

# THE TRANSITION AND EFFECTIVENESS OF INDUSTRIAL POLICY IN WESTERN BALKAN COUNTRIES – THE CASE STUDY FOR SERBIA

*Sofija Adžić, PhD,*

University of Novi Sad,  
The Faculty of Economics Subotica,  
Serbia.

*Milivoje Davidović,*

University of Novi Sad,  
The Faculty of Economics Subotica,  
Serbia.

## ABSTRACT

The basic characteristic of transition in Serbia and other Western Balkan countries is a radical deindustrialization. In this context, reindustrialization should represent the framework of a new concept of developing this region. This, naturally, makes some problems, both in creating new and using the current development factors. The first and most relevant problem is that reindustrialization must be based on the European concept of endogenous, propulsive and self-sustainable development. In this context, the starting hypothesis is that discussions on effectiveness of industrial policy cannot lead only to (1) Institutional arrangement of market authorities (multiparty political system), (2) reforms of product and service markets (privatization and liberalization), and (3) Financial market development (leaving the banking system to foreign factors). Then to expect these three markets with support of subvention of labor and capital from the public sources, before all, in order to stimulate foreign direct investments, build spontaneously a good model of industrial transition. For Serbia, the biggest problems to increase the effectiveness of industrial policy in these countries are: (1) Slow structuring of the new production-organizational system and (2) Slow efficiency of the innovation system because (3) undeveloped authentic production entrepreneurship. Their point is that the restoration of capitalism and transition in Serbia have not succeeded to create a good strategic framework for (1) Export business development, (2) Private investments in real economy, and (3) Increase of effectiveness of public industry regulation. However, such a development scenario is not fatedly determined as unrealizable. In this context, the work gives some suggestions to formulate measures and instruments for advancing the efficiency of industrial policy in Serbia.

**Keywords:** industrial policy, effectiveness, production-organizational system, innovation system, production entrepreneurship

**Classification according to JEL:** E61, L51, O14, O31

## **INTRODUCTION:**

Determining the contents of policy (as dynamic mix made of appropriate economic, social, ecological sector and spatial policies and institutional and market reforms, Author's note) with a view of revitalization of developmental industry functions should represent the key link in the process of economic and social preparation of Western Balkan countries for European integrations (Adzic, 2008a, Studija, 2010, Republički zavod za razvoj, 2011). In addition, the basic reasons are not the needs of the future memberships of these countries in EU and accepting the high standards of economic, social and territorial cohesion, but their implementation as the frameworks that should lead to neutralizing internal economic and social conflicts, increasing economic efficiency, advancing conditions of life and work and the protection of natural resources and the living environment (Adzic, 2011b).

The effects of the global financial and economic crisis in the second part of 2008 and the announced more active inclusion of countries in the region in the economic and social process of European integrations put on the agenda, among other things, the question of reindustrialization and appropriate model of industrial policy for its implementation. In the scientific sense, the most relevant concept is derived from the model of development based on (scientific) knowledge in order to increase export with a bigger participation of newly created value per product (Matejic, 2008). The approach to this problem in Serbia is characterized by spontaneity, emotiveness irrationality, instability, absence of evaluating real ways for its implementation and, in accordance with it, their use in realizing appropriate policies and entrepreneurial and business initiatives (Adzic, 2008). In this context, without aspiration to answer completely, the work presents the author's proposal to find solution for increasing the effective industrial policy in Serbia within its needs to be harmonized with principles derived from the theory and practice of the European concept of endogenous, self-propulsive and self-sustainable development (Collection of Works, 2003, 2009).

In this context, the cited matter includes, except introduction, five parts. In the first part, some important facts are emphasized (the state and development trends) which clearly point to the processes of deindustrialization in Serbia and other Western Balkan countries. In the second part, emphasis is put on determining the classification of transition and its application in analyzing the efficiency of industrial policy. The third part gives the author's vision of the use of developed research methodology of transition industrial model with a view of a more precise participation and quantitative determination of dimensions of the key problems that decrease effectiveness of the industrial policy in Serbia. In the fourth part, the following obstacles are determined as the biggest ones for effectiveness increase of the industrial policy in Serbia (1) Slow structuring of a new production-organizational system, and (2) Low effectiveness of innovation systems because of (3) Underdevelopment of authentic (national) production entrepreneurship. Their essence is in the fact that the capitalist restoration and transition in Serbia have not succeeded to create a strategic framework for (export business development), (2) private investment in real economy, and (3) Effectiveness increase of the public economic regulation. In this context, basic problems and controversies are exposed connected with effectiveness increase of the industrial policy in Serbia. The fifth part, in the form of conclusion and based on the previous analyses, gives the proposals of measures and instruments for advancing effectiveness of the industrial policy in Serbia, as directives for the future researches.

## **THE STATE AND TRENDS OF INDUSTRIAL DEVELOPMENT IN WESTERN BALKAN COUNTRIES:**

Western Balkan countries have previously experienced significant structural changes in the economy. Some of them recorded dramatic reduction of economic activities because of economic and political turbulences; the other has had the negative trend in basic industrial sectors, therefore their BDP is reduced. The third part of them has experienced the evolution in the structure of economic activities – reduction of production in industrial sectors and the increase of newly created value in the tertiary sector. Therefore, “concession for concession” between the primary and tertiary sector, the BDP remained at the level of neutral or mildly increasing trend. Which factors exerted influence on economic restructuring in these countries? These factors can be grouped into the factors of external nature and the factors of internal nature. The most significant factor of external nature is globalization definitely, i.e. integration of the world economy. Weak world market players could not follow the strong competitive tempo on the global market. Therefore, industries in these countries have been gradually losing the race with the leading world industrial players. Almost all the countries (including China and Russia) transformed economic systems and created the market

development model. It opened the market for products, but also increased the competitive pressure because of entering the Chinese producers on the world market of industrial products. In these changed circumstances, Western Balkan countries suffered big losses, which could not compete on the global market having increasingly bigger degree of integration. The other factors are mostly of internal character and reflect in technological and organizational changes, innovation and entrepreneurship. Namely, introduction of new (contemporary) technologies is the basic factor of increasing productivity, cost efficiency and competitiveness on the global market. Thus, competitive contemporary industry is capital intensive, with the critical mass of skilled labor, which, with permanent changes (adaptation) could be a respectable factor on the global market or even strong enough to preserve market participation on the national market in relation to the pressure of foreign competition. The third factor is certainly innovation and entrepreneurship. Motivated entrepreneurs who are ready to take risk in order to strengthen its market power are certainly creators of new jobs, competitiveness and economic growth. Competitiveness and economic growth are based on innovation strategies, as innovation permanently redefine market, open new profit chances and create potential for industrial sector development. However, the most important link in the chain is knowledge, as innovation strategy is based knowledge being is applicative and useful. In addition, innovation strategies bring new methods of organization and management based on information technology exerting accelerating influence on innovation efficiency.

The above cited factors, together with a turbulent economic-political inheritance, have contributed, in Western Balkan countries, every in its own way, to the decrease of significance of industry. This revitalization of economic importance of industry is the most obvious in the analysis of trends of industrial production in the last two decades.

