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Necessity and Comparative Aspect

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Abstract

Our vision of the industrial policy emerged when industries of countries determined their competitive advantages on the world market. Today the economy has entered its post-industrial development phase when the services sector, insensible assets, etc. play an enormous role. All these result in a certain terminological confusion. Thus, some authors say that the industrial policy is outdated and discredited within the classical meaning. However this point of view seems to be a bit incorrect. The fact is that in modern conditions the principles of plant placement changed, the geographic dispersion of plants increased and that resulted in an illusion that the industry made a small contribution to the economic well-being. Examples of two EU countries – Greece and Slovakia – are illustrative. On practice, only industrial countries of the EU are the core of the union and determine its further development today. What is to be done? How to devise the strategy of country development under new economic conditions? Application of the modified GE/McKinsey matrix allows to determine the acceptability of a potential strategy of economy cluster development that can bring comparative competitive advantaged to the country.

Keywords: economic policy, industrial policy, EU economy, GE/McKinsey matrix.

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1. Introduction

Our vision of the industrial policy emerged when industries of countries determined their competitive advantages on the world market. Today the economy has entered its post-industrial development phase when the services sector, insensible assets, etc. play an enormous role. All these result in a certain terminological confusion. Thus, some authors say that the industrial policy is outdated and discredited within the classical meaning. It is asserted that the industrial policy is "very contradictory, suffers from information problems and, finally, leads to the misrepresentation of competitiveness, restriction of trade and loss of prosperity". [6] Other authors say that state interference in the market mechanism cannot be efficient. [5]

However this point of view seems to be a bit incorrect.

The fact is that the industrial policy played the basic role during the emergence of mass-production manufacturing and the creation of modern market economy. [8] One can assert that the industry formed the modern economy and today it also greatly influences the development of the global economy: an attempt to reject this fact resulted in the global economic crisis of 2008-2010.

2. Industrial policy in the EU

The fact is that in modern conditions the principles of plant placement changed, the geographic dispersion of plants increased and that resulted in an illusion that the industry made a small contribution to the economic well-being.

Examples of two EU countries – Greece and Slovakia – are illustrative. Greece had its own industry, its own shipbuilding cluster, metallurgical industry and manufactured agricultural equipment and machines before it joined the European Union. When Greece joined the EU it refused its production area and switched to the area of services, first of all tourist services.[1] For the most part the EU grants took the industry share in the GDP of Greece and that led to deplorable consequences for the economy and great demotivating effect for the population. The situation in Slovakia is different.

In contrast to Greece Slovakia is an industrial country. The most developed sectors are as follows: metallurgical industry, power industry, machine building and petrochemical industry. But joining the EU led to the emergence of transnational companies on the Slovakian market. These companies are highly competitive in relation to Slovakian enterprises. The level of the innovative activity of Slovakian enterprises is low: it is higher in the EU countries than in Slovakia twice or thrice.

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[1] According to the EU decisions the Greek production was reduced by 30 %. The dominating sectors of economy alongside with tourism are as follows: food-processing industry (including olives processing) and tobacco processing. Source: [1].

Table 1. *Share of enterprises involving innovative activity among the total amount of enterprises by sizes in the EU and Slovakia*

	European Union (average)	The Slovak Republic
All enterprises	51	22,7
Small enterprises	37	17,4
Medium-sized enterprises	65	31,8
Large enterprises	81	56,6

Source: [4, section 25].

That's why non-residents in Slovakia receive income from the developed industry and the living standard in Slovakia is much lower than in Greece.

Table 2. *Some economic performances of a number of EU countries*

	The rate of unemployment among young people up to 24 years old in the EU countries	Per capita GDP (dollars)	National debt (% of GDP)
Greece	36,1%	32 100	152,6
Slovakia	35,6%	22 000	28,7
France	20,3%	41 019	74,6
Germany	7,9%	39 442	83,0
Liechtenstein	Less than 1%	134 000	0,0

Source: [1]

The great significance of the industrial policy is also confirmed by the fact that two groups of states have the most steady position: first, these are countries with a high share of industrial products in the GDP (for example, Germany, France, Norway), and second, these are micro-states (for example, Monaco and Liechtenstein1), that are prosperous mainly due to inducement of foreign capital and execution of various financial transactions, including illegal ones.2 It's under the illusion that such micro-states may become an example of the efficient development of large countries. Thus, only industrial countries of the EU are the core of the union and determine its further development today.

What is to be done? How to devise the strategy of country development under new economic conditions?

