

ROBERT BACHO
NINA POYDA-NOSYK

AUTOMOTIVE INDUSTRY IN THE REGIONS OF UKRAINE:
KEY APPROACHES TO ASSESSING LABOR MARKET
AND BUSINESS PERSPECTIVES



FERENC RAKOCZI II
TRANSCARPATHIAN HUNGARIAN COLLEGE
OF HIGHER EDUCATION

Robert Bacho – Nina Poyda-Nosyk

AUTOMOTIVE INDUSTRY IN THE REGIONS OF UKRAINE:
KEY APPROACHES TO ASSESSING LABOR MARKET
AND BUSINESS PERSPECTIVES

Monograph

SCREENED BY



Robert Bacho – Nina Poyda-Nosyk

**AUTOMOTIVE INDUSTRY IN THE REGIONS OF UKRAINE:
KEY APPROACHES TO ASSESSING LABOR MARKET
AND BUSINESS PERSPECTIVES**

Monograph



Transcarpathian Hungarian College
Berehove
2023

UDC 338.45:621-047.44(477)

B 30

The given study is focused on three main aspects in the automotive industry of Ukraine, namely on labor market, development tendencies and state regulation procedures during 2016–2021. The labor market has been studied on the basis of an assessment of the state of migration processes, the level of unemployment in the regions and the level of wages. The results of a comparative analysis of the level of the minimum wage in Ukraine in terms of regions, categories and positions are presented. The standard salary of back-office workers and management in the automotive sector was studied. The main trends in the car sales market and in the field of production were studied. The evolution of the regulatory and legal provision of state regulation of the development of the automobile industry in Ukraine is traced. Radical changes in the state policy for the development of the automotive industry of Ukraine have been revealed: from constant support of car manufacturers and stimulation of car production to bureaucratic barriers, obstacles and existing risks and threats. The monograph will be useful not only for specialists in the economic profile, but also for everyone who is interested in the problems of the development of the automotive industry in Ukraine.

*Recommended for publication by the Academic Council of Ferenc Rakoczi II
Transcarpathian Hungarian College of Higher Education (record No. 8 of August 31, 2023)*

Prepared for publication by the Publishing Department
of Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education
in cooperation with the Department of Accounting and Auditing.

Authors:

Robert BACHO and Nina POYDA-NOSYK

Publisher's readers:

*Vasyl MIKLOVDA, Corresponding Member of NAS of Ukraine, Doctor of Economic Sciences, Professor
(Uzhhorod National University)*

*Natalia VNUKOVA, Doctor of Economic Sciences, Professor, Honoured Economist of Ukraine
(Simon Kuznets Kharkiv National Economic University)*

*Ihor ORLOV, Doctor of Economic Sciences, Professor
(Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education)*

Technical editing: *Sándor Dobos and László Vezsdel*

Pagination: *László Vezsdel*

Proof-reading: *the authors*

Cover design: *László Vezsdel*

Universal Decimal Classification (UDC): *János Apáczai Csere Library of Ferenc Rakoczi II
Transcarpathian Hungarian College of Higher Education*

Responsible for publishing:

*Sándor Dobos (head of the Publishing Department of Ferenc Rakoczi II
Transcarpathian Hungarian College of Higher Education)*

The authors are responsible for the content of the monograph.

The scientific publication had been checked for plagiarism
and textual borrowings via the Unicheck service.

Publishing: Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education (Address: Kossuth square 6, 90202 Berehove, Ukraine. E-mail: foiskola@kmf.uz.ua)

Printing: "RIK-U" LLC (Address: Carpathian Ukraine Street 36, 88006 Uzhhorod, Ukraine. E-mail: print@rik.com.ua)

ISBN 978-617-8143-07-7 (hardback)

ISBN 978-617-8143-08-4 (PDF)

© Robert Bacho and Nina Poyda-Nosyk, 2023

© Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education, 2023

CONTENTS

PREFACE	7
CHAPTER 1. ANALYSIS OF THE LABOUR MARKET IN UKRAINE.....	11
1.1. Migration processes and unemployment rate in the Ukrainian labour market in the pre-war period.....	11
1.2. Estimation of the minimum wage level in Ukraine	19
1.3. Standard salary of employees of the back office and management in the automotive sector	22
1.4. Impact of Russian-Ukrainian war on the labour market.....	28
CHAPTER 2. CURRENT STATE AND DEVELOPMENT TRENDS OF THE AUTOMOTIVE MARKET IN UKRAINE	33
2.1. Overview of the automotive market in Ukraine for 2016–2021	33
2.2. Automotive manufacturing trends by region of Ukraine.....	42
2.3. Protectionism in the automotive market and barriers to entry	57
2.4. Prospects of the automotive industry in the Trans- carpathian region.....	64
CHAPTER 3. INSTITUTIONAL ENVIRONMENT FOR ESTABLISHING A NEW BUSINESS IN THE AUTOMOTIVE INDUSTRY IN UKRAINE.....	73
3.1. State registration aspects of establishing a new business entity	73
3.2. Assessment of the current tax environment for the industry, types and rates of taxes and features of their payment	79
3.3. The foreign investment state regulation	86
3.4. Bureaucratic environment, obstacles, existing risks and threats	91
CONCLUSIONS.....	103
REFERENCES	107