**Table 1: Industrial production Western Balkan countries (growth rate, 0%)**

Industrial production index, growth rate	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10
Albania	-9,9	18,6	-7,4	24,3	2,8	22,0	15,0	11,9	19,9	10,7	21,8	-5,4	-	-	-	-	-	-
Bosnia and Herzegovina	92,2	15,0	64,7	85,7	34,6	24,3	10,3	9,4	12,4	9,3	4,6	13,3	5,9	10,5	8,4	7,7	11,5	4,3
Croatia	-	-	-	-	-	-	-1,2	1,5	5,9	5,0	3,3	3,2	4,6	4,1	4,9	1,2	-9,3	-1,4
Montenegro	-	-8,5	-1,5	47,6	0,4	-0,3	-7,6	3,7	0,7	0,6	2,4	13,8	1,9	1,0	0,1	2,0	32,2	17,5
Serbia	-	-	-	-	-	4,0	25,6	11,4	0,1	1,8	-3,0	7,1	0,8	4,7	4,1	1,1	12,1	2,9
The former Yugoslav Republic of Macedonia	13,8	10,6	10,6	3,3	1,6	4,4	-2,6	3,5	-3,2	-5,2	4,6	-1,3	7,1	3,5	2,8	5,4	-7,7	-4,8

**Source:** UNECE Statistical Division Database, compiled from national and international sources (CIS, EUROSTAT, IMF, OECD)

In this Table, we can see that Western Balkan countries reported in the 1990th positive and significant growth rates of industrial production. It can be ascribed to the revival of economic systems after establishing peace and political stability in these areas. After 2000, the rates of growth have been pretty humbler, being the result of opening these economies and exposing their industries to foreign competition. The third period that can be characterized according to the fall of industrial production in Western Balkan countries is certainly the period when the global crisis manifested in its full intensity (2009). In this period, there was a noticeable fall of industrial production as the consequence of reduction of the global demand, where the worst results had Montenegro, Serbia, Bosnia and Herzegovina, and then Croatia. As for Serbia, the sectors most influenced by the economic depression were those, which had previously recorded the lowest rate of growth as industry (especially manufacturing industry) and construction. The rates of fall in these two sectors were 12.2% and 14.3% (Republički zavod za razvoj, 2011: 17). The biggest turbulences, regarding to the changeability of directions of industrial development was in the Former Yugoslav Republic of Macedonia, if measured by industrial production.

#### THE STATE AND TRENDS IN SERBIA:

In case of Serbia, since the beginning of the 1990th, its industry has been under the influence of internal and

external exogenous factors, seized by the change of the structure, employment, competition, strategic position, prospects for development (Adzic, 2011c). In the period from 1981 to 1989, Serbia was in the phase of deindustrialization because of exhaustion of effects of the national development model – whose application began after 1952. In the period of capitalist restoration at the from beginning of 1990 to the middle of 2008, business and development of the national industry developed within intensive (post) socialist deindustrialization – characterized by radical destruction of (inherited) organization-production structure (system), reduction of production capital, devastation of human capital and negative economic-social stratification. Production and employment in the industry of Serbia in 2010 amounted (to estimations) only 36% of pre-transitional maximum realized in 1987/1988. Industry was reduced only to three activities – energy, food and drink production and production of basic materials (chemical industry, ferrous metallurgy and production of construction materials), on which the basis for inclusion of Serbia in economic and social process of European integrations can be built (Adzic, 2011c: 404-405). Radical deindustrialization, only for 20 years from disintegration of the joint state, has increased differences in the degree of economic development between Slovenia and Serbia from 2:1 to 4:1, while the differences in industrial productivity increased from 1.3 and 1.5 to 3 and 4.1. Therefore, Serbia experienced the paradox situation that the end of (post) socialist transition was more conditioned by looking for solutions in its operationalization than the negative inheritance of the last economic model, because of which it started in fact (Adzic, 2011c:431).

As the „primary strategic development goal of Serbia is the sustainable and dynamic industrial development which can get into the united EU market and endure the competitive pressure“ (Republički zavod za razvoj, 2011: 1), the basic directions of industrial development in Serbia, in the region, too, should take into consideration the following criteria (1) Stimulation of structural changes in industry, (2) stimulation of innovations in the field of industry, (3) Promotion of efficiency in resources use and sustainable development, (4) advancing the business environment for industrial development, (5) Stimulation of developing small and medium-sized enterprises in the field of industrial production. One of the most disputed criteria, often emphasized as the limiting factor for foreign investment influx, also for the domicile private initiative in all the fields of industry, is certainly an unfavorable economic and political ambient, as well as the slowness of political factors primarily in looking for efficient solutions.

**Table 2: Influence of the economic ambient in attracting investors**

	<b>Push motives</b>	<b>Pull motives</b>
<b>Political influence</b>	Instable political situation, restrictive legislation, dominating counter business culture, credit limits, grey economy and disorganized market.	Stabile political situation, liberal legislation, dominating business-oriented culture, credit growth, organized market
<b>Economic influence</b>	Bad economic conditions, small growth potential, high operative costs, mature market, small domestic market	Good economy, high growth potential, low operative costs, developing market, possibility of investments in property, large market, favorable exchange rate, depressed stock prices
<b>Social influences</b>	Negative social environment, unfavorable demographic trends, stagnation and decrease of population, growth of social assistance	Positive social environment, positive demographic trends, population growth, social assistance reduction
<b>Cultural influences</b>	Unknown cultural setting, heterogeneous cultural background (small and hostile available segments)	Known referent points in cultural setting, attractive composition of cultural values, innovative business culture, cherishing corporative culture, homogeneous cultural setting (friendly segment)
<b>Competitive structure</b>	Hostile competitive background, high level of concentration, offer market saturation, unfavorable conditions for operative work	Market niches, property capacities, possibility of expansion by product imitation, favorable conditions for operative work

**Source:** Jefferson Institute, 2003: 8

If we analyze these factors, it is clear that push motives are mostly dominant in Serbia, therefore it resultet in a humbler attracting of investors, as well as in an unfavorable structure of attracted investment, exclusively in

the factors of natural resources (land, water) or in the tertiary sector (banking market, trade, etc.). and other factors (macrofinancial, RSD exchange rate, before all) have contributed to destimulating development of production activities, especially export-oriented and mostly activities in the field of industrial production.

For the process of redesigning and carrying out the industrial policy in Serbia, some **resources** will be necessary in order to finance activities of rising national consciousness, internationalization of the important interested groups for economic development of skills and superstructure of skills, cluster creation, networking, better financing of SME (Small and medium enterprises). Therefore, some bigger budget investments are necessary to raise competitiveness and favorable ecological position of Serbia on the global market (Republički zavod za razvoj, 2011: 145). Also, four main categories of framework conditions that are relevant from industrial policy perspective: (1) Rules that set the general market framework (such as company law, general principles of contract law, competition and internal market rules, investment regulations, international trade rules, consumer policy); (2) Rules that address specific categories of product and services directly (such as regulations on placing products on the market, associated with issues such as safety, interoperability, standardisation, or product-specific trade measures such as customs tariffs or anti-dumping measures); sector-specific regulations can also have an impact on the competitiveness of other sectors, for example if they affect price or availability of key inputs; (3) Institutions that enable the market to operate, which may be public (such as courts, company registers, competition authorities or patent offices), semi-public or even private (such as technology transfer institutions, standardisation and conformity assessment bodies); (4) Broader conditions, whose direct impact is usually more difficult to assess and which are often less easy to influence in the short term – such as the macro-economic framework, societal values influencing entrepreneurship or the political stability of a country (Commission of the European Communities, 2002: 21-22).

#### **ONE CLASSIFICATION OF TRANSITION AND ITS IMPLICATIONS ON STRUCTURING THE MODEL FOR ANALYZING THE EFFECTIVENESS OF INDUSTRIAL POLICY:**

Every society and economy (industry as a basic production social and economic superstructure is in the focus of this work) is permanently in the state of evolutionary or radical transition. In the last three decades, business and industrial development in Serbia has developed within three paradigms. Transition gave the starting impulse in disintegration of the old development model and functioning industry from industrial to postindustrial society. The current business and industrial development is developing within the framework of information-telecommunication and social-economic structure, and the global financial and economic crisis puts on the agenda new development and business paradigms, of which the most important is, as cited in Introduction, knowledge-based development.

