

THE IMPACT OF THE INDUSTRIAL POLICY ON REGIONAL DEVELOPMENT IN UKRAINE

Olga Nosova, Prof. Dr. Kharkov Banking Institute of Banking University

Abstract

The global industrialisation upswing, international division of labour, capital expansion, and foreign trade stimulate the developing countries' enlargement into the system of global economic relations. The analysis of different publications shows that industrial policy has been successful when those with political power who have implemented it have either themselves directly wished for industrialization to succeed, or been forced to act in this way by the incentives generated by political institutions (Robinson, 2009).

The paper deals with the study the role of industrial policy in regional development, and is aimed to formulate the basic measures for future structural adjustments in Ukraine. One could mention the existence of variety concepts for industrial policy. Scientists point out the economic results of the positive theory of industrialisation which has been applied in the Soviet Union. The negative consequences of its implication are uneven and unfair distribution of common goods among former republics. Some studies find out that on particular industries that have received protection may lead to higher growth but result in net welfare losses (Hansen, Jensen & Madsen, 2003). Measures that provide export promotion are likely to be more successful than other types of interventions (such as tariffs or domestic content requirements) (Clemens and Williamson, 2001). The theoretical analysis of various approaches confirms the existence of market imperfection and proves the necessity of further empirical research towards assessment of the effectiveness of industrial policy. The use of economic complexity, bounded rationality and socio-economic dynamics provides a transdisciplinary approach to deal with a broad range of industrial policy considerations.

The progress in reforming process within the regions depends on the success of industrial policy providing different measures of support (including protection and production subsidies) across industries to see whether supported industries exhibit faster growth. Studies on trade policies and growth show a strong correlation between increasing trade shares and country performance. The complex approach to regional industrial policy is directed to analyse the regional development effects. One could suggest the EU industrial policy should lead to fast process capital, labour, technology accumulation and knowledge diffusion from regional to national, global levels.

The analysis of two group's factors: general sources of economic growth and transition economy specific sources of growth are directed to estimate the effects of regional industrial policy in Ukraine. The first group of indices includes industrial output, fixed capital accumulation, human capital accumulation, economically active population growth, R&D spending and spillovers, macroeconomic stability, monetary indices, foreign trade, and foreign direct investment. Transition specific factors combine reform indicators, including labour productivity, capital intensity, technological change, regional differences. The regional imbalances' assessment is determined by gross regional product per capita, regional employment, and spending on education.

Keywords: industrial policy, complex approach, regional development.

Introduction

Literature review

The intensive development of the industry and the industrial policy is one of the main tendencies of modern world economy trends. Industrial policy is an integral and coordinated management system of state authorities focused on the development of industry in general and its separate (priority) branches, which is maintained by the corresponding mechanisms of implementation including stimulation, regulation and monitoring through the appropriate institutions of state and market. The purpose of this mechanism is targeting at the solving of strategic and tactic tasks of development of the real sector: increase in volume and changes in structure of industrial production, creation of new working places, competitive growth of national economy and its separate branches and etc.

Scientists point out the economic results of the positive theory of industrialisation which has been applied in the Soviet Union. The 50 % industry share in GDP was the result of Soviet model of production application. The negative consequences of its implication are uneven and unfair distribution of common goods among former republics. Saha (2015) points to the existence of elements of structural change which are visible in the evolution of Ukraine's industry. The author indicates that there is no correlation between relative size and growth of a subsector, but rather, growth was differentiated by the type of industry. Some studies find out that on particular industries that have received protection may lead to higher growth but result in net welfare losses (Hansen, Jensen & Madsen, 2003). The effects of both movement of labor from low-to high-productivity sectors and productivity improvements within sectors are analyzed as a source of economic growth, and its strong convergence property effect in manufacturing. Growth based on industrialization is defined as the relatively easy kind of growth, which can be accomplished without placing too great demands on an economy's fundamental capabilities (Rodrik, 2013). Measures that provide export promotion are likely to be more successful than other types of interventions (such as tariffs or domestic content requirements) (Clemens and Williamson, 2001).