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[1] State that the industry of Liechtenstein is quite developed. Such branches as precision instruments industry, optics, production of vacuum technique, electronic systems, microprocessors that are famous for a high level of innovations are in the lead. However, the contribution of these branches in the economy in comparison to financial transactions is small. (Source: [1])

[2] Judging by the statistics Liechtenstein citizens have not been accused of financial crimes since 1946.

3. Modified GE/McKinsey matrix

Unfortunately, national economy and its clusters are developed at random to a certain extent and such a development depends on a number of current parameters of the economic and social development of the country. Thus, one should approach the economic policy strategically, that will allow to develop those clusters of economy (if such a possibility is available) that can give the country the maximum competitive benefits at the present moment. Therefore, one should determine the vector of the country strategic development that will provide the basis for its industrial policy. The instruments developed within the framework of the strategic management concepts modified for the solution of the current task in a certain manner suit for this. The most attractive instrument for analyzing the competitiveness in response for the implemented measures of the industrial policy is modified GE/McKinsey matrix as it is based on the quantitative and qualitative information and includes a group of parameters determining the internal capabilities of a research object (here a cluster of economy) and the characteristics of its external environment.

Why can one approach the national economy as a set of business processes within the framework of one company or competitors on one market? This is due to, first, the European Union represents a single related market (having the same rules of game and no substantial boundaries) and, second, the globalization processes of the modern economy allow to consider industrial clusters in different countries integrally. (there is real competitiveness and no substantial administrative violations within the framework of the WTO)

Application of the modified GE/McKinsey matrix allows to determine the acceptability of a potential strategy of economy cluster development that can bring comparative competitive advantaged to the country.

The McKinsey matrix is a 3×3 matrix allowing to represent and carry out a comparative analysis of strategic standpoints of a company's business processes (products). The axes of the matrix are built as integral multifactorial estimates: horizontal axis represents a competitive status of a certain business process and the vertical axis represents the attractiveness of the market. So, X axis rests upon factors that depend on a company (internal environment factors) and Y axis – on the parameters that are almost beyond its control (i.e. external environment factors). [7, p. 208-211] Let's try to use this matrix for carrying out a strategic analysis of competitiveness of branches on the global market.

Let's take Lafay index as an X axis value. It shows the presence of absence of competitive advantages of products of a certain branch of a country. Lafay index represents multiplication of 100 by the difference between the ratio of net export of products j to the foreign trade commodity turnover j in a certain year and the ratio of aggregate net export to the foreign trade turnover as well as the share of the latter of j products in a gross foreign trade turnover of a certain country.

$$LFI_j^i = 100 \left(\frac{x_j^i - m_j^i}{x_j^i + m_j^i} - \frac{\sum_{j=1}^{N}(x_j^i - m_j^i)}{\sum_{j=1}^{N}(x_j^i + m_j^i)} \right) \times \frac{x_j^i + m_j^i}{\sum_{j=1}^{N}(x_j^i + m_j^i)}$$

Where x_j and m_j - export and import of products j in country i. N - number of products.
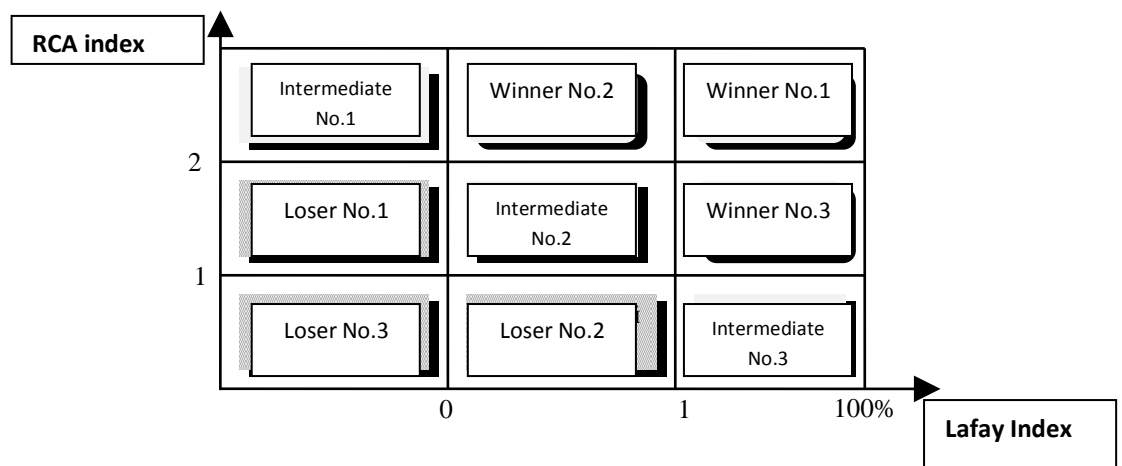
Positive values of Lafay index highlight the existence of competitive advantages. The more the coefficient value is, the higher is the level of competitiveness. And negative values give evidence of products incompetitiveness. [3]

Thus, Lafay index estimates the internal factor of country products competitiveness, its competitiveness status.