Theoretically and practically, appropriate changes of goals and mechanisms of industrial policy have followed transition. From the aspect of the subject, the key fact is that current models of industrial policy (especially that of interest for Serbia – the Lisbon Agenda, March 2000, i.e. its innovated and reduced version EUROPE, 2020, March/June 2010), have more a form of the project of transformation of the overall social-economic system than the pure sector of economic policy (in the sense of definition of industrial policy as the public support to enterprises in implementing the project of advancing competitiveness, structural adaptation and starting new business and leaving the old one. This approach is conditioned by the needs to find an authentic European model to include in the process of developing the new global production system, i.e. to find (best) solutions for the key challenges of reconfiguration of today's civilization on the principles of organization, within the triangle of these paradigm: (1) Educated people, where every individual possesses knowledge and skills enough to find job in accordance with his highest (forma) qualifications at the appropriate segment of internal or global labor market, (2) Developed industry, based on the combination of development of its own and creative implementation of foreign technologies can provide realization of the key condition of social and economic stability and the long-term sustainable development. It means that every national economy (regional and local, too) should spend only what it produced, invest within its accumulation and takes credit as much as it gave, and all other events are only episodes leading to reach this goal, and (3) Modern social-economic system, where policy is the key factor providing transfer of business and technical innovation, as the basis for contemporary business (Collection of Work, 2006b, 2008). In this context, the scientifically desirable industrial transition can be realized only within the frameworks of the model for functioning the overall (national) social-economic system that will stimulate: (1) Human capital development, (2) Advancing production



entrepreneurship, (3) Generating and economic valorization of innovations, (4) production of exchangeable goods, (5) savings, (6) Private investment in real economy, (7) Export.

The current state in Serbia is unsatisfactory. Today, it is indisputable that institutionalization and operationalization of the process of privatization in Serbia are most responsible for (Radical deindustrialization, (2) Disappearance of research-innovative work and resources from the economy (enterprises) in Serbia. The contents of reforms and policies to change the structures and ways of functioning the overall social-economic system are greatly responsible for (1) Decay of education system, (4) weakening human capital performances, (5) Slow development of production and rapid growth of broker entrepreneurship, and (6) Slow influx of private investments in export industries and business (Adžić, 2008b, Madžar, 2008). For real evaluation of reforms and the social-economic system and its ranges in the field of industrial policy, it is enough to look at the structure of GDP, employment, import and export of Serbia and China, today and 20 years ago. On the other side, bad results of implementation of the Lisbon Agenda, March and its exchange after ten years, with fewer ambitious project Europe 2020 imply that the challenges of radical industrial transitions are very difficult and complex both for societies and economies, being at the higher level of social-economic development and institutional organization than in Serbia. But, let us get back to the problem of industrial transition management.

Industrial transition management is realized as all the other (social-economic) systems (1) Affecting input dimensions in order to get the desired output by their change, i.e. the state of the system, or (2) Affecting with the aim to keep the state of the system because of changes in its environment. In both cases, the transitional regime appears. As industry works in a constantly changeable environment, practically, they are always in some transitional regime, which can be defined as evolutionary, radical or very radical transition. Here, it is important to note that the problems of transition in physical and technical systems have been for long the subject of detailed study, because the basic problems of their reliability mostly connected with the phenomena appearing in the transitional regimes. Contrary to this, economic and organizational theory pay little attention to the problem of transitional regimes, i.e. transition of large social-economic systems. The greatest part of research efforts was oriented towards the phenomena, which appear in permanent regimes, i.e. in determining and explaining the relation  $y = f(x)$ . Therefore, we do not possess enough knowledge on the phenomena of transition of big social-economic systems as (1) Inertia in the sense of indifferent behavior to the changes in transition, (2) Resistance to the changes in transition, (3) Adaptation to the changes in transition, (4) Needs to change the contents of goals during clearly targeted transition, (5) Stability, i.e. instability of the social-economic system in transition, (6) Linearity, i.e. nonlinearity of social-economic systems in transition, and especially (7) Temporal constants of lasting some phenomena in the process of transition (Matejic, 2002).

The process of transition in social-economic systems cannot be understood in different ways. However, in case of industry, the only scientific valid significance is its treating as a transitional process that creates conditions for revitalization of its development functions – generating new knowledge and its valorization in the processes and products in the way, which brings benefit to the innovator and new values to the user. In this context, industrial policy, as the basic instrument of public regulation of the industrial system, has the aim to start, enables, stimulates or slows down some forms of transition (industry).

To formalize the scientifically valid relationship between industrial transition and the model of industrial policy for its directing – the process (industrial transition) can be designated, based on the system theory, as transition from the starting state  $SI_1$  (where, in case of Serbia, as the start of industrial transition can determine 1980, 1991, 2001 or 2011 – as, in the last three decades, even four projects of industrial transition have been launched) in the state  $SI_2$  (where as the end period of observation can be determine 1990, 2000, 2010 or 2020, as the first three ones represent the years when it was understood that the chosen model of transition was wrong and it is necessary to find and apply new solutions) for some period  $T$  (in our case, four periods of ten years: 1981- 1990, 1991-2000, 2001-2010, 2011-2020). To illustrate this, I will expose the reduced approach where for formalization of the industrial transition process only three parameters will be used: (1) Kinds of changes the structure and functioning (business) of industry (CCHI), (2) Intensity of changes in changes the structure and functioning (business) of industry (ICHI) and attitudes to changes in changes the structure and functioning (business) of industry (PCHI). In the next step, three degrees will be added to everyone for measuring changes.

In case of changes in the structure and functioning (business) of industry there will differ: (1) Evolutionary changes in industry (CCHI<sub>1</sub>) – those having their result in internal natural changes, i.e. in activities of direct

actors of industries to find solutions for the challenges in internal, external (national), (narrower, Western Balkans) and wider (EU)) international and global environment, (2) External changes relating to industry ( $CCH_2$ ) – those having their results in external actors of social-economic life (before all, local, regional, national, super national and global (international) organs of executive and legislative power, (3) Joint changes ( $CCHI_3$ ) – some combination of internal ( $CCHI_1$ ) and external changes ( $CCHI_2$ ).

The intensity of changes in the structure and functioning (business of industry is classified in three groups: (1) Incremental changes in industry ( $ICHI_1$ ). In this case, the result of industrial transition can be mathematically presented as  $ICHI_1 = SI_1 \& SI_2$ , (2) radical changes in industry ( $ICHI_2$ ) – in this case, the result of industrial transition can be mathematically presented as  $ICHI_2 = SI_1 \Leftrightarrow SI_2$ , (3) Very radical changes in industry ( $ICHI_3$ ) – in this case, the result of industrial transition is mathematically presented as  $ICHI_3 = SI_1 \# SI_2$ .

The attitudes of internal and external creators and participants of industrial transition can be also classified in three groups: (1) High level of accepting changes in the process of industrial transition ( $PCHI_1$ ). This is the case when the majority of external and internal creators and participants of transition give the future state  $SI_2$  much bigger preferences than the current state in industry  $SI_1$ , (2) Low accepting the changes in the process of industrial transition ( $PCHI_2$ ). This is the case when the majority of external and internal creators and participants of transition give bigger preferences to the current state  $SI_1$  than the future state of industry  $SI_2$ , (3) Indifference to changes in the process of industrial transition ( $PCHI_3$ ). This is the case when the majority of external and internal participants of transition evaluate that the future state  $SI_2$  will not much differ from the current state in industry  $SI_1$ . Taxonomy under (2) and (3) is given supposing that creators of transition and industrial policy in these cases prefer the future state  $SI_2$  than the current state in industry  $SI_1$ .

