THE IMPACT OF GLOBAL COMPETITION ON THE STATE OF MANUFACTURING IN UKRAINE AND DEVELOPED COUNTRIES

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Abstract. At the end of the 20th century, the economic structure was changed fundamentally in some countries. It was mostly related to the growth of global competition. One of the consequences of this process was the decline in manufacturing production in developed countries and in the post-Soviet countries. The purpose of this article is to define the meaning and consequences of the decline in manufacturing production in developed countries and in post-Soviet countries on the example of Ukraine. Methodology. This study is based on some general theoretical approaches such as analysis and synthesis, induction and deduction, etc. Also, statistical analysis was used for discovering some economic trends. Structural analysis was helpful for examining shifts in economic structure. Correlation between different facts, which is crucial for the understanding of the transformation of manufacturing, was identified by applying the systems approach. The aim of the article is to reveal the impact of global competition on the state of manufacturing and to define the manufacturing development trend. Results of this research showed that the decline in the rate of profit causes the transformation of economic structure. Global competition made the production of some goods in developed countries less profitable due to the relatively high costs. The ability to transfer labour-intensive production to developing countries transformed economic structure in developed countries. It was the reason for a sharp decline in manufacturing production, which caused some economic and social problems. Post-Soviet countries had serious economic and social problems too. Liberalization of trade made these countries face with global competition. This competition revealed extremely weak competitive positions of a great range of products. There was a massive decline in manufacturing production in Ukraine. This study proves that the transformation of manufacturing is far from the end. First of all, it is related to the rising wages in developing countries. It makes labour-intensive production less profitable. The Factor Price Equalization Theorem shows that there is no further perspective to stay competitive using cheap labour force. That is why it is crucial to create favourable conditions for the development of innovations. By its nature, manufacturing is more diversified than other sectors, which gives more chances to produce innovations. Strong manufacturing basis is also beneficial for providing employment, better standards of living, and sustainable economic growth. Practical implications. Developed countries can apply new approaches to their economic policies because they already have a quite strong innovative basis. These approaches should take into account current trends, which are considered in this article. Ukraine, bearing in mind the deepening of its integration into the global economy, should substantially improve its competitive positions. That is why it is important to launch a long-term strategic program, which is relevant to Ukrainian specific conditions. Value of the study is in distinguishing of different nature of the same process in developed countries and in Ukraine. It helps to define some perspectives of economic development. The results of the study can be used for creating economic programs.

Key words: manufacturing, deindustrialization, global competition, innovations, economic development.

JEL Classification: O14, P24, P23

1. Introduction

The decline in the living standards of the population, widening of the income gap, and weak prospects for the economic growth have become the major economic and social issues in the developed countries. This is reflected in the appearance of a significant number of publications, the authors of which describe the current economic problems and come to the conclusion that it is necessary to take some urgent decisive measures to reverse existing devastating trend. They all agreed on the importance of innovations as the major component
of economic growth. It should be noted that the development of innovations can be more intensive when the economy has a healthy manufacturing sector. The main purpose of innovations is to provide productivity growth, which can solve all the problems mentioned above. Those countries, which went through the relatively large decline in manufacturing production, have to deal with serious social tensions. Therefore, a lot of ideas are being discussed for the re-industrialization (UNIDO, 2017).

The idea of reindustrialization or new industrialization is quite appealing for scholars, who are specialized on post-Soviet economies. This research is particularly focused on Ukrainian economy, which is one of them. The decline in manufacturing production, which occurred as a result of the liberalization of the economy, was an extremely fast and destructive phenomenon. It looks like this decline in manufacturing production is the same feature, which developed economies have. However, the reasons for this phenomenon are quite different from those explaining this process in developed countries but some of the consequences are similar. The decline in manufacturing production was the reason for slowing down the economic growth and had a destructive effect on the standard of living.

