are justified for both the budget and the social sphere. Taking into account that mining industry plays a significant, if not dominant role, in the economies of almost all transition countries, rental tax forms incomparably small portion of tax revenues. Indeed, the reduction of the VAT and the correction of other taxes must be coordinated so as not to incur even short-run losses.

During privatization in some transition countries, the goal of creating a broad class of owners was excessively accentuated, anyway, it was proclaimed so. An evident intention to replenishing the state budget was present that could not be the main purpose of privatization. As a result, no significant qualitative changes took place. Effective methods inherent in the market of real estate are required. For that purpose, privatization methods must be drastically improved. It is worth using successful methods of privatization in the United Kingdom and the Czech Republic that allow not only to define the market price of real estate but also to state the conditions that allow its deviations depending on the effectiveness of inputs⁶. Not accidentally, the father of Czech privatization V. Klaus was elected president of the Czech Republic.

In the set of transition countries, especially in small economies, borrowed funds from international organizations and other countries are widely used for

⁶ Gerard Roland (2008)

financing the state budget. Indeed, while using credits, the role of control is extremely important. However, the principles of selection of credit programs must be distinctly developed such as, the maximum accurate representation of the program objectives, the distinct estimate of the effectiveness of each objective for the economic growth, the estimate of the effectiveness of structure of the program. As a matter of fact, ineffective component turns into an implicit interest on credit, sometimes very high, winding down the prerogative of a credit.

Only a clear estimate of credit resources allows to implement a full control over them. Therefore, tracking "external debt/GDP" ratio, we emphasize that here, the main point is the effective use of credit resources aimed at increasing the potential of economy. Only in that case, credits provide the quality of the deficit of the state budget.

About the Sensitivity Threshold of Social Politics or When "A Half-Empty Glass Becomes Half-Full"

The increase in wages is appropriate to realize not only at the expense of the growth of revenues of the state budget but also by means of maximum possible cost reduction of acquiring goods and services, especially imported, and clarifying the article of "other expenditures", and also at the expense of reducing costs of transactions with non-financial assets (these articles of expenditure totally make up about the half of the expenditures of the state budget of Armenia). We must also note that in the state budget the costs of acquisition of imported goods occupy a significant place in the expenses of goods and services.

Of course, it is not needed to run to an extreme and do it drastically, as it was done in Belarus, increasing wages by 30% without a corresponding growth of GDP and effective changes in the structure of the state budget. The increase must correspond to the growth of GDP, taking into account the growth of prices. In

order not to exacerbate social problems, on the contrary, to smooth them, wages and pensions must be increased proportionally, using the phase principle.

With certain changes in the structure of the state budget, an increase of minimal wage (in Armenia 40 thousands AMD – about 85USD) and average pension (28 thousands AMD –about 70USD) at an accelerated rate (15 %) is possible. Since in the given case, a separate task refers to the quickly bringing of these indicators to the level of the value of minimum consumer basket (63 thousand AMD or 160USD)⁷. We must emphasize that only in case of exceeding this threshold the quantity gives a new quality. Indeed, there is a serious task for countries with transitional economies when overcoming the sensitivity threshold in this key sphere, and there is no way out without objective-oriented changes in social policy and in the budget structure.

In the EU countries the share of poor population varies from 6 % (Austria, Ireland, France) to 20% (Greece, Spain, Portugal)⁸. Besides, the indicator of poverty corresponds to the 60 % of average per capita income. Therefore, the problem of an increase of the middle class and, of course, the level of average income is actual in Armenia. It is not easy, but quite real, by estimating the indicator of poverty by the level of subsistence minimum, and then by the level of 60% of average income per capita, to reduce the share of poor population to

20% in the next 3-4 years. Then surely, overcoming sensitivity threshold in this important sphere will be managed. Moreover, the transition to the group of middle-income countries is one of the urgent tasks for the countries with transition economies.

The reduction of some expenditures of the state budget and an increase of minimal wage and pension conduces not only to solving social problems, but also

⁷ <http://www.armstat.am/en/>

⁸ <https://www.cia.gov/library/publications/the-world-factbook/fields/2046.html>

stimulates domestic demand for local products promoting the development of domestic production, particularly agriculture.

The share of consumption of vital necessities is much higher in this group, since, as a rule, the layers of population with low income firstly acquire the mentioned goods. Therefore, the increase of pensions and benefits also corresponds to the primary task, that is, simultaneously with exports, stimulating import substitution.

Three Interrelated Factors of Monetary Policy

During the period of overcoming financial-economic crisis, our goal is to draw attention to those aspects of monetary policy that become pivotal and have a system-creating character in the given situation. There are about three clearly interrelated factors; refinancing rate, level of monetization and exchange rate of national currency.

It would be a mistake to assume that a high refinancing rate always restrains inflation, and vice versa. If the increase of prices is mainly due to the prices of imported goods, especially in small economy, it is inefficient to fight inflation by means of only very high refinancing rate, moreover in the long run.

