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# INDUSTRIAL COMPETITIVENESS AS A BASIS OF SERBIAN REINDUSTRIALIZATION

Slobodan Pokrajac University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia Miroljub Nikolić Ministry of Economy, Serbia Milorad Filipović University of Belgrade, Faculty of Economics, Belgrade, Serbia Milorad Filipović Faculty of Economics, University of Belgrade, Belgrade, Serbia Sonja Josipović University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia Miloš Vasić University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia

This paper analyzes the issue of reindustrialization of Serbia, from the standpoint of industrial competitiveness. The authors believe that reindustrialization is necessary and possible only in those industries that have considerable potential for growth of competitiveness on the international market. The key assumptions for this are constant growth of innovation and productivity, as well as other factors that essentially rely on new knowledge and new technology. This development trend is present in all advanced economies, including the European Union, to which Serbia aspires. In recent years, reindustrialization has become an increasingly dominant development strategy on a global scale. It involves a very ambitious plan related to the development of modern and sophisticated, environmentally responsible and energy-efficient industries, especially manufacturing sectors, which employ highly professional workers and foster close cooperation with universities and research institutes. In this context, governments, rather than the markets, are becoming the main change drivers, as they can contribute to creating the necessary industrial "state of mind", which implies new redistribution of tasks and effects of labor among the key stakeholders in the process of creating new values: employees, owners, government, science, education, etc.

Keywords: Industry, Competitiveness, Reindustrialization, Innovation, Clusters

## INTRODUCTION

The nature of industrial production, primarily technological and organizational, in addition to its ability to produce a wide variety of usable goods essential for the survival of the human species (energy, food, transport, medicines, clothes, shoes, etc.) and its ability to quickly change, are only some of the reasons why its importance is constantly growing, even when economic and financial indicators exhibit some other trends. For example, the fact that the contribution of industry to GDP of the USA and Europe has been declining since the early 1980<sup>s</sup>, especially after 2000, so that today it accounts for only 10 percent in the US and 16 percent of the EU GDP, does not

mean that industry is coming out of focus of economic policy of either the USA or the EU. On the contrary, restoring its significance and enhancing its development is again becoming the center of policy makers. In fact, reindustrialization is becoming the key lever of economic and development policies of the above-mentioned countries, as well as many others. Moreover, efforts are increasingly directed towards returning the previously displaced industrial capacities (e.g. in Asian countries) to home countries .

Industrial production on which the present civilization rests has no limitations, and, nowadays, the most developed countries are the ones that have primarily energy and manufacturing sectors developed. Although the service sector accounts

\* University of Belgrade, Faculty of mechanical engineering, Kraljice Marije 16, 11000 Belgrade, Serbia; spokrajac@mas.bg.ac.rs



for over 50% of GDP in most countries today, it is important to know that most of these services are directly or indirectly connected with industry. In addition, some influential authors (Dani Rodrik) rightfully believe that industry is changing the entire way of life, because it changes the psychology and habits of people. Industrial production confirms the superiority of man over the forces of nature, and higher degree of industrialization raises awareness of the need for collective cooperation, collective leadership, and collective results.

In short, industry is indispensable even in strictly economic terms, because it provides well-paid jobs, commercial innovation, contributes to maintaining or increasing employment, is key to reducing the deficit, and strongly contributes to environmental and energy sustainability. Similar ideas form the basis of the Metropolitan Policy Program, an important initiative for the revitalization of American industry, which the well-known Brookings Institution published in February 2012. Similar action was taken by the European Union, whose Research Directorate started the New Growth Path in Europe and initiated a grandiose research project in order to design a new approach to economic growth, in which the main objective is industry restoration. All this suggests that our country should also design and implement a more active and more effective industrial policy and, by extension, reindustrialization, as an inevitable way of revival and restoration of the selected industry segments. This paper will show that industrial competitiveness is one of the most important criteria for the implementation of reindustrialization.