As transition represents the transition (industry) from the state  $SI_1$  in  $SI_2$ , the kind of transition through which industry passed dominantly exerts influence on the evaluation of effectiveness of industrial policy and accepting its results by the majority of external and internal creators and participants. This fact represents the essential difference between the evaluation of effectiveness of industrial transition and the analysis of transitional regimes in physical and technical systems.

In the cited text, the total number of combination of the state of these three parameters is 27. However, regarding to the specificities of transition (industry), only seven combinations are for the analysis. These are the following combinations:

The first combination:  $CCHI_1 - ICHI_1 - PCHI_3$ . In this case, it is about a continual, slow and natural evolution of industry, practically without social, economic and political shocks and costs,

The second combination:  $CCHI_1 - ICHI_2 - PCHI_3$ . In this case, it is about a dynamic, in advance specifies and targeted evolution of industry without bigger economic, economic and political costs and shocks,

The third combination:  $CCHI_2 - ICHI_2 - PCHI_1$ . In this case, it is about a (spontaneous) industrial transition with bid and obvious results without bigger social, economic and political shocks and costs,

The fourth combination:  $CCHI_2 - ICHI_2 - PCHI_2$ . In this case, it is about industrial transition with weak results and high social, economic and political shocks and costs,

The fifth combination:  $CCHI_3 - ICHI_2 - PCHI_1$ . In this case, it is about industrial transition with big results and obviously low social, economic and political shocks and costs.

The sixth combination:  $CCHI_3 - ICHI_3 - PCHI_1$ . In this case, it is about industrial transition with big results with relatively low social, economic and political shocks and costs.

The seventh combination:  $CCHI_3 - ICHI_2 - PCHI_3$ . In this case, it is about industrial transition with practically equal results and social, economic and political shocks and costs.

These seven combinations for the classification of transition type will be used to determine the way to perform ten (specific for national industry) the key and target oriented (scientifically valid) changes.

$S_{2010 \rightarrow 2020.1}$  - The change of production structure in the direction of radical (relative and absolute) increase of export business in enterprises (especially in manufacturing industry, where export should participate in business activities of every enterprise in the range from 50 to 100% . this change should be realized in accordance with the model of transition:  $CCHI_3 - ICHI_3 - PCHI_1$ );

$S_{2010 \rightarrow 2020.2}$  - Radical leave of national and accepting the European criteria to define and evaluate input and output of actors of industry and around industry (this change should be done in accordance with transitional models:  $CCHI_3 - ICHI_3 - PCHI_1$  ili  $CCHI_3 - ICHI_3 - PCHI_2$ ),

$S_{2010 \rightarrow 2020.3}$  - Increase of commercial and social effectiveness of financial resources in the process of simple and expanded reproduction of all the actors of industrial system and for every source of financing – own,

commercial and public (the basic task is that every production enterprise and commercial farms in their business provide profit for the long-term existence. This change should be done in accordance with transitional models:  $CCHI_3 - ICHI_2 - PCHI_1$  ili  $CCHI_3 - ICHI_2 - PCHI_3$ ).

$S_{2010 \rightarrow 2020.4}$  – The change of structure of the innovation system in the direction of radical (relative and absolute) increase of research and development potential in enterprises with a view of dynamic preorientation with behavior where the purchase of technologies dominates on appropriate (well in the sense of strengthening microeconomic competitiveness on the internal and foreign market, Autor's note). Mixture of real domestic technologies, transfer of foreign technologies, dynamic diffusion and adaptation of foreign technologies, and strengthening international cooperation in research and development (this change should be realized in accordance with transitional models:  $CCHI_3 - ICHI_3 - PCHI_1$  i  $CCHI_3 - ICHI_3 - PCHI_2$ );

$S_{2010 \rightarrow 2020.5}$  – Abandon of voluntary oriented infrastructural business solutions, as: implementation of technical standards and norms, standards of quality, standards of protection of life, health and living environment, creating conditions for transfer of technologies and business innovations, etc. In enterprises and their harmonization with European standards and good practice (this change should be realized in accordance with the model of transition:  $CCHI_1 - ICHI_2 - PCHI_1$ );

$S_{2010 \rightarrow 2020.6}$  – The mutual connection of actors of industrial systems in accordance with the principles of the network organization with a view of increasing the role of cooperation, specialization and learning in their growth and development (this change should be done in accordance with the model of transition:  $CCHI_2 - ICHI_2 - PCHI_2$ );

$S_{2010 \rightarrow 2020.7}$  – Connection of all the actors of industrial systems with its economic and social environment in accordance with the principles of the network organization with a view of increasing the contribution of financial sector, commerce, education and science in their growth and development (this change should be done in accordance with the model of transition:  $CCHI_2 - ICHI_2 - PCHI_2$ );

$S_{2010 \rightarrow 2020.8}$  – Strengthening the connection between education and human capital development (especially, advancement of production entrepreneurship and development of expert teams), first, creating infrastructure for lifelong learning and education at work, strengthening connections between research, college education and its active inclusion in forming generic poles of growth, high-tech industries and revitalization of development functions (inherited) industrial areas and industrial centers (this change should be realized in accordance with the model of transition:  $CCHI_3 - ICHI_2 - PCHI_1$  i  $CCHI_3 - ICHI_2 - PCHI_3$ );

$S_{2010 \rightarrow 2020.9}$  – Complete depolitization of the system of choosing management and public sector management and fast return to its essential social, ethical and scientific values on the principles of contemporary corporate management and good practice (this change should be done in accordance with the model of transition:  $CCHI_3 - ICHI_2 - PCHI_1$ );

$S_{2010 \rightarrow 2020.10}$  – To finish the process of property change in industrial systems with a view of constituting appropriate mixture of the state, public, corporate and private (individual) property (this change should be realized in accordance with the model of transition:  $CCHI_3 - ICHI_3 - PCHI_1$ );

Bringing the above-cited assumptions in the domain of analyzing the problem of increasing the effectiveness of industrial policy, we can notice the following social and economic phenomena: (1) Social-economic-political structures and mechanisms that regulate the economic and social order, cooperation and behavior of the community members, composed of: (2) Cultural-cognitive, normative and regulatory elements (market, public regulation, communal cooperation and group and individual initiatives), which, with other activities and resources provide stability, giving good significance to economic and social life, as (3) they exert influence on many levels, from the global to very localized interpersonal relationships. In the presented context, the analysis of factors, which should increase the effectiveness of industrial policy for good industrial transition, can be settled on the evaluation of its effects on functioning the four social-economic subsystems:

First subsystem – It includes the measures and instruments of industrial policy on the appropriate set of resources, institutions and institutional arrangement that determines the model of their reproduction. Their task is to stimulate and direct the whole population, not only its political and economic elite, toward regular and lifelong education and learning with a view of acquiring and maintaining internationally competitive knowledge and skills (in case of industry, it relates, before all, to the so-called non-transaction professions – I (S) $S_1$ );

Second subsystem – Affecting measures and instruments of industrial policy on the appropriate set of resources, institutions and institutional arrangement that determines the model of their reproduction with the task to stimulate and direct executive and legislative authorities to support development based on (scientific)



knowledge (in case of industry, it relates to governments, local self-governments and production of public goods and services of the public governments for the needs of industry, construction and agriculture – I (S) S<sub>2</sub>); Third subsystem – Affecting measures and instruments of industrial policy on the appropriate set of resources, institutions and institutional arrangement that determines the model of their reproduction with the task to stimulate, direct and advance production entrepreneurship and export business with a view of creating the critical mass of resources for business based on (scientific) knowledge – I (S) S<sub>3</sub>);

Fourth subsystem - Affecting measures and instruments of industrial policy on the appropriate set of resources, institutions and institutional arrangement that determines the model of their reproduction with the task to stimulate and direct development of expert teams (composed of engineers, economists and lawyers) capable to confront with all the problems and challenges of globalization of business activities I (S) S<sub>4</sub>).