At a high interest rate, especially in the conditions of low monetization, the following cause -effect chain is formed: high refinancing rate- higher interest rates of banks- at an acute shortage of own resources growth of cost price – inflation of costs, which, of course, does not promote local production and exports. In developed countries, the refinancing rate does not exceed the inflation rate⁹. So in the US, inflation was 1.3% in 2013, while the refinancing rate was 0.25%, in the Eurozone 0.8% and 0.25%, respectively. In majority of countries with small economy the indicator of inflation is closer to the refinancing rate.

⁹ Used data:<http://www.cbrates.com/>, <http://www.global-rates.com/economic-indicators/inflation/inflation.aspx>.

Especially in the period of overcoming financial-economic crisis, it is necessary to gradually lower the refinancing rate keeping close to the inflation rate. Moreover, the inflation rate in Armenia does not exceed its level confirmed by law. The refinancing rate, of course, must be flexible while being regulated¹⁰. First of all, taking into account inflation, it is necessary to consider how the refinancing rate is reflected in the GDP, in its structure, in the trade balance.

It is very difficult to modernize production if incomes are substantially reduced, the probability of inflation and exchange rate volatility is significant, and the real banking rates are very high. Thus, the high refinancing rate, in the conditions of low monetization, can be only a temporary measure, not a long-term policy. In a number of countries with transitional economies, the level of monetization is below 30%, while in developed countries it is over 60%. In rapidly developing countries, the monetization has just a record character: world leader - Hong Kong with 327%, in Taiwan this indicator stands at the level of 213%, in South Korea - 128%, in Malaysia - 120%, in Singapore - 114%, in China - 140%¹¹.

The level of monetization must be brought closer to the mark of 60% in Armenia, as at an insufficient level of monetization certain difficulties connected with stable growth of economy occur. In this case, the substitute of national money is present at the market, that is, the currencies of other countries. The growth of money supply does not change the level of inflation if a successful parallel reduction of turnover of cash are implemented. An increase in the volume of securities market can also play a significant role. Then, the level of monetization will surpass the critical sensitivity threshold and will support the sustainable growth of economy.

Even at present, the national currency is significantly revaluated in Armenia, which causes a trade balance deficit. The increase of exchange rate of Armenian

¹⁰ Otker-Robe, Vavra et al. (2007)

¹¹ Asian development bank // <http://www.adb.org/>

dram in respect to euro, dollar and other currencies of the developed countries is inappropriate, especially from the strategic aspect (table 1).

Table 1: Exchange Rate of Dram in 2003-2013

Year	US Dollar	Euro	British Pound	Swiss Frank
2003	578,8	653,8	945,6	429,9
2004	533,5	662,3	976,7	428,8
2005	457,7	570,4	833,6	368,6
2006	416,0	521,2	763,9	331,6
2007	342,1	467,9	684,1	284,8
2008	305,9	450,2	566,8	283,2
2009	363,3	507,4	570,0	335,5
2010	373,7	496,0	577,7	358,5
2011	372,5	518,7	597,5	421,4
2012	401,8	516,4	636,7	428,5
2013	409,6	544,1	640,8	442,1

Source: http://www.cba.am/storage/AM/downloads/stat_data_arm/kurs_tari.xls.

In 2004-2008, AMD appreciated in respect to USD by 1.9 times, to EUR - 1.5, to GBP - 1.7, to CHF - 1.5 times. By the way, AMD appreciated in respect to RUB by 1.5 and GEL – 1.3 times, as well. In 2009, AMD substantially depreciated only within a month. Its appreciation conduces to the growth of deficit and trade imbalance (Table 2).

The dynamics of revaluation of national currency and the dynamics of the growth of the deficit of trade balance show that during the appreciation of AMD and the corresponding growth of production prices, in terms of the currencies presented in Table 1, a significant growth of trade balance deficit occurred. During

the period of substantial strengthening of AMD, the trade balance deficit, in 2003-2010, increased by 4.5 times, this figure even slightly rose in 2011-2013. Besides, in 2008, at the lowest level of exchange rate (1 USD - 305.9 AMD), the trade balance deficit increased more than 5.6 times during 5 years.

Table 2: Trade Balance of the RA in 2003-2013

Years	Exports, mln. dollars	Imports, mln. dollars	Deficit of Trade Balance
2003	685,6	1 279,5	-593,9
2004	722,9	1 350,7	-627,8
2005	973,9	1 801,7	-827,8
2006	985,1	2 191,6	-1 206,5
2007	1 152,3	3 267,8	-2 115,5
2008	1 057,2	4 426,1	-3 368,9
2009	710,2	3 321,1	-2 610,9
2010	1 041,4	3 749,0	-2 707,9
2011	1 334,3	4 145,3	-2 811,0
2012	1 380,2	4 261,2	-2 881,0
2013	1 480,0	4 476,8	-2 996,8

Source: <http://www.minfin.am/index.php?fl=259&lang=3>.

The formed trade balance distinctly shows the growing dependency of economy on imports. A certain growth of exports is recorded mainly due to the increase of prices of non -ferrous metals. However, the situation has not changed substantially, and the diversification of exports remains in the set of the most important tasks. Having the appreciation tendency of euro and other currencies in respect to USD, AMD set a record being significantly appreciated in respect not

only to USD but also the currencies of other developed countries, totally deteriorating the conditions of exports, not only in the dollar zone.