2. Views on the transformation of manufacturing

Since the 1970s, the process of declining of manufacturing production has been discussed among scholars and politicians. At that time, the economic structure of developed countries started to change significantly. This process was called ‘deindustrialization’. Deindustrialization is generally defined as a process of declining in industrial production, particularly in manufacturing. This definition is not quite correct. For example, we cannot say that it is deindustrialization when the economy is in crisis or when it is social upheaval, although the manufacturing production is declining. Meanwhile, the decline at the end of the 20th century had different nature, which is why it generated a lot of explanations. First of all, at that time, it was not clear if this process was beneficial or damaging for the economy. That is why all the arguments can be divided into two groups respectively.

Those, who consider the declining in manufacturing production as a beneficial process, claim that it is just a natural stage of economic development (Rowthorn & Ramaswamy, 1997; Wolf, 2004). They argue that the labour productivity has become that high, so there is no need to have the same number of employees. That is why the growth of unemployment is not permanent. Unemployed people will eventually get jobs in services. This point of view is common among supporters of post-industrial society concept.

Those with a different point of view pointed out that the situation was not that promising and favourable. According to some estimates, just a minor number of unemployed managed to find their jobs in services. Bluestone (1983) noted in his article that in New England it was only 3% of those, who lost their jobs, who transferred to the high-tech sector, 16% — to retail trade and low-wage service jobs. To conclude, with the rising of labour productivity, there should be the rise in standards of living. Today the situation is quite opposite.

Some define deindustrialization as the decline in employment in the industrial sector. This definition is not correct as well. The decline in employment in the industry may occur due to the growth of labour productivity, as well as to the decline in industrial production.

Deindustrialization is a long-term process of declining in industrial production, which leads to a change in the structure of the economy. However, this process is difficult to determine, relying on statistics on the volume of production. For example, it can be that there is some decrease in employment in manufacturing, while the manufacturing production is growing in value terms. This can be explained by the implementation of new technologies, which is more sophisticated, so they are able to create more value.

3. The examination of causes and consequences of the transformation of manufacturing in developed countries

The decline in manufacturing production occurred mainly not due to the growth of labour productivity but to the appearing of alternative ways to maximize profits. These ways were created by the intensification of the processes of globalization and by the rising prospects to make more profit in the financial sector. Thus, deindustrialization in the US was induced by the fall in the rate of profit in manufacturing, which was caused by the intensification of international competition (Brenner, 2006).

By the 1970s, Western European countries had restored after the war period. At the same time, so-called newly industrialized countries (South Korea, Brazil, Taiwan) started to develop at a fast pace. Therefore, a lot of products came into the global market, which also appeared to be highly competitive compared to the American ones. Bluestone (1983, p. 36) pointed out that the profitability in the corporate sector in 1963 – 1966 was about 15.5%. By 1967–1970 the rate of profit on average had declined to 12.7%, and from 1975 to 1978 it fell to 9.7%. The auto industry had a significant decline in profitability by around 65%, the profit of industries producing electrical equipment fell by 49%, farm machinery – by 51%.

The significant development of information technology and the liberalization of trade led to the acceleration of
international capital mobility. In this regard, it provided the development of internationalization of production. The production transfer occurred both in physical aspect and through the outsourcing. Manufacturing production started to move to the low-labour-cost countries. It made it possible to produce goods at lower cost and therefore to earn greater profits.

This transferring of manufacturing production led to the rise in unemployment in developed countries. Since then real wages stagnation is a major economic and social issue. The decrease in real wages means a reduction of the level of people's well-being. At the same time, they managed to maintain their standards of living at a decent level applying huge amount of loans. This instrument proved to be unreliable because the loans must be paid off, so borrowers must have enough money to service them. As a result, inability to pay off the debts was crucial for triggering the global financial crisis.