In the semantic sense, reindustrialization means the process of transformation of the economic structure, based on more dynamic development of modern machine technology (automation, robotics, etc.), and the application of industrial methods and organization of production both in the industry and in other production and even service sectors. In this sense, reindustrialization is a general metaphor which denotes the penetration of new industrial technology, tools, and methods of work and organization into all areas of human creativity, above all production creativity. It stands to reason that industry has a leading position in this process.

In other words, reindustrialization is not a goal in itself, but an effective tool and a way to renew and strengthen, in terms of technology, finances, and human resources, all production companies that still have a certain economic vitality and expected market propulsion. All this can be done on the basis of new knowledge and new technology, as well as the new demands imposed by new ecological criteria. Such challenges can be resisted by only some parts of the metal industry, chemical, wood, textile, electrical, rubber, and defense industry.

In this sense, it can be said that reindustrialization includes a number of initiatives and programs for economic and production development of territorial areas affected by industrial, socio-economic, and environmental crisis. Now, more than ever, European real economy needs to focus on its re-growth and job creation within the new stage of development - reindustrialization, where industry should have a significant stimulating effect. It is estimated that a hundred new jobs in the EU industrial sector would create a hundred additional jobs in other areas of the economy. In its Communication entitled "For a European Industrial Renaissance", adopted on 22 January 2014, the European Commission urges member states to recognize the vital importance of industry for the creation of new jobs and growth, and to include issues related to competitiveness in all areas of system policy.

# The role of industrial production in economic development

It is generally acknowledged that production, especially industrial production, is a significant growth driver of modern economy, and the main source of creating new value and providing employment. The role of industry goes beyond its share in the creation of GDP, as production of industrial outputs includes many activities along the entire value chain, i.e. production of raw materials, research and development (R&D), processing, logistics, maintenance, after-sales service, and so on . More than 80% of private research and  $\frac{3}{4}$  of innovation comes from industry, and a quarter of employees in non-financial sector works in the industry (with increasing education and qualifications). What is more, each additional job in the production sector opens about 2 jobs in other sectors. Furthermore, production has a large spillover effect on other sectors. It is reflected in its leading contribution to general productivity that is even four times higher than its



GDP input, due to its multiplying effect on growth of the rest of the economy. However, the majority of the most developed world economies have in recent years recorded declining share of industrial production in GDP. In fact, countries have different experience, meaning that this tendency continues in some countries, while others maintain a stable and relatively high share of industry in the structure of the economy. At the same time, a lot of countries make serious efforts to enhance the role and importance of industry, including its share in the structure of their GDP. An example of the EU is particularly indicative, because it shows the new course and vigor of reindustrialization. To this end, in 2010, a strategic document, Europe 2020, was adopted, within which special attention belongs to the program Horizon 2020.

## Industrial pruduction of Serbia

Industrial production in Serbia in 2014 increased by 2.2% compared to 2001, thus reaching the level of industrial production in 2003, which was only 37.9% of the level achieved in 1989. Compared to 2001, production in the manufacturing industry increased by 3.2% (average annual growth rate of 0.2%). The level of production in the energy sector, as a result of sharp decline, returned to the level of production in 2000, while the mining sector recorded a drop of 1.6%. Positive developments were recorded in the period 2001-2008, when industrial production in Serbia increased by 12.6% (Mining – 2.1%, Manufacturing industry – 17.3%, and Energy sector – 17.9%), compared to the period 2008-2014, when there was a fall of 3.6% in industrial production (Mining – a decline of 23.0%, Manufacturing industry – a decline of 7.0%, and Energy sector – a decline of 14.3%). The unfavorable situation was recorded in 2014, because the overall level of industrial production decreased compared to 2013 by 6.5% (Manufacturing industry – by -1.4%, Mining – by -16.7%, and Energy sector – by -20.1%, respectively.

