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PAPER

Impact of Deindustrialization on the Structure of the Economy and Labour Market: the Case of Ukraine

Oleksandr I. Rogach* • Oleksandr V. Pidchosa**

Abstract Article discusses the process of deindustrialization of Ukrainian economy since 1991 and its impact on the economy structure and labour market. The authors propose periodization of the deindustrialization process which includes 4 main periods: 1991-2000 – Dramatic downsizing; 2001-2008 – Rapid growth; 2009-2013 – Cyclical period of economic recovery after the shock of the global financial crisis; and 2014-2019 – Restoration of stability. Their factors, features and influence are investigated in this study. The paper also assesses the link between deindustrialization and structural changes of the labour market during these periods of development. As a result of the study, it is concluded that the deindustrialization in periods of long-lasting transformation crisis in Ukraine has led to the waste of skillful workforce and rise of informal employment, whereas financialization has not resulted in increase of investments much-needed for modernization of the industrial sector and creation of highly productive jobs. The structure of employment has changed in favour of services.

Keywords: deindustrialization, financialization, labour market, structure of the economy, Ukraine.

JEL classification: O1, O2, O5, P2, P4, J6.

1. Introduction

From 1991 to 2019, Ukraine underwent a difficult path of transformation, which included establishment of a new state, transition from a planned command economy to a market one, adaptation of a transition economy to the shock of the global economic crisis of 2008-2009, and socioeconomic consequences of Russia's annexation of Crimea in 2014 and the conflict in the East part of Ukraine. The capacity of the

Oleksandr I. Rogach* (✉), Oleksandr V. Pidchosa**
* Ph.D. (Economics), Doctor of Economics, Professor, Chair of the Department of International Finance, Institute of International Relations, Taras Shevchenko National University of Kyiv, Ukraine.
ORCID ID: https://orcid.org/0000-0002-7246-3245
E-mail: mf.roi@clouds.iir.edu.ua
** Ph.D. (Economics), Associate Professor, Department of International Finance, Institute of International Relations, Taras Shevchenko National University of Kyiv, Ukraine.
ORCID ID: https://orcid.org/0000-0002-1279-0287.
E-mail: mf.pov@clouds.iir.edu.ua

economy of Ukraine has been changing drastically over the last thirty years as the centralized mechanism was replaced by market institutions.

With some conditionality, we can distinguish the following periods of economic dynamics of the country which differed in their structural changes in the sectoral aspect of GDP and value added, and employment:

- 1991-2000 – Dramatic downsizing;
- 2001-2008 – Period of rapid growth;
- 2009-2013 – Cyclical period of economic recovery after the shock of the global financial crisis;
- 2014-2019 – The period of restoration of stability after the shock of the loss of Crimea and the military conflict in the East of the country.

These four stages of Ukraine's development simultaneously became periods of the country's deindustrialization. Each of them (due to various reasons) brought structural changes indicating the reducing role of the industrial sector in the country's economy and migration of labour from industry and agriculture to services, in particular to the financial sector.

But this process had different intensity and scale in different periods. Therefore, we are faced with the question of assessing not only the general pace and scale of deindustrialization and financialization, but also the features and specific consequences of these processes at certain intervals. The next task is to assess the link between deindustrialization and structural changes of the labour market during these periods of development.

2. Literature Review

The issue of the scale of deindustrialization processes in Ukraine has been widely studied in literature. According to Rogach & Samonis (1993; 1996) in the early years of independence, Ukraine was a powerful industrial economy and one of the most developed regions of the Soviet Union. In the opinion of Siedenberg & Hoffmann (1999), the Ukrainian economy was overindustrialized with an extremely large share constituted by foregoing military-industrial and inefficient coal extraction sectors, and it was only a region in the holistic centralized economy of the USSR despite existence in form of the Soviet republic. According to Cornelius (1997) in 1994, the Ukrainian government launched a stabilization programme supported by international financial institutions leading to relative macroeconomic stability achieved in 1996.

As argued by Glyn (1998), non-agricultural employment is influenced by capital accumulation, but a low level of gross capital formation accelerates deindustrialization since capital stock affects industrial employment more significantly and less influences employment in the service sector. Rowthorn (1995) added that low investment in the industrial sector was limiting possibilities for increased profits that could lead to job creation. Kryuchkova (2016) states that global crises had a great influence on the Ukrainian economy, as well as deindustrialization and financialization of the country through the gross fixed capital formation level. IMF (1997) Ukraine Report provides a lot of information on the development of Ukraine. In accordance with the Report, in the 1990s state enterprises and privatized enterprises had to provide support of the social sphere (housing, kindergartens, schools, hospitals, and others) at the expense of corporate costs. Rogach & Shnirkov (1999a) also pointed that lack of resources for investment in non-financial sector resulted in progressive depreciation of fixed assets; technological development of the Ukrainian industry was impeded and obsolete technologies became an obstacle for competitiveness of Ukrainian producers on both internal and external markets. As Repko (2019) emphasizes the significant role of the credit boom in 2000-2007 when bank loans served as a crucial source of gross capital formation and subsequent economic growth, but explosive growth in borrowing led to a bubble that burst in 2008-2009.