Famous economist Krugman (1994) noted that the international trade is favourable for all participants. As a result of globalization, society gets cheaper goods. The problem is the transferring of capital can cause some serious social and economic problems for a particular country (a decrease in real wages, an increase in unemployment). The ability to move production abroad has weakened the bargaining power of trade unions, especially on the level of wages. This is illustrated on the graph as an increasing gap between labour productivity growth and average real wages growth (International Labour Office, 2016).

The decline in real wages occurred in 1973 to 1995, and then there was modest growth, which was interrupted by the financial crisis. Relatively slow growth in real wages is observed since 2012 (Economywatch, 2015). In the UK, a significant slowdown in the growth of real wages occurred in the 1980s-2000s (BBC, 2014).

The fall in the rate of real wages has become an urgent problem for developed countries. It has led to the growth of income inequality. Notably, that Germany did not face with this problem in that huge scale. German manufacturing production declined relatively less than it did in the USA. Partly it can be explained by some unique conditions. First of all, the fall of the Berlin Wall and the reunification of East and West Germany played its role. East Germans with low salaries started to migrate to the West Germany. Also, the increase in labour supply happened due to the inflow of migrants from Eastern Europe. As a result, the level of income was reduced, which made it quite profitable to produce in Germany. Developed manufacturing production was crucial for providing German economic growth.

Thus, globalization made markets extremely competitive. It created a strong incentive to find new ways of reducing production costs. The greatest value of competition is the ability to stimulate firms to innovate. In the end of the 20th century, globalization has created some extraordinary ways to be competitive. It provided the opportunity to reduce costs without implying innovations. The transfer of manufacturing enterprises was reasonable mainly for labour-intensive goods. While the capital-intensive production of goods, which is technically more sophisticated, was able to be competitive since it does not require a large number of workers. The development of this type of production is based on the availability of a highly skilled workforce and, in whole, on the favourable conditions to innovate. The theory of comparative advantage explains this change in manufacturing by the appearing of advantages to produce labour-intensive products in countries where labour is abundant.

The Factor Price Equalization Theorem, which was proved by Samuelson, may be useful for explaining some recent changes in the trade. The amount of demand for labour in developing countries has increased significantly, so its price started to increase. Today it is not that cheap as it was about 10 years ago. Samuelson

![Fig. 1. Trends in average real wages and labour productivity in developed economies, 1999–2015](image-url)
argues that international trade tends to equalize factor prices. We can see now that there is some movement of prices of labour toward equalization. This theory helps to predict the trend of manufacturing development.

The examination of a trend in the level of real wages makes it clear that the strategy of using cheap labour to get more profit will soon be non-effective. The rate of real wages growth in developing countries is far bigger than this rate in those developed countries, which manufacturing production was reduced. For example, over the decade the wages have increased by more than twice in China (International Labour Office, p. 12).

The process of factor price equalization is going to get faster due to the reduction of transportation costs, the elimination of trade barriers and to the availability of advanced technologies. Thus, there is a serious argument to predict the upgrading of the way of production. Developing countries will face a similar problem of the rising unemployment, which was typical for developed countries in the 1970s and 1980s.

Within these new conditions, it will be impossible to stay competitive just by using cheap labour. The only way to get on well is to use innovations. Competition is intensified by the informational technologies, which provide better access to information, give the opportunity to use new resources like crowdfunding and crowdsourcing, make it possible to develop innovations faster. At the same time, there are some forces, which are damaging for competition. First and foremost, this is due to the growth of monopolies. Some countries find it reasonable to apply protectionist policy measures. All of these forces restrict competition but do not eliminate the need for the development based on innovations.

Structural change of the economy may be represented by the change in employment structure. Some former manufacturing employees have found their jobs in the service sector or the financial sector. The service sector, which has become a priority in the economies of developed countries, was unable to provide sustainable development. It is worth to admit that at the moment there are no effective methods to regulate the financial sector. The service sector is not able to stimulate the development based on innovative manufacturing appears to be the most effective. Today it is clear that the importance of mass production is diminishing while the production of innovations is prioritizing.