Industrial production in the EU-28 in 2014 grew by 1.2%, which was reflected in Southeast Europe countries. Most SEE countries recorded a slight recovery of industrial production, primarily due to exports of goods and services, and to a lesser extent, due to higher demand on the domestic market.

# Competitiveness - the most important goal and recource of industrial policy

Competitiveness is one of the most used terms, not only in economic, but also in many other analyses. It marks the ability to achieve success on the markets where different participants meet, incorporating all their creative powers, knowledge, and skills into products and services they bring to market. In other words, the level of competitiveness reflects the capacity of the na-



Figure 1: Industrial production – international comparison Source: Authors, based on Eurostat data [sts\_inprgr\_a]



tional economy to, in a certain (usually mid-term) period, generate sustainable economic growth at the achieved level of development.

Companies, enterprises, and individuals work and create some goods, and when they bring them to the market (local, national, global), they want to obtain confirmation for their usefulness and value (price) that can only be given by customers. Customers buy utility value of goods (services), paying it in the form of prices. This has always been, and still remains, the basic logic of the market meeting of suppliers and customers (supply and demand). Even a short explanation of what motivates the customer to buy some goods, and what must be done by a manufacturer and a seller to attract a customer, would be a long way to go. What is important for this topic concerns the fact that each supplier/manufacturer must know that, besides them, there are many others, the same or much better suppliers, and that none of them can ever be sure that they will be able to sell their goods. However, each one can be sure that they must continuously improve their product (raise quality) and make it cheaper and cheaper (increase productivity and cost-effectiveness), and thus increase the chances that increasingly demanding customers will buy their particular product. Competitiveness becomes only a sublimate and a finish of the "game" of knowledge and innovation, a game that always has the winning end. But, to win, one must also invest. Learning has always been and undoubtedly remains the best form of investment. In fact, "knowledge society" has existed since the society itself. In the course of its development, every society faces (or will face) the stage of industrialization, some have already passed that stage and are in the post-industrial stage, while some come back to the industry again, but in a new, better, and more innovative way. We call it - reindustrialization, but accept the phrase "new industrialization".

Competitiveness is the effect of a number of factors that mutually influence each other, so that it is the sum of almost all conditions, factors, culture, politics, ecology, and philosophy of economic life. This is particularly evident today, when more and more people have to take into account the so-called global competition, as a result of pervasive globalization: technology, manufacturing, trade, education, lifestyle, culture, etc. Of course, the concept of the global market does not preclude the local market, but only means that the flow of goods, services, people, capital, knowledge, and ideas is free and independent of the geographical space. In addition, changes in market structure and the level of globalization lead to changes in the perception of competitiveness. In an open and fairly integrated world economy, competitiveness becomes a key determinant of economic growth, employment, and, therefore, the quality of life. Being competitive is no longer a question of absolute advantage in the production of goods, but means a strategy through which it is possible to achieve a better market position compared to the competition. Therefore, competitiveness is a multidimensional phenomenon, necessarily present at the level of the company, industry, or the nation as a whole. The ultimate goal of competitiveness is to increase the prosperity of the population, by increasing income, living standards, and quality of life.

Because of all that, in the analysis of competitiveness, one must bear in mind that competitiveness of the national economy is not the same as the level of industrial competitiveness. At the macro level, competitiveness is a broad term that encompasses economic growth, quality of life, and work productivity. Competitiveness at industry level is the ability of all businesses in some field to achieve sustainable success in relation to foreign competitors, but without protectionism and/or state aid. So, macroeconomic approach is the responsibility of the government, and mainly focuses on macroeconomic stability, economic growth, and the functioning of markets, i.e. monetary and credit sphere, taxation, foreign trade, and foreign exchange regime. In this regard, the scope of macroeconomic approach to competitiveness is equally related to the position and competitiveness of all participants in economic life and all sectors of the economy.