Complexity of the exposed approach is in the fact that these four social-economic subsystems have to be structured on all business levels – from the national state and economy through regional, sub-regional and local societies and economies to the level of individual businessperson – from transnational corporations (TNC) to individual entrepreneurs.

### ANALYSIS OF INDUSTRIAL POLICY EFFECTIVENESS - A CASE OF SERBIA:

At the start of this chapter, it is necessary to say something about the concept of effectiveness. In our case, the effectiveness is a measure to achieve the volume and quality to establish an appropriate model of industrial policy. Its main task (in scientific terms) is to achieve changes in the national industrial system based on the actions of external and internal stakeholders in a way that will ensure its reproduction based on the generation and evaluation of (scientific) knowledge. This note is necessary, because in Serbia widespread hostility of certain scientific methods of measuring and evaluating the effectiveness of the policy of public and private sector, especially in cases of failure or poor performance, as is the case with the transition of the industry.

In order to explain the relationship between transition and industrial policy for its implementation, the proposed ten changes in the industry of Serbia (from S<sub>2010->2020.1</sub> to S<sub>2010->2020.10</sub>) will be defined as targets, but set of measures and mechanisms of industrial policy to ensure the conditions for the functioning of social-economic (sub) systems for their implementation from I(S)S<sub>1</sub> to I(S)S<sub>4</sub>) as means (mechanisms) to achieve these goals. According to the definition of the essence of industrial policy as a complex form of various institutional reforms and the current economic, developmental, social and environmental policies related to the industry and around the industry, the results of an empirical evaluation of the results in Serbia is performed based on synthesis results of the analysis performed using the methodology presented in the set obtained decomposing national territory and industry to the six (sub) sets: (1) four regions (Vojvodina, Belgrade, Western Serbia, and Eastern Serbia in accordance with the project of organization of four generic growth points around the state universities of Belgrade, Novi Sad, Kragujevac and Nis), (2) 26 inherited industrial districts in Serbia (outside Autonomous Province of Kosovo and Metohija), (3) 136 medium and small industrial centers inherited outside of industrial districts in Serbia (outside of Kosovo and Metohija), (4) large-scale enterprise sector, (5) sector medium, small and micro enterprises and ( 6) sector of commercial farms (due to the large role of the food and beverage industry in the national industry).

In order to identify the relationship between goals and means, the impact of each of these socio-economic (sub) systems I(S)S<sub>2010,i</sub>, i =1,2,3,4) on the achievement of objectives in connection with transition of industry (S<sub>2010-> 2020th j</sub>, j = 1, 2, ..., 10) is determined on the basis of the following criteria: (1) the current state of socio-economic (sub) system I(S)S<sub>2010,i</sub> is blocking the achievement of objectives in connection with transition of industry S<sub>2010->2020,j</sub>, it is assigned with a value of -1, (2) the current state of socio-economic (sub) system I(S)S<sub>2010,i</sub> has neutral impact on the achievement of objectives in connection with transition of industry S<sub>2010->2020,j</sub>, it is assigned with a value of 0; (3) the current state of socio-economic (sub) system, and I(S)S<sub>2010,i</sub> is stimulating the achievement of objectives in connection with transition of industry S<sub>2010->2020,j</sub>, it is assigned with a value of +1;

Based on this approach, it will be presented only a summary matrix (Matrix 1) that show our expert assessment of the potential impact of the current state of these socio-economic (sub) systems to the achievement of objectives in connection with transition of industry in Serbia which should be achieved by 2020.

**Matrix 1:** *The potential impact of the current state of key socio-economic (sub) systems to the achievement of objectives in connection with transition of industry in Serbia until 2020*

	S <sub>2010-&gt;2020.1</sub>	S <sub>2010-&gt;2020.2</sub>	S <sub>2010-&gt;2020.3</sub>	S <sub>2010-&gt;2020.4</sub>	S <sub>2010-&gt;2020.5</sub>	S <sub>2010-&gt;2020.6</sub>	S <sub>2010-&gt;2020.7</sub>	S <sub>2010-&gt;2020.8</sub>	S <sub>2010-&gt;2020.9</sub>	S <sub>2010-&gt;2020.10</sub>	A
I(P)S <sub>2010.1</sub>	-1	0	0	0	-1	0	0	-1	0	-1	-5
I(P)S <sub>2010.2</sub>	-1	0	-1	-1	-1	-1	-1	-1	-1	0	-8
I(P)S <sub>2010.3</sub>	-1	-1	0	-1	-1	-1	-1	-1	0	-1	-8
I(P)S <sub>2010.4</sub>	0	-1	-1	0	-1	0	-1	-1	0	0	-5
Sum	-3	-2	-2	-2	-4	-2	-3	-4	-1	-2	-26

A column in the matrix contains the estimated values of the numeric index of the potential impact of the specific national socio-economic (sub) system I(S)S<sub>2010.i</sub> to the realization of a set of changes (from S<sub>2010->2020.1</sub> to S<sub>2010->2020.10</sub>) in order to realize the transition of national industry. This information can be useful in troubleshooting according to the definition of variety of measures and mechanisms of industrial policy in order to improve the resource utilization, institutions and institutional arrangements within the scope of particular socio-economic (sub) systems.

Row B in the matrix contains numeric values of feasibility of some desired changes in the transition of industry S<sub>2010->2020.j</sub> under the cumulative impact all relevant socio-economic system ((from I(S)S<sub>1</sub> to I(S)S<sub>4</sub>) for its management. This information provides a clearer picture of the overall potential of industrial policy for the implementation of some of the desired changes in the transition process.

## RESULTS AND DISCUSSION:

The analysis presented indicates that the transition of the national industry should be based on the model of industrial policy, which would provide an organized social and institutional process governed cooperative coordination of decisions at the macro and micro level. Thus, with the development and implementation of business and technological innovation and new forms of social and economic organization and labor division it is possible to provide the competent international level of quality and prices of industrial goods. In this context, the functioning of these four socio-economic (sub) systems (I(S)S<sub>2010.i</sub>, i=1,2,3,4) in a manner that achieves the ten stated goals of transition (S<sub>2010->2020.j</sub>, j = 1, 2, ..., 10) should be constituted in a dynamic context - structure composed of commercial farms and businesses in the industrial system, which have: (1) macro and micro structure and management system capable for efficient production, transport and distribution of industrial goods tailored to individual requirements in terms of quality, price and availability in the strong and unequal international competition, (2) adequate physical facilities and staff, (3) sound financial structure, and (4) flexibility, which allows rapid and efficient response to changes in the natural, internal and external socio-economic environment.

In this context, the main task of a dynamic mix constructed from these socio-economic (sub) systems (I(S)S<sub>2010.i</sub>, i=1,2,3,4) is that, with the achievement of transition objectives (S<sub>2010->2020.j</sub>, j = 1, 2, ..., 10), ensure of the transition network (S<sub>2010->2020.j</sub>, j = 1, 2, ..., 10) provide (1) the constitution of a new production-organizational system (in accordance with current scientific knowledge as a proper mix of industrial districts and industrial centers, clusters and poles of development - Author's Note) and (2) Market (national) innovation system in development function - based on (3) improving the performance of authentic national manufacturing enterprise. In order to determine their significance to the problem of increasing the effectiveness of industrial policy - it is necessary to give a brief overview of the events relating to the requirements of the period since 1947 to 1989. Four results of analysis are relevant.

First – The industrialization of Serbia from 1946 to 1989 was taken out, mainly by using the model of industrial districts. As stated in the previous paragraph, our research suggests that by the end of the sixties of the last century in Serbia (excluding the territory of the Autonomous Province of Kosovo and Metohija) was set up 26 industrial districts (Adžić, 2010). In their framework it is possible to identify 22 additional medium-sized industrial and 114 small industrial centers (Adžić, 2010).