According to Aslund (2006), Ukraine's market transformation encompassed Washington Consensus dimensions of liberalization and other reforms. But, as Sutela (2012) noted, political instability and turmoil transition, as well as institutional disorganization slowed down economic reforms in the early period of transition, and the country experienced huge production decline and deindustrialization.

3. Hypothesis, Methodology and Data

Our working hypotheses are as follows:

Hypothesis 1 Throughout the period (1991-2019), Ukraine underwent very significant deindustrialization of the economy, as well as growing financialization of the country.

Hypothesis 2 At different stages of development, the deindustrialization was caused by different factors or combinations of factors. The financialization of the country was an important but not the only determinant of deindustrialization. At different stages of economic development, the role of financialization as a driver of deindustrialization was different.

Hypothesis 3 The social consequences of deindustrialization and financialization were noticeable in all periods of economic development, but the direction of these effects was opposite.

Hypothesis 4 The negative effects of deindustrialization in employment were particularly substantial in 1991-2000, when the development of services and financialization of the economy failed to absorb most of the workforce released from industry.

We used statistical data for gross domestic product and gross value added from the World Development Indicators Database by World Bank (1991-2019) as well from State Statistics Service of Ukraine Databases (2020). Data for the average number of full-time employees were collected from the State Statistics Service of Ukraine but just covered 1995-2019. For the period 1991-1994 data were based on the authors' estimations. Due to the fact that national statistical data of the period of transformation of the Ukrainian economy from a planned system to a market one (1990s) are fragmentary, and in some years are absent, we also used the estimates and statistics of IMF (1997) *Ukraine – Recent Economic Developments*, *IMF Staff Country Report*, as well as National Bank of Ukraine (NBU) analytical materials:

Banking Sector Review and NBU Database for this period. It should also be taken into account that no reliable data of informal sector performance are available; estimates of the size of informal sector are ranging from 30% to 60% of the formal sector.

4. Results

4.1 1991-2000: Deindustrialization due to the Market Transformation of Ukraine (a period of significant contraction of the industrial economy due to market transformation and the collapse of the USSR)

In the early 1990s, the newly independent Ukraine was a powerful industrial economy. According to the Industrial Development Index, it was one of the most developed regions of the Soviet Union. The basic branches of the mining industry, metallurgy, metal-intensive engineering, automobile, shipbuilding, tractor, electric technology, radio electronics and radio engineering, and aerospace industries were concentrated here. A special place was occupied by the military-industrial complex – Ukraine was one of the main centres of production of modern weapons and components for the army.

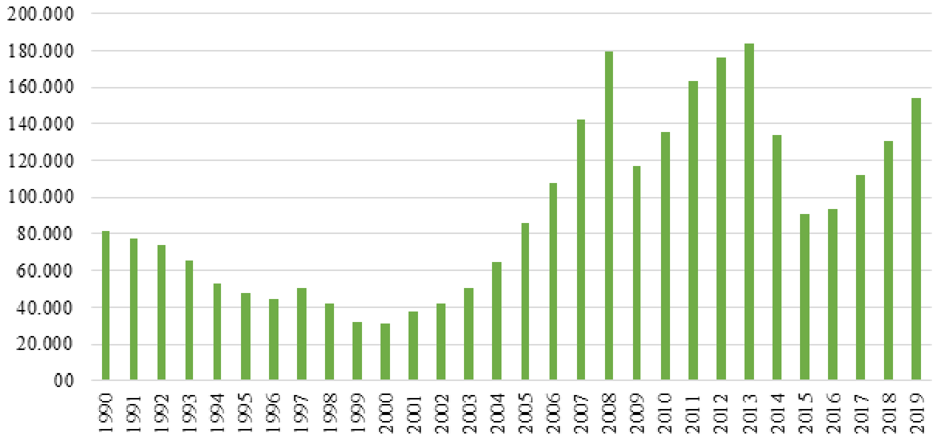
Thus, 1991 could be considered the starting period of deindustrialization of Ukraine. Since then, for various reasons, the country has undergone fundamental structural changes that have radically changed the role of the industrial sector and its relationship with the service sector.