However, one should bear in mind the theory of competitive advantage, based on which it is not the states, but the companies that compete on the international market. Therefore, microeconomic competitiveness is a key condition for achieving economic and social objectives of each macroeconomic strategy, namely: growth in gross domestic product (GDP), employment growth, higher exports, higher wages, higher pensions, increased living standards, and so on. But none of this is possible without innovation, i.e. continuous generation of new products, processes (technology), services, and so on.



At the same time, competitiveness at the company level can be defined as the ability of the company to produce and sell its products/services on competitive markets, the ones that will be superior to competitors', in terms of price and/or non-price criteria. So, these can be:

- 1) products at lower prices than other companies,
- 2) unique products, and
- innovative, new, or improved products, i.e. existing products with special properties and quality.

In general, the acceptance of the concept of competitiveness is crucial for the economic development of Serbia, and, by extension, reindustrialization, as an important aspect of this development. A similar situation exists in the world, especially the developed countries, where competition is also given primary attention. In fact, in the exercise of economic competitiveness, particular focus is on the importance of competitiveness of labor, creative and innovative skills of people, especially young people, who must not stay long outside the world of work and production.

According to the OECD definition, competitiveness of the country is a measure of the ability of a country to, in free and equal market conditions, produce goods and services that pass the test of international markets, while maintaining and long-term increasing of real income of the population. According to a well-known OECD's Global Competitiveness Report, four factors play a key role in determining the quality of national competitiveness framework: 1. Macroeconomic framework 2. The efficiency of public administration, 3. Encouraging business efficiency, 4. Infrastructure. An interesting approach to competitiveness is offered by the renowned Swiss Institute for Management Development (IMD), which points to the following 10 "golden rules of competitiveness":

- 1) Create a stable and predictable legal environment;
- 2) Work on a flexible and resilient economic structure;
- Invest in traditional and technological infrastructure;
- 4) Encourage private savings and domestic investment;
- 5) Develop aggressiveness on the world market and attractiveness for foreign investment;

- 6) Ensure transparency of government and administration;
- 7) Maintain balance between wages, productivity, and taxes;
- Maintain the social structure so as to reduce differences in wages and strengthen the "middle class";
- Significantly invest in education, especially at the secondary school level, and the lifelong learning of labor;
- 10) Establish balance of national and global economy to ensure sustainable wealth creation, while maintaining a value system to suit citizens;

It is obvious that these ten determinants of competitiveness can significantly direct both general economic policy, and even more industrial policy, towards high achievements in the development of any national economy. Therefore, today, increasing focus is on the competitive ability of nations, which is monitored by the so-called Global Competitiveness Index.

This complex analytical parameter was adopted by the famous World Economic Forum. When defining the Global Competitiveness Index, this respectable institution started from a logical assumption that the competitiveness is a very complex phenomenon, affected by a number of different factors. All factors are grouped into the so-called 12 pillars of competitiveness, divided into three groups.

The first group of pillars of competitiveness includes the so-called Basic requirements. This group includes the following pillars of competitiveness: (01) Institutions, (02) Infrastructure (03) Macroeconomic stability, and (04) Health and primary education.

The second group includes the so-called Efficiency enhancers. This group includes the following pillars: (05) Higher education and training, (6) Goods market efficiency, (07) Labor market efficiency, (08) Financial market sophistication, (09) Technological equipment, and (10) Market size.

The third group includes the so-called Innovation and sophistication factors. This group includes (11) Business sophistication and (12) Innovation.

In addition to all the above, it should be noted that strategies for achieving competitiveness still vary among countries, depending on their level of development. This can be seen in Table 3.