Tridico (2011) understands by institutional, structural and systemic change getting the right institutions to adapt those which do not fit well, keeping the old institutions which could still work and overcoming the inefficient ones. Felipe (2015) identifies and analyses new forms of modern industrial policy which work effectively and are able to overcome the problems of the past. There are proposed new conceptual developments, showing how modern industrial policy is able to initiate, upgrade, and transform economic activity for the benefit of all. The evidence is used to provide a new theory of industrial policy, distinguishing modern industrial policy from the practices of the past. The author stresses that developing countries need a "modern industrial policy" which refers to the set of actions and strategies used to favor the more dynamic sectors of the economy (Felipe, 2015). A key aspect of modern industrial policy is embedding private initiative in a framework of public action to encour-

age diversification, upgrading, and technological dynamism to achieve development in the twenty-first century.

The theoretical analysis of various approaches confirms the existence of market imperfection and proves the necessity of further empirical research towards assessment of the effectiveness of industrial policy. The use of economic complexity, bounded rationality and socio-economic dynamics provides a transdisciplinary approach.

In the market economy the private sector and private sector enterprises are the long-term driving force of industrial development. It is this vibrant private sector that triggers economic dynamism, enhances productivity, carries out the transfer and diffusion of new industrial technologies, and maintains competitiveness. In so doing it also shapes the economic globalization process. At the same time, it must be underscored that the ultimate objective of this process is poverty reduction (UNIDO, 2003)).

The difference of working and not working industrial policy lies in the objectives and functioning of the institutions implementing the policies and these are determined by the political system (Robinson, 2009). The analysis shows that industrial policy is successful when those with political power who have implemented it have either themselves directly wished for industrialization to succeed, or been forced to act in this way by the incentives generated by political institutions.

Peculiarities industrial development of Ukraine

The basic idea of the state industrial policy is ensuring economic power, independence and security of the country through development of high-technological and competitive industries. The purpose of the state industrial policy - suspension slump production, to ensure the modernization, restructuring and sustainable development of Ukrainian industry in transition to industrial economy as the basis of economic independence of the state, the welfare of the people, and the country's integration into the global space. The relative importance of the industrial sector in Ukraine has continuously decreased since the end of the Soviet Union. Its share of industry in Ukraine's economy dropped from around 50% of gross value added (GVA) in 1991 to 27%, including energy and water supply. In 2004 among CIS, the situation was severe, and all the former Soviet republics (FSRs) were still below their 1989 GDP level (Tridico, 2009). Ukraine has not succeeded in carrying out sufficient reforms, had hyperinflation, unstable economy and high corruption. UNIDO experts note explanations for the declining trend in the manufacturing sector in NIS countries (UNIDO, 2003). First, the privatization of SOEs in the region was a measure to improve the government's fiscal position by reducing subsidies to SOEs, simultaneously increasing government revenue by the sale. Instead, many of SOEs engaged in asset stripping, selling off company properties piece by piece at discounted prices to make a quick return which leads to the decline of competitiveness. Secondly, the inefficient use of resources, including labour, was quite high in the previously state-owned enterprises, it was impossible to avoid generating significant unemployment as a result of the restructuring process. Sectoral studies showed that "there is no evidence of a substantial diminution of the technological gap between the Soviet Union and the

West in the past fifteen to twenty years, either at the prototype /commercial application stages or in the diffusion of advanced technology” (Amann, Cooper & Davies, 1982). Transition countries have not reached a leading position in the world in a particular branch of economic activity on the basis of innovation. They relied on imported technology which does not provide a basis for following the key differences in the forms of integration into international economic relations (Myant, Drahokoupil, 2011). New sources of growth have not yet been able to compensate for stagnant or diminishing performance of old industrial substance. Identifying and strengthening these new sources of growth will be the key to securing Ukraine’s status as an industry-based economy (Saha, Kravchuk, 2015).