4. The examination of causes and consequences of the transformation of Ukrainian manufacturing

The research of industrial transformation at the global level is useful for defining the effective ways of integration of Ukraine into the world market. It is important to implement the strategic plan for the transformation of Ukrainian industry. To get the best view of the state of Ukrainian industry, we should identify the factors that influenced its formation.

Deindustrialization in Ukraine was the result of liberalization of the economy. The economy was not ready to face with global competition, as the industrial base, which was formed in the USSR, was unsuitable for the development within market economy conditions. Since this peculiarity was not taken into account by reformers, the industry started to undergo some serious destruction. It caused a large decline in industrial production, an unprecedented fall in real wages, quick widening of income inequality and rising unemployment. All these problems are still topical for Ukraine.

Table 1

| The state of manufacturing, unemployment and the dynamics of average monthly real wages in Ukraine, 2012–2015 |
|--------------------------------------------------------|--------|--------|--------|--------|
| Indices                                                | 2012   | 2013   | 2014   | 2015   |
| Industrial production indices of manufacturing, percent of the previous year | 98,0   | 92,9   | 90,7   | 87,4   |
| Unemployment rate (ILO methodology), percent of economically active population of group aged 15–70 | 7,5    | 7,2    | 9,3    | 9,1    |
| Average monthly real wages of regular employees, percent of the previous year | 114,4  | 108,2  | 93,5   | 79,8   |

Source: State Statistics Service of Ukraine, 2016, p. 31, 35, 107
A noteworthy fact is that even with low wages there was no considerable growth in foreign direct investment. It can be explained by highly unfavourable investment climate. The capital outflow intensified the destruction of Ukrainian industry. It is just extractive industries managed to survive global competition. Manufacturing was seriously ruined. Ukraine has a relatively low share of production of innovative products. The share of industrial enterprises that implemented innovations in 2015 was 15.2% (State Statistics Service of Ukraine, 2016). At present, Ukrainian investment climate is worsening by the unstable social situation and the complexity of the reform process.

There is quite good education system in Ukraine though. It has possibilities to form highly skilled workforce. In 2015, only 6.5% of Ukrainians aged over 15 had primary education or lower; 48.5% had a secondary education; and 45% had completed or were engaged in tertiary education. Gross enrolment rates in secondary education are almost universal, at 99.2% (UNESCO data for 2014), which is above the OECD average (European Training Foundation, 2017). The problem is that the current structure of Ukrainian economy does not require that many highly skilled workers. This leads to the migration of highly educated professionals and reduces prospects for the development of innovation. Taking into account that intellectual capacity is the main factor of competitiveness today, the present situation looks quite disturbing.

The competitiveness theory, particularly the theory of comparative advantage, entitle us to consider Ukraine as a country with huge prospects of becoming rich and prosperous, as Ukraine is very rich in natural resources. But the fact that Ukrainian economy was formed while it was a part of the USSR made it weak and unstable within market economy conditions. False economic policy played a major role in forming conditions of inefficient use of Ukrainian resources. As a result, Ukraine is stuck in a group of less developed countries with the relatively low quality of life (Zveryakov, 2016).

The privatization process, which happened at the beginning of the 1990s, created the highly monopolized structure of Ukrainian economy. The assets have been distributed among a limited circle of people – the oligarchs. It was crucial for economic growth perspectives. The ability to obtain high monopoly profits does not motivate manufacturers to upgrade their production and to develop innovations. Monopolies restrict the development of competition.

Porter (1990) argues that the competitive environment in the domestic market is highly important for creating the country’s competitive advantages. Competition on the national level becomes the mechanism that stimulates firms to be competitive primarily in the domestic market, and then in the global market. The stronger competition in the domestic market, the more companies are getting ready to compete in the global market. Moreover, Ukraine as a post-Soviet country has weak demand conditions. In the Soviet period, it was impossible to pay enough attention to the quality of goods because there was a narrow range of goods. After the liberalization of trade Ukrainian consumers were more demanding to the price of product rather to its quality. It can be explained by the low level of income. Today the average level of income is still low, which impose strong restrictions on the development of competition. The lack of demanding buyers is a serious weakness of Ukrainian demand.