Second - Because the effects of the development according the concept of industrial districts were not sufficient to promote micro performance of industry - at the beginning of the seventh decade of the last century, the policy measures initiated the process of building large-scale business systems according to the paradigm of the third technological revolution. From there, according to our analysis, is established 76 major

national, regional or sub-regional production systems assembled on the basis of similarities in energy production, agro-industrial complex, electro-metal complex, a complex for the production of chemical products, complex for production of consumer goods (before all, textiles, leather and footwear and furniture) and building complex (Adžić, 2010, 2011). According to current scientific knowledge, these operating systems have features clusters driven by natural resources or investments. Since the mid eighties of the last century, with a new policy decision, began their decomposition, the first with transfer of financial power to the lowest branches, and then the whole process of business decision making. However, despite this, these business systems (clusters) by the end of the period employed about 55% of workers, produced about 65% and performed 90% of the foreign trade turnover of the real economy in Serbia.

In the period (post) socialist transition, inherited industrial centers and clusters have disappeared. The analysis of this phenomenon has to be taken into account and the fact that most of the development function has lost around 1980. But what is worrying is that practically nothing has been done in the search for their replacements. The current structure of the national industrial system consists mainly of old and new mass medium, small and micro enterprises (defined by the common institutions of the European Union) that grew on the ruins of the inherited organizational structures and productive capital. The biggest problem is that even after two decades these enterprises are not business profiled to be able to promote the development of national industry by exogenous criteria of open market economies, particularly those structured by the European concept of endogenous, autoproductive and sustainable development.

The third is in the domain of motivation for good work and management in the industry. The first and key problem is that their structuring and development took place under the patronage of the political (communist) elites. The consequences of this approach, which feel to this day, are: (1) poor accumulated experience of best industrial practices, (2) a deeply ingrained habit (especially on the management structures) to the high level of protection and non-competitive efficiency and (3) the system of values and social relations block *in cite* the generation and implementation of technological and business information (Adžić, 2003, 2008b, 2008c, Matejić, 2002, 2003)). Two other key issues, which are at the beginning of the transition cited as reasons for blocking the development of national industry according to market criteria can no longer be cited as factors of de-industrialization of Serbia. Thus the institution of agreement and negotiations are introduced with reforms in 1974 as a substitute for the regulated administrative planning, which is at the beginning of the ninth decade of the last century, anathematized as a key factor in of development setbacks of Serbia (and Yugoslavia), in the last twenty years has become standard operating mechanism of business and implementation of development without any special public promotion and normative coercion. Finally, several decades continually blaming of institutional arrangements which governing the labor market for the weak relationship managers and employees relative to the results of the work has become moot. For only ten years (2001 - 2010), in Serbian is created the state in which: (1) first, made meaningless and then de facto abolished institution of regular competitions and career development, particularly in the public sector, (2) salary and other remuneration and privileges of most managers in both the public and private sector, does not correlate with the results of the operations of their enterprises and institutions, (3) de facto abolished the right of job stability outside the public sector, (4) only slightly more than one-sixth of private employers regularly paid salaries and benefits and taxes from labor, (5) suspended the right to meal and transportation allowance for all employees, and (6) operation for a period of fifty to sixty hours a week (no special compensation for overtime and work on Saturdays, Sundays and public holidays) became more or less standard in the private sector.

The fourth is in the area of innovation systems in industrial development. Since 1945 in Serbia there was the explicit idea of the need for the establishment of generic growth points, through the development of strong and international competent research and educational institutions, and their connection with industry. Because that, at the end of the fifth decade of the last century, in reliance on the resources of the University and various public services, the initiatives for the establishment of the Institute of Nuclear Sciences in Vinca (in the shape of Technology Park) and the complex of the institute for various purposes in Belgrade were deployed. At the end of the sixth decade of the last century, it was initiated the development of new projects of generic growth points – with establishment of the University of Novi Sad, Nis and Kragujevac and with college structure according to the industry needs in their environment. Along with clustering within large business systems were formed more or less relevant resources to implementation of research and

development. However, as a whole has not succeeded in building up an innovation system qualified for the realization of the development and transfer of high technology into the industry.

At this point, it should be noted that the state of the resources in the innovation system in the public ownership in many dimensions (number and structure of the organization for education and research, the size and structure of teachers, scientists and researchers, available space and equipment) remained quite respectable (and enough for a country the size of Serbia). However, the institutional arrangements that support this part of the innovation system are far from the ability to provide conditions for reindustrialization, and apart from the crowd, the more political and declarative, but properly designed educational, scientific and technological policies, including the implementation of the project of privatization and institutional reforms in the past decade (Matejić, 2008, 2009). In this context, the innovation system in the industry of Serbia, in the scientific sense of the term does not exist, because where there is no innovation (in the sense that they benefit the innovator, and new values to the customer - author's note), there is no innovation system. In order to overcome the state of development of entropy - the authors are of the opinion that using the results of a critical analysis of the historical heritage should be the first step to find solutions which would be launched a constitution of a new production and organizational models of functioning industry in Serbia. In accordance with the European concept of endogenous, autoproductive and sustainable development solutions should be search in the (business and macroeconomic) policies of clustering in a way that will ensure the revitalization of the legacy of industrial development centers and appropriate segment of the innovation system in enterprises (which, by the scientific recommended and empirically verified analysis should be at least twice time bigger than the resources in the public ownership). In this context, the main task of industrial policy is to start the process that would make every player of the national industrial system integrate into a complex and hierarchical established production-organization system with five levels:

The formation of the first (baseline) levels, at first glance, does not fall within the scope of industrial policy. Its purpose is to unify the commercial farms (mainly in the form of commercial family farms) in the primary production lines (in the case of Serbia, for the production of wheat, corn, fruits, vegetables, sugar, oil, milk, poultry, pork and beef meat). The main task of this level is that through a complex package consisting of public goods and public administration, to initiate and support the process of building a globally competitive agricultural primary producers - to the most natural and labor created resources in Serbia in put in the function of industrial development of food and drink in a way that would support the transition process ( of industry) in the right direction (that is, as well as for the industry as a whole, focusing on the production of food for export with increased added value per physical unit - Author's Note).

Second (basic) level, should include individual companies merged in business networks and alliances or export macro-clusters. Merging should ensure economically and technologically efficient operation in terms of European and global competition, and other rigidities imposed by protectionist-oriented trade policies of developed market economies. In doing so, we must be aware that, due to the almost complete disappearance of the old export industries and manufacturing jobs, the question of productions that should be encouraged, out of the complex for the production of food and beverages, is open mind. In this context, it is instructive example of the automotive industry where the huge public subsidy mid-2008 launched the project FIAT Serbia - so far with no apparent contribution to the revitalization of national industry development functions. The third level, should include individual companies merged in macro-production units that secure supply of physical inputs (such as: energy, basic production materials, intermediate goods, machinery and equipment) and services (business services, transport, storage and trans-border transfer) under the most favorable commercial terms. These macro-production units should include large retail companies, both in the supply inputs, and even more in the marketing, storage, transportation, cross-border transfers of industrial goods in the target segments of the European and global market.

The fourth level should include companies in institutional regulated framework of the national socio-economic environment. Its main task is to supply the human and financial capital, public goods and services, public administration, in a way that will drive their behavior to meet broader socio-economic objectives (establishing a balance in foreign economic conditions and the improvement of living and working conditions on the whole Serbian territory) - based on the criteria of increasing the competitiveness of products, processes, companies, business and macro-production units. The content of this institutional framework should provide for each company: (1) stimulating business development, (2) improving the business and corporate governance, (3) the broader application of the principle of participation and



decentralization in the implementation of business activities and (5) a consistent, transparent and accurate vision of the social, technological and environmental development.