The structure of the Ukrainian economy is under the influence of the global challenges of the world economy. The basic structure of the global economy shifts defined by the following tendencies: accelerated pace of development of new advanced high-tech and high-tech industries, compared with the traditional; growth rates approaching the first and second units of social production, groups A and B industry; reducing the share of environmentally hazardous mining and manufacturing industries in total industrial production; increase the share of social-service industry, which "absorbs" in developed countries to 70% of wage earners and self-employed economically active population. At the same time the world's attention to industrial policy is growing. The governments of many developed countries and developing countries consider industrial policy as a means of promoting sustainable economic growth and improving the welfare of citizens.

In Ukraine as a result of the global financial crisis, political instability and weaknesses of the control system, the level of investment activity does not allow to accumulate sufficient investment resources for the modernization of the economy. In 2010-2013 the deep crisis led to slowdown in capital investments and reduction of new production capacity, growth of volumes of incomplete construction, low technological parameters and reproductive structures of capital investments. Some stabilization in recent years, the dynamics of gross capital investment in the industry was largely due to the low base of comparison with level of investment in the post-crisis years. In 2013, yet failed to invest in the pre-crisis level of 2008

In recent years, the share of industry in GDP of Ukraine is decreasing. Industrial companies are forced to respond to the growing challenges and threats before their activity is reduced: demand for domestic and foreign markets, deterioration in access to many traditional industries in the Russian market, the appreciation of domestic financial resources, an urgent need to update of fixed assets. At the same time the world's attention to industrial policy is growing.

In 2015 the share of industry in GDP of Ukraine is decreasing. Industrial companies are forced to respond to the growing challenges and threats before their activity is reduced: demand for domestic and foreign markets, deterioration in access to many traditional industries in the Russian market, the appreciation of domestic financial resources, and an urgent need to update of fixed assets.

Industry of Ukraine occupies a prominent place in the global economy. The production of iron and steel Ukraine occupies the eighth place in the world, and traded products – the third.

In Ukraine for 25 years of independence it have not developed a clear and systematic approach to what needs to be industrial policy, and whether it place in the economic policy of the country in general. Various initiatives by governments to support industry consisted mainly of decisions (often political) of tax relief to certain industries and direct financial support of "sensitive" industries through their social aspect. This support did not stimulate the restructuring and development of distressed industries, and on the contrary, preserved their problems.

The main characteristic features of the industrial development of Ukraine are:

- significantly weakened the position of investment-oriented activities;
- deepened the technological gap between Ukraine and developed countries;
- the share of the most energy intensive and environmentally harmful fuel and energy and metallurgical complexes;
- a rapid reduction in the share of light industry - an industry that, along with the food industry directly focused on meeting consumer needs.

The consequences of slow down industrial development explained via further deepening of imbalances in the structure of social production, and technological backwardness its material and technological base. Resolving economic problems is impossible without active state structural policies.

The whole industrial complex of the country acts as an object of industrial policy. Wide acknowledgment of industry's important role in the current pressing issues was reflected in new tasks on accelerated development of an industry, which is the generator of scientific and technical progress and innovations, as well as an important factor of global competitiveness of national economies and a driver of the economy growth. Ukraine also needs to use the indicated advantages of the industry more actively, taking into account current situation in Ukraine and beyond its boundaries. Assessing the structure of the economy of Ukraine in 2013, one can conclude that in Ukraine the total proportion of manufacturing industry as a whole meets the core index balanced structure (20%) (Fig. 1).