Global competition has had various effects on the economic structure in developed and post-Soviet countries. In developed countries, manufacturing production, which is technologically sophisticated and based on innovations, was not ruined, while in Ukraine almost all of the products appeared to be uncompetitive. Therefore, Ukraine is facing a more challenging task – to create favourable conditions for the innovation development. Today the process of integration of Ukraine into the global market is deepening, so it is crucial for Ukrainian producers to upgrade their productive capacities to comply with the world standards.

Globalization has led to the development of more universal requirements from manufacturing. In the post-war period, innovations in manufacturing were represented mainly by resource-saving technologies. Today there is a new requirement – to develop environmentally friendly production. Ukrainian manufacturers should take into account all the requirements and production standards. Thus, Ukrainian manufacturing should be reconstructed according to the modern world trends. It will provide the ability to stay competitive and to stop the long-drawn process of deindustrialization.

To examine current perspectives of positive transformations in manufacturing, it is useful to look at the share of R&D spending. This share shows relatively poor opportunities for the development of innovations in Ukraine.

Table 2

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<tr>
<td>Ukraine</td>
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<td>0.83</td>
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<td>The UK</td>
<td>1.639</td>
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<td>1.677</td>
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<td>Poland</td>
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<tr>
<td>The USA</td>
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<td>2.506</td>
<td>2.740</td>
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<td>China</td>
<td>0.893</td>
<td>1.308</td>
<td>1.710</td>
<td>2.067</td>
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<td>Germany</td>
<td>2.392</td>
<td>2.423</td>
<td>2.714</td>
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<td>Russia</td>
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<td>1.060</td>
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<tr>
<td>Japan</td>
<td>3.002</td>
<td>3.309</td>
<td>3.252</td>
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<tr>
<td>Republic of Korea</td>
<td>2.180</td>
<td>2.626</td>
<td>3.466</td>
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<td>Israel</td>
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<td>Finland</td>
<td>3.246</td>
<td>3.330</td>
<td>3.726</td>
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To conclude, it is clear that Ukraine has weak competitive advantages. In the Global Competitiveness Report 2016–2017, Ukraine is on the 85th place. Moreover, its positions got worse compared to the last year (79th place) (World Economic Forum, 2016).

It is important to create conditions for the economic growth in Ukraine. It should be based on the developed manufacturing. It will enable Ukraine to use the greatest advantage it has – a highly skilled workforce. In order to stick to the emerging trend of development and to be able to generate innovations, Ukrainian manufacturers should primarily be supported by the government.

At the present stage of social and economic development, economic growth is no longer a spontaneous process, which is generated solely by the market. Modern economic development is directed towards the environmental friendliness and social justice. Creating a strategic plan of Ukrainian development should take into account these features. This plan should be supported by the government, business, public organizations, and international institutions.

Those countries, which have deindustrialization caused by the transformation of the planned economy to a market economy, are facing more difficult challenge than developed countries. It is connected to the modification of existing economic model. This modification requires the launching of a long-term strategic programme. It appears to be quite difficult to make it in Ukraine due to the economic and political instability.

5. Conclusions

The global competition had a devastating impact on the manufacturing of those countries, which transformed their planned economies into the market economies. This was reflected in the growth of unemployment, the decline in real wages and in the widening of the income gap. Therefore, in order to prevent further destructive tendencies, it is necessary to launch a process of new industrialization.

The examination of the transformation of manufacturing production among different countries gives the idea that the development of manufacturing in a particular country can be provided only if there is a strong possibility to get a relatively high rate of profit.