PREFACE

The automotive industry of Ukraine is a term that covers a wide range of companies and organizations involved in the design, development, manufacture, marketing and sale of cars, commercial vehicles, trucks and buses, trailers, motorcycles, mopeds, special and military vehicles, machinery, spare parts and components for motorcycles and mopeds. The automotive industry was a rapidly evolving field in Ukraine, and there could be further developments if not the war. Since 2014, Russia's armed aggression against Ukraine has led to a significant decline in the car industry. The situation much worsened in 2022 when unprovoked and unjustified military aggression of Russia against Ukraine started in February.

The military conflict between Ukraine and Russia has led to the severance of economic ties with the countries, and as a result, the cessation of car production. This not only negatively affected the Ukrainian automotive industry, but also negatively affected the forecasts of the world production of passenger cars (Wayland M., 2022). The conflict has caused logistical and supply chain problems as well as parts shortages of critical vehicle components. The problems added to an already strained supply chain due to the coronavirus pandemic and an ongoing shortage of semiconductor chips. Several OEMs in Europe and Eastern Europe have paused or slowed their production due to a lack of parts from Ukraine-based suppliers. Production halt and auto parts supply shortage are the immediate effect of this crisis.

The main tasks of automotive development are defined by the concept of the State Industrial Policy of Ukraine, which provides to increase the annual production of cars to 120 thousand, trucks – 15–20 thousand and buses – up to 5 thousand units. The development of the automotive industry in Ukraine does not meet the needs of the state in its own products.

Over the past decades, there have been dramatic changes in the state policy on the development of Ukraine's automotive industry: from the constant support of automakers and stimulating car production to the overwhelming indifference to the fate of the automotive industry. In the last decade the Concept of the State target economic program for the development of passenger cars for the period up to 2020 (which was not actually implemented) was adopted. In addition, it was made some changes to the Customs Code of Ukraine and the Tax Code of Ukraine in order to combat the phenomenon of "Euro number plates". However, a set of problems

and obstacles to the development of Ukrainian automotive industry is much broader: from problems of logistics, staff shortages to obstacles to innovative development.

Development of the Ukrainian automotive industry and its state support in the historical context, the problems of optimizing the activities of automotive enterprises using modern technologies and assessing the level of their competitiveness were the subject of study in the works of many Ukrainian scientists. Among prior studies, which emphasize the importance of the current study, are works of M. Dmytrychenko, M. Kyzym, O. Kryvokon, M. Mishchenko, G. Pasov, A. Redzyuk, V. Chupryna, I. Shevchenko, and O. Yazvinska. Particularly, in the monograph (I. Shevchenko, 2019), the author proposed a systemic view on progress of the automobile industry as well as developed a methodology for assessing competitiveness and a concept of the state program for the growth of industry until 2025. The issues of transformation of Ukrainian Automotive Industry based on introduction of electric vehicle production were considered among priorities (Y. Savelyev, V. Kuryliak, K. Darvidou, M. Lyzun, I. Lishchynskyy, 2021). However, the rapid change in business conditions and global challenges affects the development trends of the automotive industry not only in Ukraine, but also throughout the world, which requires updating such research.

Below is an attempt to reveal these issues of development of the Ukrainian car industry, taking into account the peculiarities and specifics of the functioning of the industry in Ukraine, trends in the labor market and the peculiarities of state regulation, bureaucratic and tax environment.

The goal of the monograph is to help readers better understand the automotive market in Ukraine and provide them with regional, occupational analyses of different tendencies in the automotive sector.

The monograph consists of three chapters. Chapter 1 – ANALYSIS OF THE LABOUR MARKET IN UKRAINE – presents analytical materials of the labor market in Ukraine regarding the automotive sector, features and the standard wages level for both back-office workers and management.

Chapter 2 – CURRENT STATE AND DEVELOPMENT TRENDS OF THE AUTOMOTIVE INDUSTRY IN UKRAINE – contains research results of the current state and development trends of the automotive market in Ukraine. The authors identified the most important trends

of the automotive market for 2016–2021, assessed the state of the automotive industry in general and at the regional level. The presentation of car manufacturers operating in Ukraine using the cartographic method on a geographical map and their grouping by regions, the number of employees, and the amount of revenue deserves special attention.

Chapter 3 – INSTITUTIONAL ENVIRONMENT FOR ESTABLISHING A NEW BUSINESS IN THE AUTOMOTIVE INDUSTRY IN UKRAINE – is devoted to evolution of the regulatory and legal provision of state regulation regarding the automobile industry's development in Ukraine, in particular assessment of the current tax environment, tax bases and rates, as well as enforcement practices. Moreover, there was investigated bureaucratic environment, obstacles, existing risks and threats for investments into the industry.