| Table 1: Strategies for achieving competitiveness according to the level of economic | c development |
|--|---------------|
|--|---------------|

| Stages in<br>economic<br>development of a<br>country | Factors                           | Developing<br>countriesc                           | Transition coun-<br>tries | Developed<br>countries |
|--|-----------------------------------|--|---------------------------|------------------------|
|  | Factor<br>conditions<br>based on  | Resources  | Production                | Knowledge              |
| Basic "physical"                                     | Business                          | Protectionism                                      | Efficiency                | Competitive-<br>ness   |
| factors  | Related and supporting industries | Basic<br>infrastructure<br>(roads, ports,<br>etc.) | Industrial<br>clusters    | Regional integration   |
|  | Demand condi-<br>tions            | Quantity   | Quality                   | Sophistication         |
|  | Workers                           | Cheap  | Motivated                 | Trained                |
| Human factor   | Politicians                       | Simplification                                     | Support and regulation    | Advisory services      |
|  | Entrepreneurs                     | Risk exposure Efficiency growth                    |                           | Value creation         |
|  | Experts                           | Operational  | Management                | Strategic              |

In terms of our approach to reindustrialization, all 12 pillars of competitiveness are extremely important, especially the 12th pillar – Innovation and innovativeness.

Similar ideas prevail in the European Union. Faced with declining competitiveness of its industrial sector, it undertakes a range of measures. All prejudices about the alleged impropriety of government interference in the economy have been rejected, so that the EU objections to others for doing the same things it does sound pretty hypocritical. Table 4 provides a relatively recent review of some of the most important measures and activities to encourage industrial competitiveness of EU member states.

#### Industrial competitiveness of Serbia

Industrial competitiveness is the ability of manufacturing companies to create new value by increasing the volume and quality of production and attracting production factors in relation to other sectors within the economy or in relation to the same sectors in other countries. Industrial competitiveness is defined as the ability of countries to increase their presence on the international and domestic markets, through the development of industrial sectors and activities with higher added value and technological complexity. It is a condition in which manufacturing companies can, on an open and free market, produce goods and provide services that meet the requirements of the world market, while increasing profitability and real income of employees.

Industrial competitiveness is determined by a large number of factors, such as: scope, type, and quality of products and services, customer satisfaction, development and efficiency of internal processes, profit margin, innovation, employee satisfaction, and others. The achieved level of industrial competitiveness is usually measured on the basis of analysis of industry structure and productivity of production factors, i.e. productivity and/or unit labor costs.

#### The structure of industry according to technological complexity

Analysis of the manufacturing industry structure in terms of technological intensity points to a low level of industrial competitiveness, characterized by dominance of low-tech sectors. In 2013, more than 90.3% of manufacturing companies operated in low- and medium-low-technology sectors. These companies employ 77.2% of work-



■LOW-TECH ■MEDIUM-LOW-TECH ■MEDIUM-HIGH-TECH ■HIGH-TECH

Figure 2: Structure of the manufacturing industry by technological complexity in 2013



LOW-TECH MEDIUM-LOW-TECH MEDIUM-HIGH-TECH HIGH-TECH Figure 3: Trends in industrial structure indicators in the period 2007-2013, AAGR

ers, generate 76.3% of GVA, and have 74.1% of share in the manufacturing industry labor costs. Change in the value of structural indicators, expressed on the basis of average annual growth rates (AAGR), points to deterioration of the manufacturing industry's technological structure in the period 2007-2013. Compared to 2007, the largest decline in the share of all the analyzed in-

dicators was recorded by high-tech companies, which further reduced the already low industrial competitiveness of the domestic economy.

### Structural changes in the manufacturing industry

The index of structural changes, which is obtained by aggregating the absolute differences in sectoral share in the first and last observed year, also



shows the deterioration of industrial competitiveness and reduced share of high-tech companies in the structure of industrial production.

Aggregated indicator of structural changes, calculated as the average rate of structure change of four indicators (number of companies, employment, GVA, and labor costs), shows that the highest rate of change in the period 2007-2013 was in the sector of medium-low-tech companies, which increased its share by all individual indicators, while companies from high-tech sector mostly decreased share, indicating that domes-



Figure 4: Index of structural changes in industry, 2007-2013

tic industrial production is increasingly based on manufacturing low-tech products of lower value added and weaker industrial competitiveness.