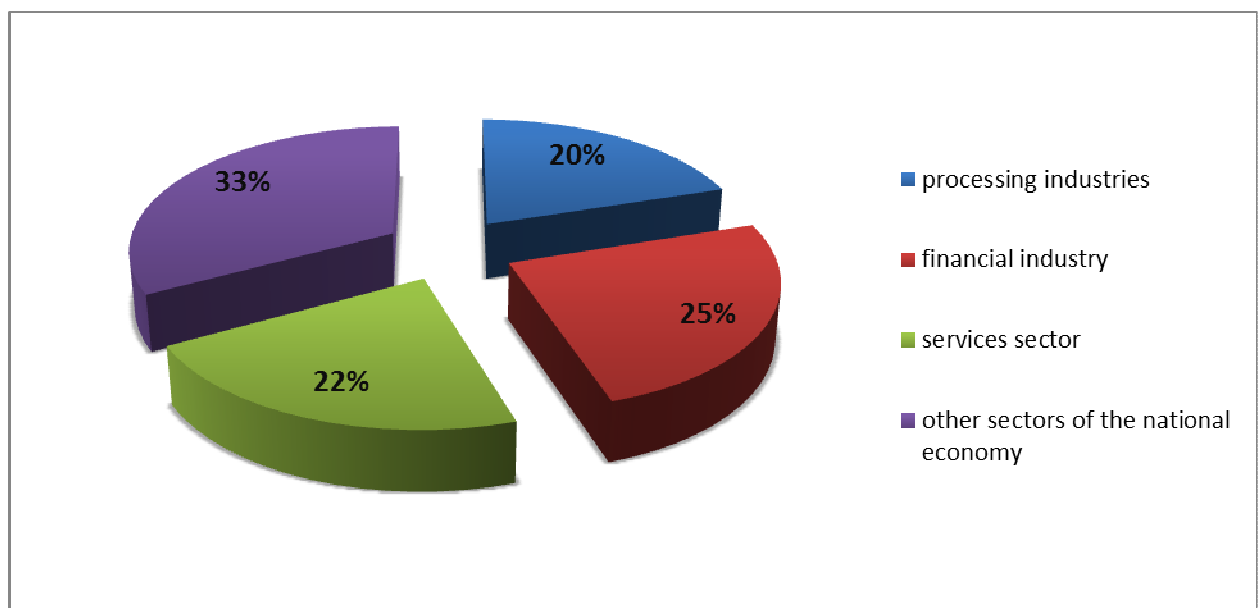


Fig. 1 The model for the national economy branch structure in 2013*
Source: Data of the State Statistic Committee in Ukraine.

However, be aware that intra-structure manufacturing industry Ukraine has a "bias" towards heavy industry - steel and energy sector.

During the period from 1990 to 2013 proportion of engineering, which is the basis of high and medium technological industries in the structure of industrial production dropped almost three times: from 31% to 10.6%, while the industry that is weak low and medium resource sector industry increased 1.5 times: from 11% to 17.5%.

The structure of the national economy of Ukraine did not meet the technological stability criterion. The share of high-technological industries is about 5% (4 times less), the total share of high-tech and medium high-tech industries - about 25% (2 times less) ((Fig. 2).

