

Management of economic security

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Abstract.

The economic security is the balance between the defense of the economic values and the risks which treat these values. The economic values are multiple but all them are more or less related to the way and the quality of the public life.

The paper considers risks and conflicts for national economy. A simple model of choosing strategy under embargo is presented.

Key words: security, conflicts, embargo

1. Introduction.

The concept economic security is used for first time in 1971 by the Ministry of Export and Industry in Japan. It denotes the dependency of internal growth on international relations. Later the concept obtains broader distribution and sense.

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From national point of view the economic security is internal and external.

The external economic security presents the dependence of the economic growth of the country on the international relations.

Initial condition for the security is the adaptation of the national economy to the system of world trade. This means to guarantee stable supply of needed quantity of commodities, materials, goods and services.

Other important condition is the maintenance of the trade positions of the country in the global trade. These positions should guarantee the necessary financial revenues. Clear indicator for achieving this condition is the sustainable and positive trade balance of the country. This means there are no major dependencies from the trade partners.

Third condition for external economic security is the guaranty of trade and logistic connections – freedom of the transportation of goods, services, people and capital.

Forth condition for internal economic security is the maintenance of reserves of key commodities, materials and products needed for functioning of the economy in conditions of crisis. Common practice in developed countries is to maintain basic reserves for 160 days and reserves of strategic commodities and materials for several years ahead.

Internal economic security denotes the dependence of the economic growth on internal disturbing factors.

Key issue of the internal security is the maintenance of sustainable growth of the economy, which means growth with social and ecological concern, leading to increase in the nation's welfare. Growth means increase of GDP. Increase in savings, increase of the accrued capital and improvement of quality of life.

Second important condition for internal economic security is the achievement of full employment in order to use human resources in full capacity.

Third important condition for internal economic security is stable level of prices and inflation control.

External as well as internal economic security are dependent on quality of the management of the national resources in an environment of continuous treats and disturbs.

The paper considers risks and conflicts for national economy. A simple model of choosing strategy under embargo is presented.

2. Risks, crises and conflicts in the economy.

The risks for the economic security are potential treats for the economic system which may cause economic crisis. Every treat is related to a specific agent initiating it. The agent can be a person, organization or institution.

The negative impact may be on the status or on the development of the economic system. Blocking a desired change is sometimes more dangerous than disturbing usual stationary economic process.

The treats can be short- or long-term depending on their duration. They are internal or external depending on that which kind of security – internal or external is affected.

Internal treats can be treats for the growth (for GDP, for savings, for capital, for wellbeing), treats for the employment and treats for price level stability. External treats are treats for the import, for the export, for the deliveries or for the reserves.

The countries in the today's world have two main options – to maintain mainly open or mainly closed economy. The opening of the national economy is a major challenge for a nation in our time. The main reason is because it brings external dependence, instability and uncertainty. The economic environment becomes a field for competition. Fail in this competition can lead to worsening of the life quality, uncertainty and economic destruction. The opening is condition for adaptation, not for stability. The rate of opening should comply with the rate of performance of economic reforms and should stimulate them.

The realized economic risks are denoted as crises. The factors generating an economic crisis can be internal (in the frames of the economic system) and external (scientific disclosures, disclosure of new resources, natural hazards, political factors). The crises are often related to conflicts. Conflicts are characterized with different kind of participants. The participants can form coalitions. Both participants and coalitions take decisions about their future actions called strategies. The choice of strategies determine the outcome of the conflict. The participants have different preferences and interests. Preferences are often measured by gain or loss.

The solving of this conflict model is subject of game theory. Game theory deals with taking finding optima solutions in conditions of certainty, risk or uncertainty. Certainty means that the outcomes and probabilities of their occurrence are known. At risk, the outcomes are known but the probabilities of their occurrence are not known. At uncertainty, both outcomes and probabilities are not known.

In case of severe internal and external conflicts the heuristic analysis is very useful.

Economic conflict usually takes softer forms than political and military ones. But often the economic conflict can rise political one and the political conflict in its turn can generate military conflict. According to Du Montsel (1981), there are two main types of economic conflicts: conflict related to control and conflict related to relations.

The conflicts related to control are based on the property and use of resources: territory (with people and natural resources attached to them), technologies, information, communication and transport channels and others.

The conflicts based on relations deal with the conditions of economic exchange between countries. Main types of conflicts based on relations are: conditions of foreign exchange, customs and non-customs rules, price conditions for exchange of goods, conditions for investments and credit access.

3. Types of conflicts.

Depending on their intensity the external economic conflicts can take different forms: boycotts, economic sanctions, and economic wars (Ivanov, 2002).