# Industrial competitiveness by unit labor costs

Industrial competitiveness is often measured by the efficiency of production factors (labor, capital, energy, raw materials). While cost competitiveness is determined by the efficient use of all production factors, the intensity of use is determined by the character of individual production and competitiveness factors. Therefore, unit labor costs stand for a good indicator of industrial competitiveness of manufacturing companies, because they emerge during the production process, cover the largest cost component, and show how much total labor costs (or gross wages) participate in the realized productivity, i.e. the newly created value.

Unit labor costs show the relationship of the labor market (labor costs) and economic activity (labor productivity), and are calculated as the ratio of labor costs (gross wage per employee) and labor productivity, where labor productivity represents the ratio of gross domestic product (or gross value added ) and number of employees during the period.

In 2013, the manufacturing industry had higher unit costs than the rest of the non-financial sector of the economies, with the movement of unit labor costs in manufacturing industry being largely determined by movements in unit labor costs in the rest of the economy.

Within the manufacturing industry in the period 2007-2013, the lowest unit labor costs were recorded among companies in low-tech sectors, and the largest among companies in mediumhigh-tech sector. Low unit labor costs of companies in low-tech sector were largely the result of the low qualification of workers (the costs arising from their involvement were lower than those of companies in other sectors), which is not a basis for improving competitiveness in the future. On the other hand, high unit labor costs point to low-



er competitiveness of companies in the mediumhigh-tech sector, since a high share of wages in gross value added does not leave enough room for the improvement and modernization of labor processes and the strengthening of industrial and overall competitiveness.

Clearer picture of industrial competitiveness is obtained by analyzing changes in unit labor costs, as it reflects the discrepancy between the change in labor productivity and labor costs. In the period 2007-2013, unit labor costs in manufacturing industry decreased by -0.5%. Nevertheless, this does not imply improvement in industrial competitiveness, because the fall in unit labor costs occurred due to a drop in productivity, GVA, and employment, indicating only that the balance was achieved at a lower production level in 2013 compared to 2007.

In the period 2007-2013, manufacturing industry recorded a sharper decline in unit labor costs in relation to the overall economy. However, this gap tends to decrease, mainly as a result of a more pronounced fall in employment, gross value added, and labor costs (and consequently, labor productivity) in the manufacturing industry in relation to the overall economy. This is also the basic problem and limitation faced by the entire Serbian economy, especially manufacturing industry, because the fall in unit labor costs is the result of faster decline in labor costs in relation to labor productivity, given the long-term unsustainable downsizing. Moreover, a high share of labor costs in total labor productivity and gross value added is the result of obsolete equipment, outdated technology solutions, insufficient investment in science, research and development, insufficient employment of highly educated professionals, low level of innovation, etc. Technological gap and the existing production structure, dominated by low-tech production sectors,

cannot in the long term have a significant impact on reducing unit labor costs, which will result from dynamic growth in labor productivity, employment, and gross value added.

Within the manufacturing industry, unit labor costs are the lowest in medium-high-tech companies. Although the fall in unit labor costs in these sectors indicates the strengthening of industrial competitiveness due to a significant drop in labor costs, accompanied by a slight increase in productivity, it is still not real strengthening of industrial competitiveness, as productivity growth is achieved in conditions of sharper decline in employment in relation to a drop in the gross value added. The situation is similar with companies in low-tech and high-tech sectors, and the least favorable situation is with companies in medium-low-tech sectors, as in these companies, unit labor costs are increased, with significant fall in employment, GVA, and productivity. The slower decline in labor costs in relation to decline in employment in companies in medium-low-tech sector points to inflexibility of the labor market, as companies try to avoid the costs of firing staff and subsequent costs of recruitment and training, artificially keeping excess employees until economic activity restores positive dynamics. Furthermore, growth of unit labor costs increases the share of wages in gross value added, which does not leave enough room for improvement and modernization of the labor processes and qualitative improvement of competitiveness.