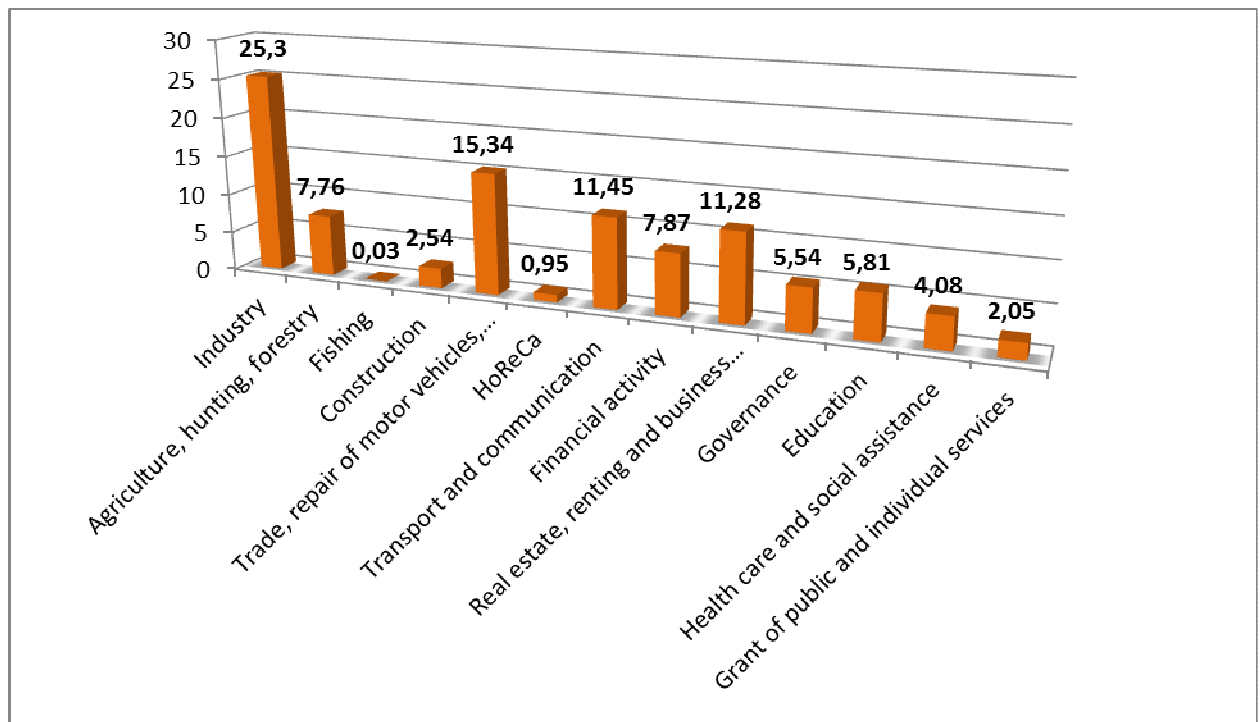


Fig. 2. Sectoral structure of Ukrainian economy in 2013 (% GDP)*

* Source: Data of the State Statistic Committee in Ukraine.

Exploring the impact of technological and industrial structural changes in Ukraine's economic growth, one could mention established economic growth in the period from 2000 to 2004. It has been provided by economic activity in which there was a rapid turnover of capital (metallurgy, chemical industry, mining industry, food industry). It should be noted an important role played by capital, particularly foreign investors, technologically for these types of production. However, economic growth, based on these economic activities, has long-term nature.

The heavy industry remains very important for Ukraine. Metals, mining and machine accounted for almost 50% of industrial sales in 2013. However, light industry subsectors such as food processing, furniture and chemicals/pharma outperformed the heavy industry in the growth of sales in 2010- 2013, before the present crisis. At 26% of industrial sales, food processing also was the single largest subsector in 2013. The GDP share of relatively important industries declined in the economy to 27% in 2013.

During 2014, according to the National Bank of Ukraine data, the drop in GDP was 7.5%, and the devaluation of the hryvnia has reached 100%, the consumer inflation rate rose to 25%. The banking system has lost a third of all deposit deposits, and foreign exchange reserves of the country decreased to 7.5 billion dollars. Industrial Production in Ukraine averaged -1.66 percent from 2000 until 2015, reaching an all-time high of 17.60 percent in April of 2010 and a record low of -33.80 percent in January of 2009. In 2015, industrial production fell by 13.4% in Ukraine. The main industrial potential is concentrated in the Eastern part of Ukraine. The most affected production sector was coke and refined petroleum products, chemical products, steel products, engineering products. According to the National Institute for Strategic Studies, industrial production (excluding the portion of the zone ATO) has decreased compared to the year 2014 by 2.5 times, the greatest reduction has undergone metallurgical production - 42.6% and mechanical engineering - 46.3%.

The fall in GDP is estimated at 10-11% in 2015. The March (2016) report the Ministry of Economy there is a renewed recessionary processes in the beginning of the year, after two quarters (III-IV 2015) GDP growth, it is noted that for the most productive sector of the country was hit trade and transit restrictions with Russia.

The Ukrainian market with the products of the domestic industry is largely isolated from the domestic market. Ukrainian producers cannot use their capacities in full, due to the high competition from the cheap import that is coming into the country a lot, including the use of gray schemes. These problems can be solved by fighting corruption in customs and tax simplification. These will not only "raise up" domestic producers, but also increase the attractiveness of the Ukrainian market for foreign investors.

Representatives of the business organizations unanimously put equal conditions for all market participants as a very important element of the industrial policy. The duty of the state is to create equal clear and predictable rules for business. Without this, any industrial policy would not be implemented.