Boycotts are usually applied in relations to concerns about human rights, environment or human values. The effectiveness depends on the degree of dependence between the both sides as well as on the coordination between the countries setting the boycott.

The economic sanctions are trade and/or financial bans or penalties aiming change of the basic policy of a country. They are usually combined with diplomatic measures to attract other countries also to raise sanctions. The strength of the sanctions is highest at the beginning and decreases with time as the affected country adapts to the new situation.

The economic sanctions can be strategic and common embargo. The strategic embargo forbids the delivery of goods and technologies which increase the defense capacity of a country. It is not economic but political action and can lead to some losses for the applying country. It ails long-term objectives. The common embargo is a specific trade ban applied by government or other state institution which forbids the import or export of goods, technologies, currencies, financial instruments or gold. When applied in conditions of peace, it is a way of pressing the concerned country. In war time, it is a means for enforced stopping of assets at the territory of the applying country.

Legal basis for embargo is the UN establishing contract, giving right to the Security Council, in conditions of treat or aggression, to apply such measures which should lead to restoration of the peace.

Examples for embargo are:

1. Embargo on import of military technologies by China. It is applied by USA and EU since 1989.
2. Embargo for Republic of South Africa, applied by UN in 1972 with Resolution 418 of Security Council and lifted with Resolution 919 of 1994.
3. Embargo for Iran, applied by UN with Resolution 1747 of Security Council in March 2007.
4. Embargo for Argentina applied by USA since 1976. UK joins the embargo in 1982. Embargo is lifted in 1990.
5. Embargo for Indonesia applied by USA in 1999 and lifted in 2005.

The economic war is an ultimate form of economic pressure, typical for the transition period to political war. Using the economic power is a means to increase the chances for success in a potential political war. The

economic war includes clear and escalating application of sanctions without presumption for return to normal trade. The objective is to damage maximally the economy of the enemy.

The economic conflicts and in particular the economic wars contain four main phases: preparatory phase, phase of stating pretensions, phase of posing conditions and phase of applying measures.

The preparatory phase includes informing of the public about the interests affected and debate on possible responses.

The second phase is stating pretensions and accuses in twisting law by the targeted country.

The third phase includes posing conditions, for example refusal of trade, if the policy of targeted country does not change.

The last phase is applying the measures. They may be penalties, de-stimulating or stimulating. The measures may have acceptable or aggressive character.

4. Strategies for guaranteeing the economic security.

There are two main strategies for guaranteeing the economic security.

The first one is strategy of opening and adaptation. It is typical for liberalism. Open economy is highly involved in international trade. Export or import can surpass 60% of GDP. This strategy leads to maximal use of comparative advantages of a country but also to very high dependence on the international economic system.

The second strategy is the one of isolation, and resistance. It is typical for protectionism. Autarchy is isolationistic policy aiming maximal self-satisfaction and small dependence on external trade connections. It is usually applied in pre-war periods.

Criteria to choose one or another strategy are the duration of the disturbing factor and competitiveness of the economy. When disturbing factor is short-term, keeping the economic balance depends on the sustainability of the economy, i. e. by its possibility to resist to the disturbance and to restore its initial state. When the destabilizing factor is a result of long-term change of the economic environment, the ability for adaptation is a crucial factor for survival.

5. A simple quantitative model of embargo situation.

We consider a model of arms embargo at which a part Y of the import of arms of a country X can not be received due to embargo. The affected country then looks for substitution with alternative import. After this alternative import, the missing part must be ensured by conversion of civil to military production.

Let the maximum substitution rate be $0 \leq s \leq 1$ and the chosen substitution is $0 \leq x \leq s$. Let $c + vxY$ be the substitution expenses where c are constant expenses related to substitution and v is the coefficient of the variable expenses (supposed to be linear with the substitution). Let also r be the norm of expenses of conversion. Then the optimal norm of substitution x can be obtained by solving the linear optimization problem:

$$r(1-x)Y + c + vxY = xY(v-r) + c \rightarrow \min.$$

If $v > r$, i. e. the coefficient of variable expenses of substitution is greater than the norm of expenses of conversion, minimum is obtained for $x = 0$, i. e. zero substitution. If $v < r$, i. e. the coefficient of variable expenses of substitution is less than the norm of expenses of conversion, minimum is obtained for $x = s$, i. e. zero conversion.

The comparison of the variable expenses of substitution and the norm of expenses of conversion here play a key role. Also, precise estimation of the maximal norm of substitution is important to determine the minimum.

6. Conclusion.

The choice of strategy for guaranteeing the economic security is a political issue. It depend on the readiness to sacrifice part of the public wellbeing in the name of some traditional or new ideals. Most often nowadays, some intermediate choice is made by most countries – moderate protectionism with multiple trade restrictions.

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