In studying industrial competitiveness through unit labor costs, greater emphasis is on productivity growth in relation to the reduction of labor costs, as labor productivity growth affects price and non-price competitiveness, and is considered an indicator of technological progress. The ability to produce more goods or goods of

|      | Non-financial | Manufacturing | Low-tech | Medium-  | Medium-   | High-tech |
|------|---------------|---------------|----------|----------|-----------|-----------|
|      | sector        | industry      |          | low-tech | high-tech |           |
| 2007 | 0,62          | 0,67          | 0,61     | 0,64     | 0,89      | 0,65      |
| 2008 | 0,62          | 0,66          | 0,61     | 0,62     | 0,88      | 0,66      |
| 2009 | 0,65          | 0,68          | 0,58     | 0,76     | 0,98      | 0,56      |
| 2010 | 0,61          | 0,65          | 0,56     | 0,67     | 0,94      | 0,62      |
| 2011 | 0,61          | 0,66          | 0,55     | 0,74     | 0,94      | 0,63      |
| 2012 | 0,60          | 0,62          | 0,54     | 0,67     | 0,76      | 0,63      |
| 2013 | 0,60          | 0,65          | 0,58     | 0,73     | 0,74      | 0,62      |

Table 2: Unit labor costs in the economy and the manufacturing industry in the period 2007-2013



higher quality with the same or smaller expenditure of labor (due to improved technology, organizational and/or other innovation) is an important way to gain competitive advantage, because it allows companies to reduce their prices (or increase their margins) at given labor costs.

The global economic crisis has caused fluctuations in the movement of unit labor costs in the neighboring countries as well, so that there is no clear trend of increasing or decreasing relative unit labor costs.

Relative unit labor costs in Serbia are the ratio of unit labor costs of a certain country and unit labor costs in Serbia, where the growth of relative unit labor costs reflects the growth of the industrial competitiveness of Serbia in comparison with that country, and vice versa. In the period from 2009 to 2014, industrial competitiveness of Serbia has improved in comparison to other countries in the region, except in relation to Slovenia and Bulgaria.During the mid-1980s, the distinguished M. Porter, in his book Competition in Global Industries, pointed out that traditional sources of competitive advantage are completely unreliable and unsustainable, because they constantly change. He believed that factors such as "low-cost unskilled labor" and natural resources are less and less important for global competitiveness in relation to complex factors, such as greater scientific and technical support of workers and advanced infrastructure, particularly information infrastruc ture. In his opinion, expansion of innovation in the right direction is important for international success, rather than passive exploitation of natural resources and competition based on low costs, which can be easily overcome. Japan is the best example of how scarce natural resources can be compensated by fostering development based on intangible, primarily intellectual resources, such as people innovativeness, organizational culture, brands, etc. Until recently unknown, poor and underdeveloped countries (South Korea, Taiwan, Ireland, Finland, etc.) are now rich and developed due to emphasis on innovation, as a strategic development objective and priority, from the company to the national economy level. What is more, Europe has reached a political consensus that, in order to ensure competitiveness, prosperity, and wealth, all forms of innovation must be given support, and that current shift of focus of European innovation policy

|  | Employment | GVA  | Labor costs | Product | Unit labor<br>costs |
|--|------------|------|-------------|---------|---------------------|
| Non-financial sec-<br>tor of the economy | -2,6       | -2,3 | -2,6        | 0,2     | -0,3                |
| Manufacturing<br>industry                | -4,2       | -4,6 | -5,0        | -0,4    | -0,5                |
| LOW-TECH                                 | -4,4       | -5,0 | -5,9        | -0,6    | -1,0                |
| MEDIUM-LOW-<br>TECH                      | -2,2       | -4,2 | -2,0        | -2,0    | 2,3                 |
| MEDIUM-HIGH-<br>TECH                     | -3,8       | -2,9 | -5,9        | 0,9     | -3,1                |
| HIGH-TECH                                | -13,4      | -7,3 | -8,1        | 7,1     | -1,0                |