The fifth level should include companies in selected segments within the European and global markets of industrial goods. Its main task is to provide economies of scale and encouraging the development of those industries that can be based on the available factors of production, as well as those that will be developed in the future, to achieve the level of efficiency and competitiveness in terms of price and quality, concerned with strong and unfair international competition.

In the presented structure of the organization-production system, there are no sharp boundaries between certain proposed hierarchical levels. Thus, for example, the scientific preferred organization of export macro-clusters for food production should include all the five levels. However, what is of interest to the structure of this paper is to answer the question: "Why is not there a critical mass of (public and private) initiative for the creation of more efficient production and organizational structure of the system and, in its framework, the more efficient involvement of innovations in industrial system in Serbia?". The answer, according to the authors, lies in the fact that Serbia is constantly delays the resolution of the problems that block the development of the manufacturing enterprise. In the public denunciation of the political, business and professional people, as the main problem stand little investment in new equipment, and less frequently the new knowledge and skills. However, very little is being said - Why, in Serbia there are very few individuals who are willing and able to organize labor and capital in a way that production was profitable in strong and unequal competition in specific segments of the European and global markets?

With historical instances it is clear that the main causes for the blockade of productive entrepreneurship development should be search in the fact that, the primary restructuring of the national economy in the first stage of the transition (from 1990 to the end of 2000.) carried out in the framework - the "gray" economy and "brotherhood's" privatization. After the radical political changes in 2000, the key protagonists of these trends legalized their property and businesses - which resulted in the closure of the market for the other competition participants. Therefore, the spillover effects of the global financial and economic crisis in the second half of 2008, among other things, showed also that, the amnesty of protagonists of the "gray" economy, "brotherhood's" privatization and culture of small economic and freedoms in Serbia are not able to fulfill the mission of the entrepreneurial class - the shifting horizons of personal progress causes move it to the society. Key consequences are the low level of institutional capacity, innovation and investment myopia.

In this context, solutions to improve the efficiency of industrial policy should seek to the better management of the public the private sector (Lipczynski et al. 2005). The main task is to create conditions for a more precise identification of the specific (local, sub-regional, regional, national) comparative strengths and weaknesses, problems and ways of their transformation or elimination and, accordingly, the definition of appropriate strategies, goals and instruments of policy and institutional reforms to ensure the fulfillment of the following requirements:

First, consistent respect of the principles that contemporary development is based on differentiated processes that realize simultaneously in different spatial and sector frameworks, with respect of diversity of natural, ethnical, cultural, social, economic and historical conditions (Collection of Works, 2006, 2008). In accordance with it, it is necessary to observe concrete territories and groups of enterprises as the poles of development of appropriate industries works that must be efficiently used. Therefore, the initiatives for revitalizing industrial areas and industrial centers, as well as establishing business networks, alliances and export micro clusters must have a clear spatial (sub regional or local), i.e. sector contents and represents the real answer to concrete problems, where "in-cite" actors start and realize initiatives. Consistent respect of the concept of development on the "bottom-up" principle will emphasize its endogenous feature. Together with developing, the conscious about the justification of endogenous development will strengthen the conviction about the need of connecting of every development project with the possibility created by the process of European integration.

Second, the focus of activities on structuring the framework for reindustrialization should be on the qualitative, wide, and structural development and capabilities to create new or complementary activities that increase newly created value in production on the principles of sustainable development, not on the quantitative development with expensive investments in eliminating inherited (social, cultural and ecological) problems.

Third, to create institutional conditions for privatization of development, it is necessary to realize the wide range of different actors (institutions, organizations and individuals) to create, develop and apply different policies and strategies and their integration into harmonized, functional and operative structures. In this context, it is necessary to provide partner relationships, cooperation and participation when creating every



sector and tertiary strategy of development and their implementation. This is the only way to provide consensus of different actors of development, promote strategic approaches and avoid (if possible) overlapping of development efforts.

Fourth, it is necessary to create the condition for holistic approach to the problem of reindustrialization, respecting strategic aspects, aspects of operational structures and aspects of activities. Therefore, concrete projects of reindustrialization must be based on the real estimation of the nature of economic, social and ecological problems endangering some industrial area, as well as to eliminate them. In implementing chosen strategy, numerous operative structures should be used, where local, sub regional, well as national authorities, enterprises, economic associations, development agencies, secondary and advance schools have the key role. Fifth, activities on which the strategy of reindustrialization should be based are: (1) Stimulate associations of industrial systems in business networks and alliances, and export macro clusters, (2) Stimulate the foundation of new production for export, (3) Promotion of private investments in real economy, (4) Development of specific physical infrastructures, with emphasis on actions on the local level, (5) Development of STIROT infrastructure (*Science – Technology – Information – Education – Organization – Telecommunication*), providing additional education and training, support to research and development, rendering services of business consulting , IT construction or reconstruction, (6) Strengthening business infrastructure, before all, improving the approach to financial resources (with constant respect of the principle of strict budget limitation and individual responsibilities for misuse and fraud ) and advancing the quality of public government, etc.

## CONCLUSIONS:

Necessary conditions for increasing effectiveness of the industrial policy in Serbia in accordance with the European concept of endogenous, self-propulsive and self-sustainable development based on (scientific) knowledge are very bad. The key problem is the fact that in Serbia in the last 20 years, the critical mass of production entrepreneurs, managers and expert teams capable to face the problems and challenges of a very complex reindustrialization has not been created.

In this context, a conclusion can be drawn that increasing the effective industrial policy in Serbia cannot be realized in the near future. However, this not crucially determined as unrealizable. Therefore, it is necessary to identified all the main obstacles and shortages and eliminate them rationally. It is important that entrepreneurs and managers with their expert teams and in cooperation with the state and science set very ambitious (macro, mezzo and business) goals in the domain of export of industrial products with bigger participation of the newly created value per unit ad find original ways to realize them. For that purpose, the cited taxonomy is the author's attempt to determine the key principles on which the model of industrial policy in Serbia should be based, and which has almost the same meaning for all Western Balkan countries.

First, the reforms carried out in the period from 12001 to 2010, did not succeed to make a favorable climate for the reindustrialization of Serbia, first, for the lack of adequate determining the role of public factor in the economic, social and cultural development. The consequences are double. The time horizon for efficient (macro, mezzo and business) planning is tragically short, and therefore, very often, one year is the far future. On the other side, practically, nothing has been done to promote phenomena representing the cultural basis for efficient (business, local, mezzo and macroeconomic) policies in contemporary market economies as the pubic, transparency, preciseness, skillfulness, responsibility and trust.

Second, it is shown that foreign investments have been mostly irrelevant for developing export industries and business in Serbia. However, it does not mean they are undesirable. On the contrary, we only should be aware that foreign capital could not solve our national development problems. for institutional disorganization, problematic macroeconomic and political stability, and in general, low development performances of the society and economy in Serbia, their current goal is profit in the short-term, which cannot be automatically overlapped with the advance of performances of national industry and establishing the balance in social-economic relationships. Practice has shown, in the case of Serbia, too, that foreign capital can increase profit also by reducing production and employment – substitution of home production, export saving.

Third, it is necessary to accept the attitude clearly and undoubtedly that the concrete realization of institutional reforms and managing appropriate policies must stop on knowledge and convictions about how industry in the open economy functions and how to realize, in that context, social and political goals. In contemporary society, the choice of goals and determining their priorities is, primarily, the result of political

struggle between some interest groups, not the result of some optimal process of social decision-making. In this context, the basic principles to increase the effectiveness of industrial policy are: (1) Multicriteriality of the problems which should be solved, better understanding of transitional phenomena, especially, the resistance to changes designated by the process of industrial transition, and (3) Instability of social potentials in determining the size, structures and quality of goals and actions of institutional reforms and policies.