According to the experts' views, an important part of the industrial policy of Ukraine would be the establishment of the industrial parks in order to attract investment from abroad. They should become a safe and secure haven where foreign investors will feel convenient and advantageous to start their operations in Ukraine. While discussing the conditions for the domestic manufacturers in the domestic and foreign markets, some experts stressed the importance of giving support, primarily to small and medium businesses.

Structural change in Ukraine's industry affects the regional distribution of industry. The heavy industry is concentrated in the Southern and Eastern part of

Ukraine. In the Western part of the country is specialized with agriculture and trade activities.

The problems of attraction and distribution of investments in the industrial sector in Ukraine involves solving the structural disproportions (technological, sectoral, and regional, by source of investment). They are threatened by the deepening of the imbalances in commodity and financial markets, the preservation of inefficient structure of production, the monopolization of certain strategic or socially important sectors of the economy, and inefficient use of raw resource base and production capacity.

Hypothesis and research design

The econometric estimation of parameters influencing gross regional product per capita (GRP) growth would be used for analysis of regional development. The study will test the hypothesis according to which industrial policy depends on the existing sectoral structure of the economy.

The modelling has been based on annual data of gross regional product per capita (GRP) in Ukraine from 2005 to 2009 for 27 Ukrainian regions. In detail the following variables are available and are considered where index I runs over all 27 regions, and index t over all time periods considered (years).¹ The theoretical framework of the empirical analysis is based on the hypothetical equation:

- $GRP_{it} = F(FCI_{it}, IPI_{it}, CPI_{it}, FDI_{it}, AW_{it}, NT_{it}, UR_{it}, RTR_{it}, WTR_{it}, EMP_{it}, RIN_{it}), \quad (1)$
- where GRP_{it} – Gross Regional Product per Capita (UAH);
- IPI_{it} – Industrial Production Index, where 2000 = 100% (%);
- FCI_{it} – Fixed Capital Investment per Capita (UAH);
- CPI_{it} – Consumer Price Index (%);
- FDI_{it} – Foreign Direct Investment per Capita (UAH);
- AW_{it} – Average Nominal Wage per Worker (UAH);
- NT_{it} – Number of Telephones per 100 Families;
- UR_{it} – Unemployment Rate (%);
- RTR_{it} – Retail Trade Turnover per Capita (UAH);
- WTR_{it} – Wholesale Trade Turnover (Mln. UAH);
- EMP_{it} – Employment of Working People from 17 to 70 years (thousand people);
- RIN_{it} – Real Income per one Citizen (UAH).

In accordance of the State Statistic Committee of Ukraine GRP is determined as the sum of the value added of all kinds of activities, including net taxes. The industrial production index calculates as the value of produced products (works, services) in the corresponding prices. Consumer price index (inflation index) is considered the index of the price change and tariffs on goods and services buying for consumer's consumption. Wholesale trade turnover is a value provided by enterprises for goods'

¹ Data from Regional Statistical Surveys Ukraine in 2010. State Statistical Committee in the Ukraine.- <http://www.ukrstat.gov.ua>

sales other enterprises, organizations and their use in Ukraine. Retail trade turnover includes retail turnover of enterprises, which are engaged in retail trade activities, and sales within the markets and by entrepreneurs.

The modelling GRP from 12 exogenous variables demonstrates the existence of various results and values of significant coefficients from 2005 to 2009. The significance of the coefficient is tested at the 5 per cent level. The standard error is given in the parenthesis.

The modelling GRP from fixed capital investment, wholesale trade turnover, employment, and real income per one citizen demonstrates the significant relationships from 2005 to 2009 in the Ukraine (Table 1).

The GRP increase depends on the development of the wholesale trade turnover among enterprises in the regions. The negative coefficients for employment is caused by low labour productivity in industry, demographic trends, high share of pension expenditure to GDP ratio in excess of 14 % (OECD, 2011), and significant share of working people in retail trade.