Among the factors leading to reduction in the share of the industry we should note:

1. Reduction of energy-intensive production due to a sharp increase in the cost of energy (oil, gas, and electricity);
2. The rupture of traditional cooperation within the Soviet Union and the refusal of enterprises of other independent CIS countries to buy products of Ukrainian industrial enterprises;
3. Inefficiency (and sometimes unprofitability) of some industrial enterprises that existed at the expense of state subsidies;
4. Bankruptcy of some enterprises due to competition;
5. Privatization of state-owned industrial enterprises and inefficient management of new owners;
6. Destruction of the military-industrial complex of Ukraine and conversion of these enterprises for production of civilian products;
7. Overall reduction in demand for industrial products due to the prolonged economic transformation crisis and falling consumer demand.

The rapid absolute reduction in industrial production in Ukraine in 1991-1996 and dismissal of a large number of workers in these enterprises became the impact of all these factors. After the collapse of the Soviet Union as a result of market transformation, Ukraine's GDP fell by about 60% from 1990 to 2000 (Figure 1).

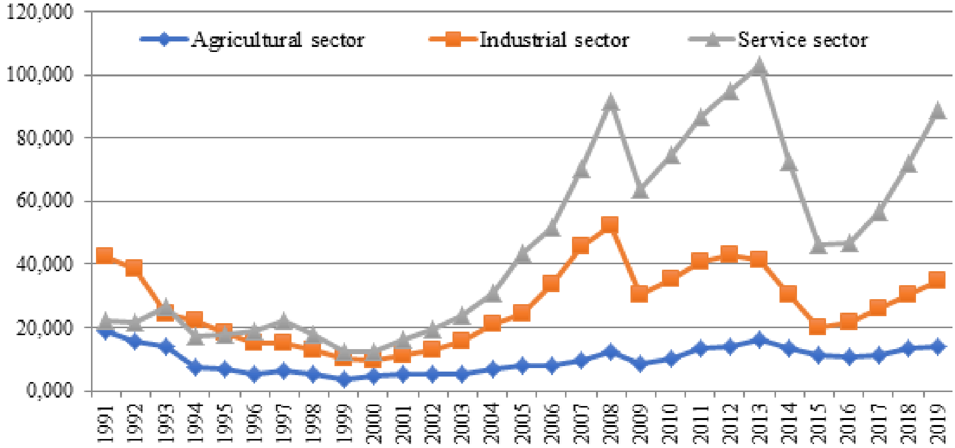
Figure 1. Gross Domestic Product at Current Market Prices, USD mln



*No reliable data of informal sector performance are available; estimates of the size of informal sector are ranging from 30% to 60% of the formal sector
Note: Data for gross domestic product from the World Bank Database (1990-2019)

In 1991-1996, the Ukrainian economy was going through the crisis caused by dismantled command economy and market-oriented reforms including privatization (Elborgh-Woytek & Lewis, 2002) and price liberalization that provoked structural changes. In 1991 the largest share of gross value added (GVA) was generated by industrial sector (USD 42.3 bn), but by 1996 GVA in industrial sector declined by 64.4% and service industry generated more GVA in 1996. Decline in service industry GVA in 1996 in comparison to 1991 was only 15.5% (from USD 22.4 bn to USD 18.9 bn) (Figure 2).

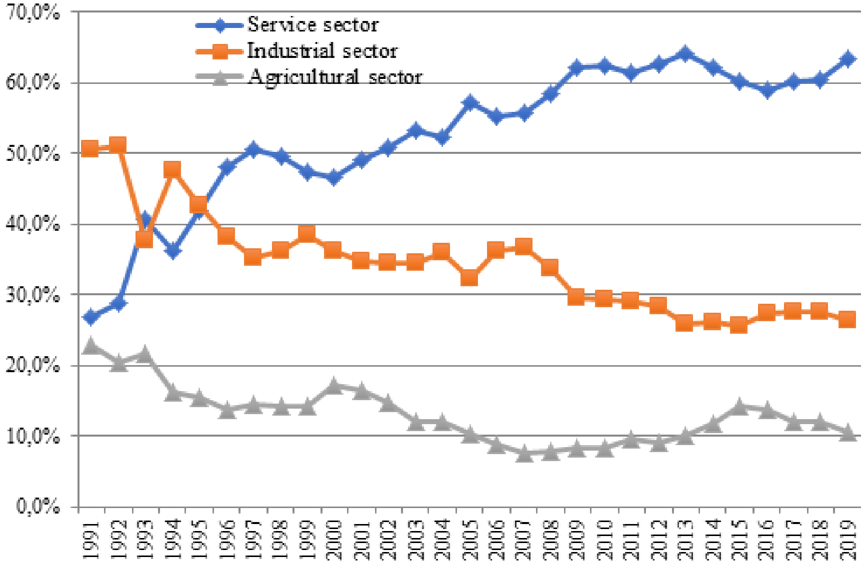
Figure 2. Gross Value Added (Goods and Services Output) by Type of Economic Activity at Current USD bn, by Sector