Table 3: Industrial competitiveness of Serbia in the period 2007-2013, AAGR

| Table 4: Annual rates of growth/decline | in unit labor costs |
|---|---------------------|
|---|---------------------|

|          | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------|------|------|------|------|------|------|
| Hungary  | -2,3 | 0,5  | 0,9  | 1,0  | -1,0 | 2,8  |
| Romania  | -1,8 | 3,0  | -6,5 | 1,2  | -2,8 | 0,6  |
| Bulgaria | 6,3  | 5,6  | 1,7  | 2,6  | 6,1  | 0,0  |
| Slovenia | 3,3  | 1,3  | -1,4 | -1,8 | -0,4 | -2,6 |
| Croatia  | 1,6  | -1,0 | -1,0 | -2,8 | -0,2 | 1,1  |
| Serbia   | -3,8 | 2,6  | 8,6  | 6,7  | 1,7  | 0,5  |



from the sole reliance on technology to innovation, guided by customers and their needs, must continue.

# Cluters as a way to increase competitiveness

In theory and policy on strengthening competitiveness, a significant role belongs to the concept of clusters. Most often, competitiveness clusters are used as instruments to increase sectoral competitiveness, for efficient use of EU funds and programs, international and cross-sector networking, lobbying, promotion, and branding of sectors, and as an instrument for targeted investment attraction and creation of new value-added at sector level. In fact, they represent a kind of triple helix principle of networking of industry, academic institutions, and public and private industrial sector. In this way, they can contribute to the improvement of industrial production by connecting all participants in the production chain of an industrial sector.

In other words, cluster is a platform for networking and cooperation among different stakeholders, aimed at improving competitiveness in a way that all stakeholders are functionally connected and able to share knowledge and experience, and collaborate in the development of new projects and promotion of products and services on national and international markets. Organizationally, these are non-profit organizations, usually established by the government (ministry) in order to effectively link private, scientific and research, and other public institutions within a particular economic sector (e.g. industry) of strategic interest for the development of the whole society. Networking of various stakeholders in the process of implementation of various projects can strengthen the competitiveness of businesses, increase employment and national competitiveness, and bring balanced regional development, sustainable development, and well-being of society as a whole. One of the key conditions to achieve these objectives is the creation of an educated and competitive labor.

## CONCLUSION

Previous analysis has shown that competitiveness is one of the most complex performance indicators of an economy, particularly industry. It involves more effective and efficient operation than the relevant competitors, along with success on the market, without protectionism and subsidies.

Stagnant industrial production, accompanied by low industrial competitiveness, imposes the need for changing the current development policy, especially industrial policy, which should be a central part of every development-oriented economic policy. Given the role and importance of industrial production for economic development, employment, new jobs, creation of added value, increase in living standard, and strengthening of competitiveness, it is necessary to point to the need for reindustrialization, i.e. new industrialization, but on new and qualitatively better fundamentals. To be viable, new industrialization should be based on improving industrial competitiveness. Strengthening industrial competitiveness through the transformation of industrial structure is possible only by significant growth in business and investment activities of companies whose business is based on high technology, knowledge, and innovation, i.e. by increased level and quality of investment in fast-growing, innovative, export-oriented, and technology-intensive domestic companies. This implies profound transformation of the economy and the current development model. The new economic structure should ensure the offer of more competitive products in terms of price and quality, of higher level of processing, which can only be achieved by investing in modern technology that leads to increased supply, lower production costs, higher degree of specialization, and more efficient use of production factors. This means that reindustrialization, which we are advocating, does not mean commitment to the renewal of the entire industrial sector, but only those parts which are the best and most competitive, i.e. those segments where growth can be expected. So, only selective reindustrialization can help in overcoming the technological and economic backwardness of most capacities, unsatisfactory level of quality of products and services according to international standards, high imports, low level of marketing management and product management, redundancies, lack of foreign direct investment, and other developmental problems.

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