• **Table 1: Results of Gross Regional Product Estimations from Exogenous Variables (OLS)**

Regressor	2005	2006	2007	2008	2009
INT	-129,9 (687,3)	336,2 (682,5)	-1979,6 (1331,6)	-5512,9 (1374,9)	-4788,2 (2136,2)
IFC	2,7 (0,3)	2,4 (0,3)	1,5 (0,4)	1,2 (0,3)	1,17 (0,39)
WTR	0,05 (0,01)	0,07 (0,01)	0,06 (0,01)	0,03 (0,01)	0,042 (0,01)
EMP	-1,2 (0,3)	-1,1 (0,2)	-1,5 (0,4)	-1,3 (0,4)	-0,56 (0,51)
RIN	0,9 (0,3)	0,7 (0,3)	1,6 (0,4)	2,4 (0,3)	1,76 (0,43)
R-Squared	0,96	0,97	0,97	0,98	0,97
DW-statistic	1,75	2,07	2,19	2,19	1,7

The use of SURE (Seemingly Unrelated Regression Estimation) model is aimed to analyse a system of multiple equations with cross-equation parameter restrictions and correlated error term. The SURE model gives more accurate estimation and is used in case of not correlated variables estimation. The dependence of the gross regional product per capita estimates from fixed capital investment per capita, wholesale trade turnover, employment of working people, real income per one citizen. The results of estimation from 2005 to 2009 could be seen in the table 2.

The significant of the coefficient is tested at the 5 per cent level. The standard error is given in the parenthesis. The estimation results demonstrate the existence of the significant relationship between GRP per capita and fixed capital investment per capita, wholesale trade turnover, real income per one citizen for 2006 and 2007. The analo-

gous relationship shows the insignificant relationship of GRP per capita with employment of working people for all estimated periods.

• **Table 2: Results of Gross Regional Product Estimations from Exogenous Variables (SURE)**

Regressor	2005	2006	2007	2008	2009
INT	2007,9 (414,3)	2667,3 (438,2)	3676,1 (659,1)	1948,6 (1004,5)	2036,2 (1569,7)
IFC	0,3 (0,12)	0,4 (0,1)	0,3 (0,1)	0,16 (0,1)	0,05 (0,19)
WTR	0,01 (0,004)	0,02 (0,01)	0,02 (0,001)	0,01 (0,01)	0,02 (0,01)
EMP	-0,5 (0,2)	-0,3 (0,2)	-0,5 (0,3)	-0,16 (0,5)	-0,08 (0,6)
RIN	0,5 (0,1)	0,3 (0,09)	0,18 (0,14)	0,95 (0,2)	0,92 (0,27)
R-Squared	0,46	0,48	0,43	0,53	0,61
DW-statistic	2,06	2,02	2,0	2,06	2,0

The insignificant relationship of GRP per capita with real income per one citizen for 2007, and fixed capital investment for 2008, 2009 are caused by the existing of the regulatory impediments for growing business. A systemic assessment of product-market regulation in Ukraine evaluates three components: state control; barriers to entrepreneurship and barriers to trade and investment suggests that regulatory reform could contribute to greater efficiency of both resource allocation and production, accelerating convergence of Ukrainian regions (OECD, 2011). Experts suggest underpinning economic diversification, enhanced competitiveness and private sector development.

The analysis of the estimation results demonstrates the better assessment results of coefficient values in the table 2 in comparison with the data results in the table 1. The decrease of the values of standard errors in the table 2 in comparison with the analogous results for the same variables in the table 1 points out the improved estimation results. The absence of significant coefficients in some equations confirms a need for ongoing statistical analysis of data for longer estimation period of research. The research shows that regional industrial policy in Ukraine depends on the economic structure, which It reaffirms the need to change the structure of the economy in the direction of reducing the share of extractive industries and increasing the share of processing industries.

Scientists consider that Ukraine needs to identify priority areas of economic development in order to define what type of country's industrial development model they prefer to select. One can consider that the industrial and investment policies

should not be compensatory, but stimulating. Then, the risk of the leaching tax base would be gone and favorable conditions for domestic and foreign investors in the Ukrainian production would be created.