Note: Data for gross value added from the World Development Indicators Database by World Bank (1991-2019)

The share of sectors in the economy changed in 1991-2000 as the industrial and agricultural sector GVA dropped faster than the service sector GVA. In 1991, the industrial sector accounted for 50.5% of total GVA, the service sector – 26.7%, and the agriculture – 22.8%. By 2000, the share of the service sector grew by 19.9 percentage points (to 46.6%), the share of industrial sector declined by 14.2 (to 36.3%) and the share of agricultural sector dropped by 5.7 percentage points (to 17.1%) (Figure 3).

Figure 3. Gross Value Added (Goods and Services Output) by Type of Economic Activity at Current LCU, Share from Total by Sector



Note: Data for gross value added from the World Development Indicators Database by World Bank (1991-2019)

On the other hand, the transformation period was characterized by expansion of services, creation of thousands of small and medium enterprises in trade, consumer services, transportation, tourism, legal, audit services and more. The financial sphere played a special role in this process of deindustrialization. The breakdown of the state monopoly on banking, insurance, auditing and other services led to the emergence of numerous private institutions in this area.

Thus, the deindustrialization in Ukraine in 1991-2000 took place under the influence of two groups of factors.

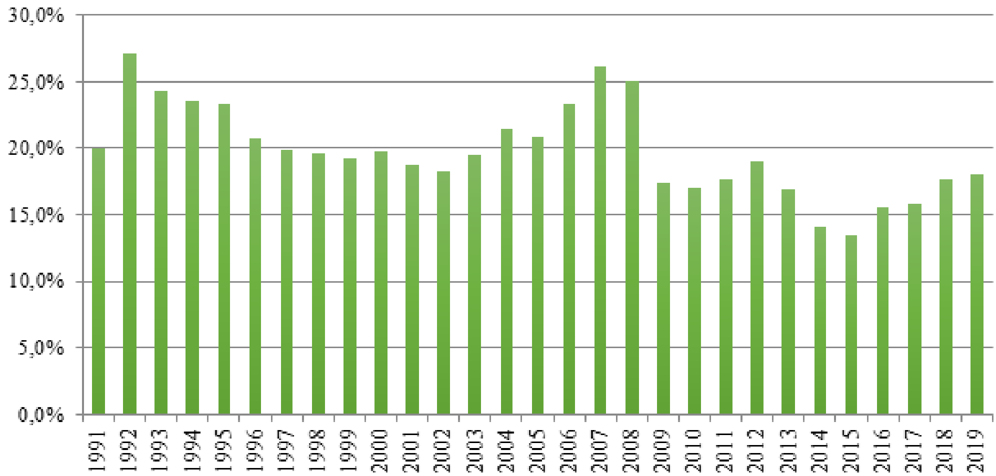
The *first group* included many factors of market transformation, breaking the old command structure of the economy, the impact of new energy prices, destruction of old supply networks due to their inefficiency or the collapse of the Soviet Union.

The *second group* included factors of growing new sectors of the service economy, public services, and the creation of small and medium enterprises providing services to the population. Also it covered the rapid development of the financial sector of Ukraine, as evidenced by the emergence of commercial private banks and the growth of their branch networks, insurance companies, pawnshops, trust, financial and investment companies.

The labour market has undergone structural changes caused by the deindustrialization. In 1991-2000, this process was particularly intensive. Although the total number of employees in the country decreased during this period, this was mainly due to the layoff of workers in industry and agriculture. At the same time, the share of those employed in the service sector was growing steadily.

Despite the economic transformation crisis that lasted for almost 10 years, workers laid off from industrial enterprises (due to their closure or reduction of production) often found a new job in the service sector. If in the middle of this period in 1995, the industry and agriculture were the place of work of the majority of the working population (6mln and 4mln people out of the total working population of 18mln people), but by the end of this period the situation changed radically.

Figure 4. Gross Capital Formation, % of GDP



Note: Data for gross capital formation from the World Development Indicators by World Bank (1991-2019)

During the second half of this period (1995-2000) due to deindustrialization, these sectors ceased to be the main place of employment. On the contrary, the share of the service sector increased from 43% in 1995 to 50% in early 2001.