Let's take the value of the revealed comparative advantage index of B. Balassa as an Y axis value. The revealed comparative advantage index (RCAI) shows the intensity degree of export orientation of a certain branch in a certain country in relation to the global economy. Balassa index for branch j in country i and during a period of time t can be presented in the following way:

$$RCAI_{i,t}^j = \frac{x_{i,t}^j}{x_{w,t}^j}$$

It is assumed: if RCA$_{ij}$ coefficient value exceeds 1, the country is competitive in production of this product; if it is less than 1, the country has no competitive advantages. One can identify those sectors of economy in which the country has a competitive advantage using RCA coefficient. A competitive advantage involves a quite liberal share that the product takes in the international market and, respectively, the absence of a competitive advantage involves a small share of this product on the export markets. [2] Thus, Balassa index is an external factor of country products competitiveness on the global market.

RCA index			
	Intermediate No.1	Winner No.2	Winner No.1
2	Loser No.1	Intermediate No.2	Winner No.3
1	Loser No.3	Loser No.2	Intermediate No.3
	0	1	100% → Lafay Index

In order to determine the priorities of the industrial policy development let's compare branches called "Winners" in two countries – Greece (table 3) and Slovakia (table 4) in 2006 and 2010.

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Table 3. Lafay and Balassa Indexes for Greece in 2006 and 2010

Branch	Specialization (Lafay Index)	Specialization (Balassa Index /RCA Index)
2006		
Vegetables, fruit, nuts, etc.	1	12.6
Salt, sulphur, soil, stones, gypsum, lime and cement	1	11.9
Tobacco and tobacco industrial substitutes	1	10.7
Animal and vegetable fat and oils, split products, etc.	1	8.1
Cotton	1	7.1
Fresh fruit, nuts, citrus peel, melon rind	1	6.5
Aluminum and aluminum items	1	4.8
Fish, shellfish, molluscan shellfish, water invertebrates	1	4.6
Articles of clothing, accessories, knitted or crocheted goods	1	3.9
2010		
Vegetables, fruit, nuts, preparations and other food products	2	14.4
Tobacco and tobacco industrial substitutes	1	10.5
Cotton	1	8.1
Fresh fruit, nuts, citrus peel, melon rind	1	8
Salt, sulphur, soil, stones, gypsum, lime and cement	1	7.5
Fish, shellfish, molluscan shellfish, water invertebrates	1	5.9
Aluminum and aluminum items	2	5.9
Copper and copper items	1	2.7

Table 4. *Lafay and Balassa Indexes for Slovakia in 2006 and 2010*

Branch	Specialization (Lafay Index)	Specialization (Balassa Index/RCA Index)
2006		
Iron and steel	2	2.7
Vehicles for land transport except railway transport and trams	4	2.5
Wood and woodwork, charcoal	1	2.2
Aluminum and aluminum items	1	2
2010		
Vehicles for land transport except railway transport and trams	4	2.9
Iron and steel	1	2.6

4. Conclusion

Analyzing the above tables one can state that the amount of winner branches reduced during four years both in Greece and Slovakia. Slovakia suffered from the crisis in a greater degree, only two competitive branches are left. Greece could save almost all competitive advantages and even strengthened its specialization in one of winner branches.

At the same time the most competitive branches in Greece are not high-technology branches and branches involving a small degree of processing and that is related to favorable natural climatic conditions of its location.

Thus, Greece shall pursue the industrial policy aimed at the growth of competitiveness of high-tech branches. Slovakia shall take measures on the recovery of competitiveness of the branches that were competitive earlier.

Expansion and support of industrial productions is necessary as countries with a high share of high-tech industrial products of high-degree processing in GDP hold a stable position in the EU.

In whole one can make a conclusion that notwithstanding a huge role of insensible assets in the global economy industry keeps playing a leading role in the implementation of the economic policy of states and thereby the conclusion about the great role of the industrial policy in XXI century to which we came earlier can be confirmed.

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