Fourth, conception and realization of institutional reforms and policies must be based on (1) Decentralization and deconcentration of functions of the public regulation with a view of approaching to users and providing work flexibility. The basic challenge is how to provide coordination and control of work without endangering freedom of work of lower organization of the authorities, (2) Introducing the system of quality standardization of public goods and services of the public government in order to satisfy differential needs of actors in contemporary industry – by overtaking business techniques and orientation to individual expectations and additional resources to provide them, and (3) Advancing regulatory mechanisms – improving the quality of normative regulation, reducing costs for their implementation and advancing the system of monitoring and control of execution – by overtaking appropriate business techniques.

Fifth, in preparing and realizing institutional reforms and policies, the following should be used more efficiently (1) Human resource management, based on scientific programs for staff recruiting, introduction in work, education, staff development and motivation improvement, (2) IT – in order to provide better quality, fast access to public goods and services of the public government and the control of flows of their reproduction, and (3) market mechanism – especially partnership mechanisms of public and private sectors.

Sixth, the basic objects of public regulation of industry are commercial farms, business networks and alliances, and export macro clusters. To avoid mistakes in modeling public policies appropriate to enterprises, it is necessary to work hard on developing political and economic culture based on wide participation all those who are anyhow included in solving the problematic situation on the basis of the so-called development-oriented coalitions (which, in connecting and associating resources, see the possibility of penetration on the target segments of the European, i.e. global market of industrial products as the basic source of growth and development in order to provide profit and increase individual wealth).

Seventh, measuring the results of institutional reforms and policies must also include the component that would aggregate the results of implementation (1) Empirical models of actors of industrial systems in contemporary market economies, (2) Joint (legal) rules of EU (Acquis communautaire) in the domain of industry. They are the exact basis to make the system of standards for evaluation of successfulness of industrial policy, especially, in the sense of public, precise and transparent determination of individual and group responsibility for taken business, development and investment activities. However, their implementation is connected with high economic and social costs, which directly influence the increase of public expenditure and business costs reducing, in this way, the space for realizing other, at this moment, prioritized tasks in the field of revitalization, modernization and construction of business and the STIEOT infrastructure for the needs of industry, as well as development and restructuring of actors of the industrial system in Serbia.

## REFERENCES:

- [1] Adžić, S. (2003). "Institucionalna infrastruktura i unapređenje industrije u Srbiji – Kontroverze, ograničenja, rešenja", *Economic Annals*, Thematic Number – December, pp. 97-109
- [2] Adžić, S. (2008a). "Reindustrijalizacija i konkurentnost: Kako iz postojećeg stanja?", In: Zec, M. i Cerović, B. *Kuda ide Srbija: Ostvarenja i dometi reformi*, Beograd: NDE, The Faculty of Economics Belgrade.
- [3] Adžić, S. (2008b). „Stanje i perspektive razvoja metalnog sektora Srbije: Smernice za rad sindikata“, Swiss Labour Assistance i UGS "Independent". Belgrade.
- [4] Adžić, S. (2008c). „Regionalna politika i evropska integracija Vojvodine“, Prometej, Novi Sad.
- [5] Adžić, S. (2009). "Reindustrijalizacija, teorija endogenog razvoja i dobro regionalno i lokalno poslovno okruženje". In: Jakšić, M. i Prašćević, A. (Editors) *Ekonomika Srbije u 2009. godini i izazovi svetske ekonomske krize*. NDE, The Faculty of Economics Belgrade. Belgrade.
- [6] Adžić, S. (2010). "Reindustrialization, Balanced Spatial Development and Financial Industry". In: Hanić, H. et al. (Editors) *Economic Growth and Development of Serbia New Model*. Banking Academy, Faculty for Banking, Insurance and Finance. Belgrade.
- [7] Adžić, S. (2011a). "Reindustrijalizacija Srbije i strukturna politika", *Ekonomika/Economics*, Vol. 17, No. 2, pp. 301 – 326.

- [8] Adžić, S. (2011b). „Regionalna ekonomija Evropske Unije“. The Faculty of Economics Subotica, University of Novi Sad.
- [9] Adžić, S. (2011c). “Povratak industrije u Srbiju – između želja, mogućnosti i iluzija”, *Ekonomija/Economics*, Vol. 18, No. 2, pp. 403 – 466.
- [10] Cerović, B. i Nojković, A. (2011). “Reforme i rast – iskustva privreda Zapadnog Balkana” In: Cerović, B. i Uvalić, M. (Editors). *Kontroverze ekonomskog razvoja u tranziciji: Srbija i Zapadni Balkan*, Beograd: NDE, The Faculty of Economics Belgrade. Belgrade.
- [11] Collection of Work. (2003). *Industries in Europe: Competition, Trends and Policy Issues*, Edward Elgar. London. UK.
- [12] Collection of Work (2006a). *Entrepreneurschip, Investment and Social Dynamics: Lessons and Implications for an Englarged EU*, Edward Elgar. London. UK.
- [13] Collection of Work (2006b). *International Handbook on Industrial Policy*, Edward Elgar. London. UK. London. UK.
- [14] Collection of Work (2008). *Industrial Development for the 21st Century*, Orient Longman and Zed Books in association with the UNITED NATIONS. New York. USA.
- [15] Collection of Work (2009). *Europe, Globalization and the Lisbon Agenda*, Edward Elgar. London. UK.
- [16] Lipczynski, J., Wilson, J., and Goddard, J. (2005). *Industrial Organization: Competition, Strategy, Policy*, (Secon Edition), Prentice Hall, (Pearson Education Limited). Harlow. UK.
- [17] Madžar, Lj. (2008). *Nedostajuće dimenzije u evaluaciji makroekonomskih performansi Republike Srbije*, Department of Finance. Belgrade, Serbia.
- [18] Matejić, V. (2002). *Prilozi istraživanju naučnog i tehnološkog razvoja*, Federation Department for Science and Development. Belgrade.
- [19] Matejić, V. (2003). *Prilozi istraživanju naučnog i tehnološkog razvoja i upravljanja organizacijama*, Federation Department for Science and Development. Belgrade.
- [20] Matejić, V. (2008). “Razvoj Srbije zasnovan na znanju: Pomodna priča ili stvarnost”, In: *Tehnology, Culture, Development* No. 15, 8-11 September, Palić-Subotica, Association “Tehnology and Society”. University of Novi Sad. Novi Sad. pp. 32-40.
- [21] Matejić, V. (2009). “Institucionalni sistem i efektivnost istraživačkog sistema Srbije – Značaj za razvoj i tekuće stanje”, In: *Tehnology, Culture, Development* No. 15, 30 August - 2 September, Palić - Subotica, Association “Tehnology and Society”. University of Novi Sad. Novi Sad. pp. 6-13.
- [22] Republički zavod za razvoj. (2011). *Strategija i politika razvoja industrije Republike Srbije 2010-2020*, Beograd.
- [23] Studija (2010). *Postkrizni model ekonomskog rasta i razvoja Srbije 2011-2020*. USAID, FREN.[http://www.kss.org.rs/doc/1102\\_makroekonomska\\_proj\\_razv\\_Srbije\\_2011-2020.pdf](http://www.kss.org.rs/doc/1102_makroekonomska_proj_razv_Srbije_2011-2020.pdf)
- [24] Commission of the European Communities. (2002). *Industrial Policy in an Enlarged Europe (Final version)*, Brussels. EU.
- [25] Jefferson Institute.(2003). *Konkurentnost privrede Srbije*, Jefferson Institute, Belgrade.

----