Thus, we can assume that in late 2000-early 2001 Ukraine entered a new stage of structural change – for the first time in its long history (which included decades of economic development in the Soviet Union), the industrial and agricultural sectors lost ground in the number of workers to the service sector. This milestone coincided with the end of the long period of economic transformation crisis, when Ukraine actually lost half of its GDP. The ‘forced' transformational deindustrialization had acute negative socio-economic consequences. It was accompanied by a sharp rise in the shadow economy, unemployment, falling incomes, a widening gap between rich and poor, and feelings of dissatisfaction and pessimism among the population. It also caused other negative social consequences, such as criminalization of the society, rapid growth of corruption and the influence of oligarchs (merging of criminal, industrial and political power) on political life, and intensification of political instability and protests in Ukraine.

4.2 2001-2008: Deindustrialization due to the Rapid Growth of the Service Economy (Period of high economic growth)

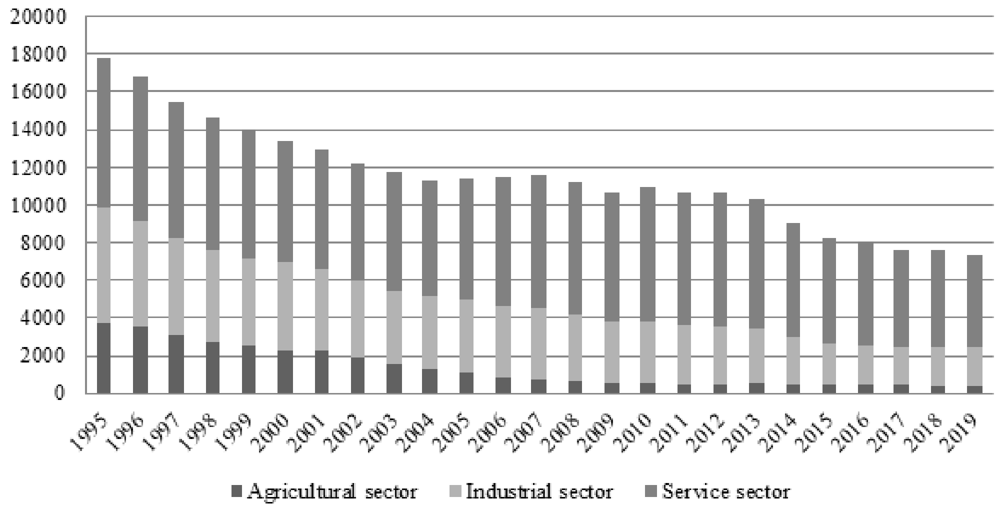
From 2001 to the onset of the global financial crisis, Ukraine showed high rates of economic growth due to:

1. The positive effect of the structural reforms carried out in the previous years;
2. Favourable conditions for foreign trade;
3. Financial stabilization and introduction of the national currency.

All three sectors of the economy (industry, agriculture and services) showed steady growth rates, which was radically different from the negative dynamics of the previous period. As shown in Figure 3, the highest growth rates were shown by the services sector, which led to further structural changes in GDP and employment. At the beginning of this period, the service economy was already generating 49% of Ukraine's gross value added. At the same time, the industry accounted for only 35, and agriculture – 16%.

The yearly average number of employees has been constantly decreasing for the last 25 years (Figure 5). Since 1995 this number has been halved. The sectoral distribution is shown in the next chart.

Figure 5. The Average Number of Employees (Thousand) by Economic Sector

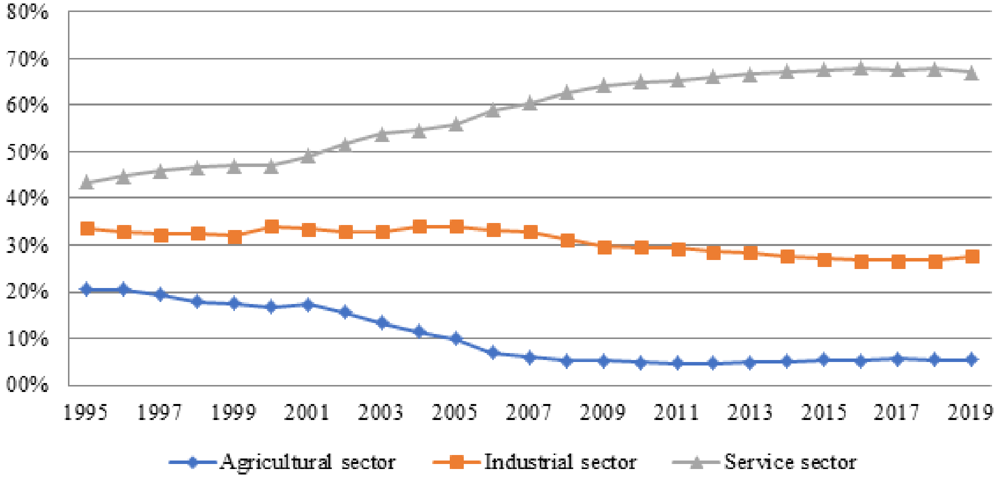


Note: Data for the average number of full-time employees from the State Statistics Service of Ukraine (1995-2019)

The share of employees in different sectors of economy has been changing since 1995

(Figure 6): the share of employees in the sector of services has increased from 43% in 1995 to 67% in 2019; the share of employees in the industrial and agricultural sectors has fallen by 6% and 15% accordingly during the same period of time.