If AMD gradually appreciated at the average exchange rate, whose appreciation rate had not been significantly changed in respect to USD (as it happened in the case of AMD), the exchange rate of USD would be in the interval of 430-450 AMD, that would not entail a serious trade imbalance, and would conform our export tasks in the created situation. Taking into account the comparatively small volume of the domestic market, it would positively influence the diversification of the economy.

Because of the record increase in exchange rate of AMD, its ratio to the purchasing power parity decreased from 3.36 (578.8/172.2) to 1.59(305.9/191.2) in Armenia, in 2003-2008¹². The exchange rate of AMD in respect to USD is in the numerator, and the purchasing power parity of AMD in respect to USD is in the denominator. If the ratio of exchange rate to the purchasing power parity is more it allows to have privileges in price formation of exports. We must also note that in countries with transitional economies, the ratio of the exchange rate of national currencies to purchasing power parity is about 2.

Consequently, so that the quantity, in case of national currency, transfers into a new quality it would be fully actual to set a goal and take appropriate measures for gradual transition to the sensitivity threshold of exchange rate of national currency, taking into account, of course, the interrelatedness of exchange rate not only with export, but also with the level of prices.

The exchange rate of national currency conduces to the growth of exports only in case the rate passes the critical mark, that is, the sensitivity threshold; according to our estimates, it is about 430-450 drams in Armenia. This corresponds to an average increase in the cost of convertible currencies to the dollar.

It is especially actual to consider the intervals of uncertainty of economy for the medium and long-term forecasts, so the variance and the flexibility of such forecasts significantly increase their efficiency¹². The factor of uncertainty must be considered in various forecasts to obtain the most probable estimates of the limits of sensitivity thresholds.

If the quantity does not transfer to a critical quality, the devaluation of national currency will not have a significant impact on exports. Therefore, in the given sphere, it is important to estimate the sensitivity threshold and its impact on exports.

It is necessary not to allow a significant strengthening of the national currency for the efficient inflation regulation. As a result, the probability of substantial deterioration of trade balance, the growth of the dependency of prices on fluctuations of world prices increases, and as a consequence, the role of central bank in regulating inflation decreases, especially in the countries with transitional economies. That is, the increase in exchange rate of national currency does not prevent the growth of prices. It may also entail the reverse situation. This shows once more that it is impossible to isolate one indicator from general economic system and to attempt to regulate it, even if that indicator plays an important role in economy.

The problem is not in the case that Armenian dram has strengthened, taking into account the worldwide tendency of appreciation of currencies in respect to dollar; the problem is that the exchange rate of dram has increased in respect to all exchanging currencies, especially to dollar. It entailed a significant trade imbalance, struck both domestic production, exports, and did not conduce to the growth of investment in the sectors with export potential.

¹² Friedman M. The Lag in Effect of Monetary Policy // J. of Politi. Econ. Vol, 69. 1961. N 5. Tavadyan A.A. Intervals of Uncertainty of Economy, M.: Nauka, 2012 pp.48-60. ISBN 978-5-02-037957-2

Thus, in the conditions of serious trade imbalance the total depreciation of exchange rate of national currency promotes a rise in prices of imported goods and causes a certain rise in general prices based on the existing ratio of imports to GDP. Especially if it's more than the exchange rate of other currencies.

With a substantial trade imbalance, the tools of monetary policy cannot fully work. When imports greatly exceed exports the central bank is not able to effectively fight the inflation.

Until the most serious problem of trade imbalance is solved, the increase of prices in the country will mainly depend on the fluctuations of world prices, the influence of which is amplified depending on the level of monopolization of the economy in any country.

The comparative analysis of refinancing rate, the level of monetization, exchange rate, purchasing power parity, trade balance are necessary for estimation of the interval of real exchange rate of national currency. It is fully inappropriate to appreciate the exchange rate of national currency since it may artificially reduce country's competitiveness facilitating the growth of double deficit, trade and budget.

Taking into account the factor of time, the proposed measures have crucial significance, they must necessarily be interconnected and arranged.

* * *

During the achievement of indispensable conditions of transition from quantity to a new economic quality that is the critical characteristics of certain sphere, the likelihood of substantial changes in economy significantly increases. Without overcoming the sensitivity thresholds, it is impossible to attain the

acceptable level of stability of economy, ensuring its economic security and creating prerequisites for the effective realization of the potential of the economy.

The formulation of critical characteristics of taxation, privatization, credit programs, level of corruption, refinancing rates, level of monetization, exchange rate of national currency, pensions and wages, including the state apparatus, enables to define the sensitivity thresholds of fiscal, monetary, social policies, especially in countries with transitional economies. In case of achieving the given parameters, a significant growth of GDP, the improvement of its structure, the solution to the problem of trade deficit, the increase of minimum wage and average pension, and of course, the solution to the most crucial problem of employment become possible. In fact, the sensitivity thresholds of economic processes create benchmarks of economy which decisions made, must correspond to.

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