Since the trend in the growth of wages in developing countries is getting stronger, it is clear that the maximization of profits is becoming possible only with the implementation of more productive technologies. It should be taken into account that the development of innovative technologies can get substantial development in a country that has demand for these technologies. Manufacturing is able to make a strong demand for innovative technologies. It is noteworthy that invention requires problem determination and assessing existing possibilities of the production process. That is why the development of new technologies for manufacturing is hard to provide if there is weak manufacturing production in a country.

The formation of a new manufacturing sector, which is capable to stay competitive in the long run period, is becoming an issue for all countries. It is important to understand that in order to improve the state of manufacturing each country should create its specific plan based on its unique conditions. This approach is able to enhance economic growth prospects and increase the standards of living.

References:
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ВЛИЯНИЕ ГЛОБАЛЬНОЙ КОНКУРЕНЦИИ НА СОСТОЯНИЕ ПРОМЫШЛЕННОСТИ В УКРАИНЕ И В РАЗВИТЫХ СТРАНАХ

Аннотация. В конце 20-го века произошли значительные изменения в экономической структуре разных стран. Это было связано с ростом глобальной конкуренции. Одним из последствий этого процесса стало сокращение промышленного производства, как в развитых странах, так и в постсоветских странах. Целью данной статьи является определение значения и последствий спада промышленного производства в развитых странах и в постсоветских странах на примере Украины. Методология. Данное исследование базируется на некоторых общих теоретических подходах, таких как анализ и синтез, индукция и дедукция и др. Кроме того, статистический анализ был использован для изучения некоторых экономических тенденций. Структурный анализ был полезен для анализа сдвигов в структуре экономики. Корреляция между различными фактическими показателями, которая крайне важна для понимания трансформации производства, была определена путем применения системного подхода. Целью статьи является изучение глобальной конкуренции на состояние промышленного производства и определение тенденции его развития. Результаты этого исследования показали, что снижение нормы прибыли вызывает трансформацию экономической структуры. Глобальная конкуренция привела к тому, что некоторые товары в развитых странах стало менее выгодно производить из-за относительно высоких издержек. Возможность переноса трудоемкого производства в развивающиеся страны изменила структуру экономики в развитых странах. Это стало причиной резкого сокращения промышленного производства, что повлекло за собой появление ряда экономических и социальных проблем. Постсоветские страны также имеют множество экономических и социальных проблем. Либерализация торговли привела к возникновению на рынках этих стран глобальной конкуренции. Эта конкуренция привела к низкую конкурентоспособность продукции. Так, в Украине произошло значительное сокращение промышленного производства. Это исследование показывает, что преобразование промышленности во всех странах еще не завершено. Прежде всего, это связано с ростом заработной платы в развивающихся странах. Это снижает прибыльность трудоемкого производства. Теорема выравнивания цен на факторы производства показывает, что исчезают дальнейшие перспективы оставаться конкурентоспособным, прибегая к использованию дешевой рабочей силы. Именно поэтому важно создать благоприятные условия для развития инноваций. По своей природе промышленность более диверсифицирована, чем другие секторы экономики, что увеличивает возможность создания инноваций. Сильная промышленная база также важна для обеспечения занятости, повышения уровня жизни и обеспечения устойчивого экономического роста. Практическое значение. Развитые страны могут просто модифицировать свою экономическую политику, поскольку у них уже есть достаточно мощная инновационная основа. Эта модификация должна учитывать современные тенденции, которые рассматриваются в данной статье. Принимая во внимание усиление интеграции Украины в мировую экономику, ей следует существенно улучшить свои конкурентные позиции. Именно поэтому важно запустить долгосрочную стратегическую программу, которая будет учитывать конкретные украинские условия. Ценность данного исследования заключается в объяснении различного характера одного и того же процесса в развитых странах и в Украине. Это помогает определить некоторые перспективы экономического развития. Результаты исследования могут быть использованы для разработки экономических программ.