Figure 6. The Share of Employees by Economic Sectors



Note: Data for the average number of full-time employees from the State Statistics Service of Ukraine (1995-2019)

Several features of deindustrialization of Ukraine at this stage should be noted.

1. In contrast to the previous period, this process took place not due to the factors of the first group (transformational breakdown of inefficient planned economy), but due to faster growth of the services sector. The services sector was at that time one of the main drivers of the country's economic development. Among the branches of the service sector, high dynamics was demonstrated by professional, scientific and technical activities, administrative and support service activities, accommodation and food service activities.
2. The increase in the share of the services sector was accompanied by a very significant reduction in the role of agriculture (the share of the agricultural sector decreased almost twice during this time, from 18% in 2001 to 9% in 2008 (Figure 3).
3. The very favourable situation on global markets led to high growth rates of metallurgy, chemical and agro-industrial products of Ukraine, thus stabilizing the share of this sector in GDP (28-30% in 2002-2008).
4. Deindustrialization and growth of the services sector reflected the rapid financialization of Ukraine during this period of its development.

The latter conclusion requires further analysis and is important for understanding the social consequences of Ukraine's deindustrialization. Although the growth of the financial sector has been observed since the second half of the 1990s, this process was particularly noticeable in 2001-2008. It was at this time that the country's banking system was finally formed, and the number of commercial banks reached its maximum value in the thirty years of Ukraine's existence. In the early 2000s, the foundations of the country's stock market were formed, many institutions of financial intermediaries, registrars and custodians of securities appeared, and the investment fund industry began to develop.

Unlike the first stage of 'forced' deindustrialization, this process in 2001-2008 did not have such acute negative social consequences.

The reduction in the number of employees in the country slowed sharply. Their total number from 2002 to 2008 stabilized at 11-11.5 million people and even began to increase slightly in 2005-2007 (Figure 5). Such positive dynamics of the labour market was achieved due to the development of the services sector and the rapid growth of the financial sector in particular.

At the same time, deindustrialization continued to drive out 'redundant' workers from both industry and agriculture. During this period of economic development of Ukraine, the services sector became the main direction of intra-industry labour migration, as well as one of the most attractive areas of work for young and middle-aged people. If at the beginning of this second period of deindustrialization, the services sector accumulated 50% of employment, at the end of active financialization and development of other service industries this figure was already almost 64%.

As already mentioned, particularly significant structural changes in the labour market during this period also occurred due to the reduction of employment in agriculture. The share of this industry decreased almost 3 times from 18% in 2001 to 6% in 2008. Although the industrial sector was the workplace of 32-33% of all employees during the period, in 2007-2008, it also began to reduce labour demand due to deteriorating conditions for Ukrainian export industrial goods on world markets (Figure 6).

Thus, financialization was one of the main reasons for the deindustrialization of Ukraine's economy at the 2nd stage of this process. The decrease in the share of the industrial sector and agriculture of Ukraine, in contrast to the 'forced' deindustrialization of the 1990s, was solely due to the faster growth of new service sectors, including banking insurance, auditing, financial consulting, investment and others.

Deindustrialization due to the development of the service economy had opposite social consequences compared to the first period of Ukraine's development. Nominal and real wages in the period 2001-2008 grew at the highest rate in the history of Ukraine. Unemployment dropped significantly, housing construction and the purchase of durable goods (cars, refrigerators, furniture, etc.) increased.

However, this did not lead to any automatic solution to other acute social problems, such as corruption, smuggling, shady business schemes, informal employment, and payment of 'informal' salaries (Kupets, 2005; Lehmann & Pignatti, 2008). The financial sector also came under the major control of oligarchs who played an increasing role in the country's political life.

4.3 2009-2013: Deindustrialization due to External Shocks (Cyclical period of economic recovery after the shock of the global financial crisis)

The global financial crisis 2008-2009 interrupted the trends of the previous period of deindustrialization of Ukraine. It caused new structural changes and trends that differed from previous years.

The beginning of this period was characterized by the following events:

1. A very significant decline of GDP caused by contraction of both industry and financial sector;
2. A long period of economic recovery from the crisis and stabilization of the economy (almost 4 years);
3. A period of significant financial instability, which included devaluation of the national currency, the deep mortgage and the consumer credit crisis, and sharply exacerbated problems and risks in the banking sector (Repko, 2019).