Policy conclusions

In order to create competitive modern industry is suggested to use the experience of the developed countries with the industrial policy. It is based on three basic principles: the international competitiveness of industrial products, export expansion and state protectionism with the emphasis on the modernization of the economy.

Econometric modelling examines the existence of the division for the industrial regions with high urbanization and backward agrarian regions in the Ukraine. The basic problems influencing the integration process of the Ukrainian regions are the following: the industrial development disparities among regions; the insufficient infrastructure (telecommunications, roads, hotels, services and etc.), the low labour productivity in industrial sector, and insufficient regional trade. There is a need for adoption the priority measures for regional policy improvement, including the financial support of the depressed regions, the enhancing competitive sectors development and better access to new technologies, the adoption programs for stimulating preparation skilled workers, and creation of the institutional network for regional development.

A number of specific measures that can be effective instruments of industrial policy include an effective regulatory framework, a stable tax system, and barriers to decrease the amount of corruption schemes. While creating these conditions, the government should support the economy with special measures and state guarantees protection to business.

Carrying out specific policies for foreign direct investment (FDI) attraction suggests removing barriers, selecting and business analyzing the Ukraine's most attractive sectors in terms of competitiveness and FDI appeal.

An important part of the Industrial policy of Ukraine would be the establishment of the industrial parks in order to attract foreign capital. They should become a safe and secure haven where foreign investors will feel convenient and advantageous to start their operations in Ukraine.

References

- Amann, J.M., Cooper J.M. & Davies R.W. (1982). The technological level of Soviet industry. Yale University Press, New Haven.
- Acemoglu, D., P. Antras, and E. Helpman. 2007. "Contracts and technology adoption. American Economic Review, 97(3), pp. 916–43.
- Development and Modern industry policy in practice: issues and country experiences (In association with the Asian Development Bank). (2015), Edt. Jesus Felipe, Elgar. Grossman, G., and Elhanan, H. (1991). Innovation and growth in the global Economy, MIT Press, Cambridge, MA.

- Harrison, A.E., and A. Rodriguez-Clare. (2009). Trade, Foreign Investment, and Industrial Policy. In *Handbook of Development Economics*, 5, ed. D. Rodrick and M.R. Rosenzweig. Elsevier.
- Madsen, E.S., Jensen, C., Hansen, J.D. (2003). Scale in technology and learning –by-doing in the windmill industry. *Journal for International Business and Entrepreneurship Development*, 1(2), pp. 27 -35.
- Myant M., Drahokoupil J. (2011). *Transition economies. Political economy in Russia, Eastern Europe, and Central Asia*. John Willy & Sons, Inc.
- OECD (2011). *Competitiveness and private sector development: Ukraine 2011. Sector competitiveness strategy*.
- Robinson J.A. (2009). *Industrial policy and development: a Political Economy perspective*. Harvard University Department of Government and IQSS, May.
- Rodrik, D.(2013). *Structural change, fundamentals, and growth: an overview*. Institute for Advanced Study. September.
- Rodrik, D. (2013). *The Past, Present, and Future of Economic Growth*, Global Citizen Foundation. Working Paper 1, June 2013. Available at: http://www.sss.ias.edu/files/pdfs/Rodrik/Research/GCF_Rodrik-working-paper-1_-6-24-13.pdf
- Saha, D., Kravchuk, V. (2015). *The industrial sector of Ukraine: trends, challenges and policy options*. Policy Briefing. PB//05//2015
- Saha, D. (2015). *From heavy to light: structural change in Ukraine’s industry*. News letter. The German Advisory Group, Issue No. 81, July.
- Tridico, P. (2011). *Institutions, human development and economic growth in transition economies*. Palgrave Macmillan.
- UNIDO. (2003). *The Role of Industrial Development in the Achievement of the Millennium Development Goals*. Proceedings of the Industrial Development Forum and Associated Round Tables Vienna, 1-3 December 2003. Compendium Edition.
- Rodrik, D. 2004. *Industrial Policy for the Twenty-First Century*. CEPR Discussion Paper 4767, Centre for Economic Policy Research, London.