External shocks caused the negative social consequences of deindustrialization. The number of employees began to decline again (after some stabilization at the previous stage in 2001-2008). If at the beginning of this period it averaged 11.5 million people, then in 2013 it was a little more than 10 million (Kryuchkova, 2012).

The labour migration of the population became widespread (Standing & Zsoldos, 2001; Osipian, 2009). It is estimated that since 2009, millions of workers have started leaving Ukraine (to work in Russia, Poland, Italy, Portugal, Spain and other countries) en masse. Although the decline in employment was observed in all sectors, it was the smallest in the service economy and agriculture. The most significant reduction in the number of jobs occurred in industry. The share of this sector in total employment decreased again – from 31 to 29%. Although the service sector of the economy failed to neutralize external shocks (and even intensified them in finance), the services sector continued to be the largest place of employment and further increased its share of the labour market from 63% to 67% (Figures 5 and 6).

Although the process of deindustrialization in Ukraine did not stop at this stage, its pace was not as high as before. The share of industry in total value added continued to decline gradually from 25% at the beginning of this period to 22% in 2013. A similar indicator for agriculture after a long decline stabilized due to high demand in the world food markets. Ukrainian agrarian companies began a successful expansion into world markets at this time, although their export positions represented only lower of chains of value creation in agribusiness.

4.4 Period of restoration of stability after the shock of the loss of Crimea and the military conflict in the east of the country

After the acute political crisis of 2014, Ukraine entered a new period of instability, the factors of which were Russia's annexation of Crimea and the loss of control over a large part of the territory in the east of the country. If Crimea has never been of great industrial importance, the loss of control over the industrial areas of Donetsk and Luhansk regions has become a factor in the further deindustrialization of the country and the reduction of GDP. Ukraine is estimated to have lost about 20% of GDP as a result of the events of 2014. Supply chains in the metallurgical, coal, metalworking and chemical industries were disrupted.

Thus, at this stage of development, deindustrialization was the result of military-political events, rather than the conscious national policy or structural changes due to uneven sector growth rates. Under the threat of loss of sovereignty and political independence, and the financial and economic collapse, the Government focused its policy on other priorities and goals of the strategic plan at this time.

Social adaptation to deindustrialization and the risks of shrinking the financial sector were not the focus of the Government. For example, a much more pressing issue was the problem of helping hundreds of thousands of migrants from the eastern regions affected by military conflict, or rescuing the banking sector from collapse and compensating for the lost savings of thousands of bank depositors.

Figure 1 shows the short-term shock of the economy from the political crisis, the annexation of Crimea and Ukraine's loss of control over part of the territories in the east. If in 2013 the GDP was USD 180bn, it fell to almost USD 90bn in 2015. Since 2016, there has been a resumption of growth dynamics, which indicates that the country's economy as a whole has already adapted to the new conditions.

After a substantial reduction in the labour market in 2014-2015, due to the loss of significant potential of industry and business in the Crimea and in uncontrolled areas of Luhansk and Donetsk regions, this trend has continued in subsequent years, albeit less intensely.

The average number of employees in Ukraine decreased from over 10 million in 2013 to 7.5 million in 2019 (Figure 5). The decline in demand for workforce covered all sectors of the economy – industry and agriculture, as well as services. At the same time, in contrast to previous periods in the service sector, in particular the financial sector, the number of employees has decreased sizably. As a result, the share of the service economy in the overall structure of employment has stopped growing and even began to decline. This process became especially noticeable in 2018-2019 when the service sector significantly reduced the number of employees due to the crisis in the banking sector and the bankruptcy of dozens of Ukrainian banks.

This trend is confirmed by Figure 2 – the gross value added of the service sector in 2019 was at the level of 2011 and well below the level of this indicator at the end of the previous period of deindustrialization. At the same time, the reindustrialization of Ukraine's economy did not take place. After a certain decline in the share of the services sector in the total value added of the country (2015-2016), this figure again reached 69%, it returned to its values, which were recorded at the end of the previous period of deindustrialization (2013 – 69%).

The data in Figure 4 *Gross Capital Formation* (GCF) also show that Ukraine's economy adapted to the shock of losing territories and some factors of production (labour, industrial assets, and land) at the end of this fourth period of deindustrialization. In 2019, the share of GCF in the country's gross domestic product was 18%, which was one of the highest figures for the last ten years.

The continued reduction in the scale of financialization was a feature of the fourth period of deindustrialization. This trend was noticeable in the previous period of deindustrialization under the influence of the global financial crisis, but now it has become larger. This process of definancialization included not only the liquidation of almost half of the country's banking institutions and the dismissal of their employees. In 2014 there were 178 banks, and in 2017, their number decreased to 99. Even those banks that received the support of the National Bank of Ukraine and avoided bankruptcy or insolvency problems in 2014-2019 significantly reduced their branch network and number of employees.

Due to the reduction in the number of banking and insurance institutions, the gross value added of this sector has fallen sharply compared to the previous period of deindustrialization. For four years (2015-2018), it was even smaller than in 2004, when the country's banking sector began to grow rapidly and the financialization gained momentum. If we compare the value added of the financial sector at the end of each of the 4 periods of deindustrialization, we can see that in 2019 the GVA amounted to only USD 4.3bn, which was 3 times as small as at the end of the second period of deindustrialization and financialization (2008) and 2 times as small as at the end of the third period of deindustrialization (2013) (NBU, 2020; NCSRFSM, 2020; UAIB 2020).

The reduction of the financial sector during this period had impactful negative social consequences. Tens of thousands of employees of Ukrainian banks have lost their jobs; real incomes of workers in this sector have heavily dropped. A significant increase in demand due to definancialization has led to a decrease in the number of students in the departments of finance and a reduction in training programmes for this area.

5. Conclusions

Over the last thirty years, Ukraine has experienced an extremely strong deindustrialization of the economy. As a result, the service economy has begun to play a major role in the economic development (67% of value added) and has absorbed most of the country's working population (68% of employees). Deindustrialization of Ukraine has had a different nature and growth rate over the past thirty years. We could distinguish four stages of deindustrialization which differed in the main reasons for this process:

- 1991-2000 due to the market transformation of Ukraine;
- 2001-2008 due to the rapid growth of the service economy;
- 2009-2013 due to external shocks;
- 2014-2019 due to political upheavals, military events, and the loss of part of the territory.

During the first period of deindustrialization (1991-2000) the main reason for this process was the market transformation of the economy, the crisis of inefficient planned state-owned industrial enterprises, and the rupture of traditional cooperative supply ties among the republics of the former USSR. The rapid development of new sectors of the service economy, including banks, insurance companies, consulting and trading firms, also intensified deindustrialization, but was inferior in strength to the factors of the first group.

In the second period of deindustrialization (2001-2008), its main reason was not the industrial crisis, but the extremely rapid growth of services. The services sector was at that time one of the main drivers of the country's economic development. One of the components of such structural changes was the formation of the financial sector of Ukraine and the financialization of the country, which has gained rapid momentum and scale.

The third period of deindustrialization (2009-2013) took place under the influence of significant external shocks caused by the global financial and economic crisis of 2009. The contraction of the industrial sector was the result of negative trends in world markets for Ukraine's main export goods. At the same time, the financial sector of Ukraine also suffered considerable external shocks, which led to its reduction, albeit on a smaller scale than industrial production. Financialization has slowed significantly and ceased to play the role of one of the main drivers of economic development.

The fourth period of deindustrialization, which covers 2014-2019, strengthened the trends of the previous stage. But the peculiarity of deindustrialization was that it was the result of military-political events, rather than the conscious national policy or structural changes due to uneven sector growth rates. This period of deindustrialization was characterized by the continued reduction in the scale of financialization.

The deindustrialization has had an extremely strong social impact on all aspects of life in Ukraine. This impact was negative, with a sharp rise in unemployment, falling incomes, loss of skills of many industrial workers, mass impoverishment, and increasing labour migration in particular. The negative social consequences of deindustrialization were noticeable in all periods of economic development, but they were greatest in the first stage of deindustrialization which lasted almost ten years and was due to the market transformation of Ukraine's economy.

In the periods of 1991-2000 and 2001-2008, financialization had a positive impact on the labour market and income growth. In the first stage of deindustrialization, due to the immaturity of the financial market at this time, financialization only partially offset the negative effect of the reduction of the industrial sector. At the same time, in the second stage of deindustrialization, financialization became one of the main drivers of economic growth and had a strong positive effect on the workforce. The sphere of financial services at this time became one of the most attractive places of employment in Ukraine, which led to fundamental structural changes in the labour market and training. In the third and fourth stages of deindustrialization (2009-2019) of Ukraine, financialization did not have any significant positive effect on the labour market. On the contrary, it has become one of the generators of unemployment and social problems. Financial instability has led to the loss of liquidity of most Ukrainian banks, resulting in the bankruptcy of many of them and a very sharp decline in employment in this sector.

Deindustrialization in times of long-lasting transformation crisis in Ukraine has led to waste of skillful workforce and rise of informal employment, whereas financialization did not result in increase of investments much-needed for modernization of the industrial sector and creation of highly productive jobs. The structure of employment has changed in favour of services.

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