CHAPTER 1

ANALYSIS OF THE LABOUR MARKET IN UKRAINE

1.1. Migration processes and unemployment rate in the Ukrainian labour market in the pre-war period

A characteristic feature of the domestic labor market is the presence of disparities between supply and demand, which are expressed in professional qualifications, gender, age, industry and territorial (regional) aspects. These imbalances in practice lead to a significant outflow of labor abroad. The main reason for the labor migration of Ukrainians abroad in the pre-war period was the difficulty in finding decently paid work at home. Over the past five years, the economic factors of migration have intensified politically and security-wise, leading to a rapid increase in migration sentiment and the intensity of migration.

According to 2020 data, more than 2/3 of migrants (70.4%) were men, but there was a tendency to a slight increase in male migration under the influence of military actions. By age groups, male migrants are generally distributed evenly with some predominance of 40–49 years (24%). At the same time, compared to men, women migrate later and continue to work abroad, even after reaching pre-retirement or early retirement age. Most migrant women are over 40, and a third are over 50. Compared to 2016, when the majority of migrant workers came from rural areas (54%), the migration of citizens increased, which in 2020 amounted to 51%. At the same time, the level of participation of the rural population in labor migration is twice as high as that of the urban population: 6.9% of peasants aged 15–70 were involved, compared to 3.4% of citizens.

Labor migration has unevenly affected the country's population. The share of labor migrants recruited from the western regions was 69.4%. The share of them in the Center was 9.2%, in the South – 8.6%, in the East – 6.8%, in the North – 6%. The level of education of migrant workers is mostly secondary (64%). However, according to 2020, the share of people with complete, as well as basic or incomplete higher education compared to 2016 increased slightly – 33.5% vs 30.5%. Most specialists with full higher education work in the USA (58.3%), Israel (52.5%), Portugal (35%), and Germany (31.4%). In Belarus, Poland, Russia, and the Czech Republic, migrants with a secondary level of education predominated. According to

surveys of the State Statistics Service, the main countries of destination for Ukrainian migrant workers are neighboring countries – Russia and Poland, as well as the countries of Southern Europe (Italy, Spain, Portugal, Greece).

A comparison of the results of 2008, 2016 and 2020 (Figure 1.1) shows that the distribution of migrants by employment country has gradually changed. The share of Russia has decreased, while the share of European countries has increased, including Poland, which is currently the main destination for Ukrainian workers. The geography of men's and women's employment is different. Thus, except for Poland, where the largest share of both men and women, almost a third of women are employed in Italy (27%), while 31% of men worked in Russia.

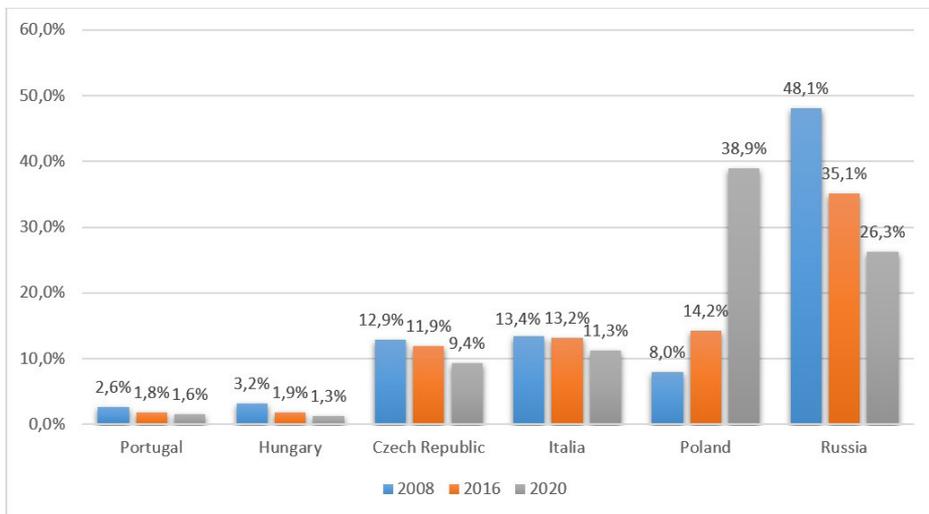


Figure 1.1. Dynamics of migration of the Ukraine's population by recipient countries in 2008–2020

The transformation of Poland into the main destination for labor migrants from Ukraine was facilitated by the procedure introduced in Poland in 2008, according to which Ukrainians could work for 6 months during a calendar year without a work permit, but only at the request of an employer registered with local authorities. The number of Ukrainians employed in the Polish economy up to 2021 was estimated at 1.5-2 million.

The amount of earnings naturally differed depending on the country of residence, legal status and the nature of the work performed. The highest

earnings were recorded among workers who worked in the United States and Israel. Almost a thousand dollars reached earnings in Portugal, Italy and Germany. In Poland, migrants earned an average of USD 584 per month.

According to official income statistics, Ukraine is one of the poorest countries in Europe. In Ukraine, the official average monthly salary was less than not only the Polish but also the Hungarian level (Figure 1.2).

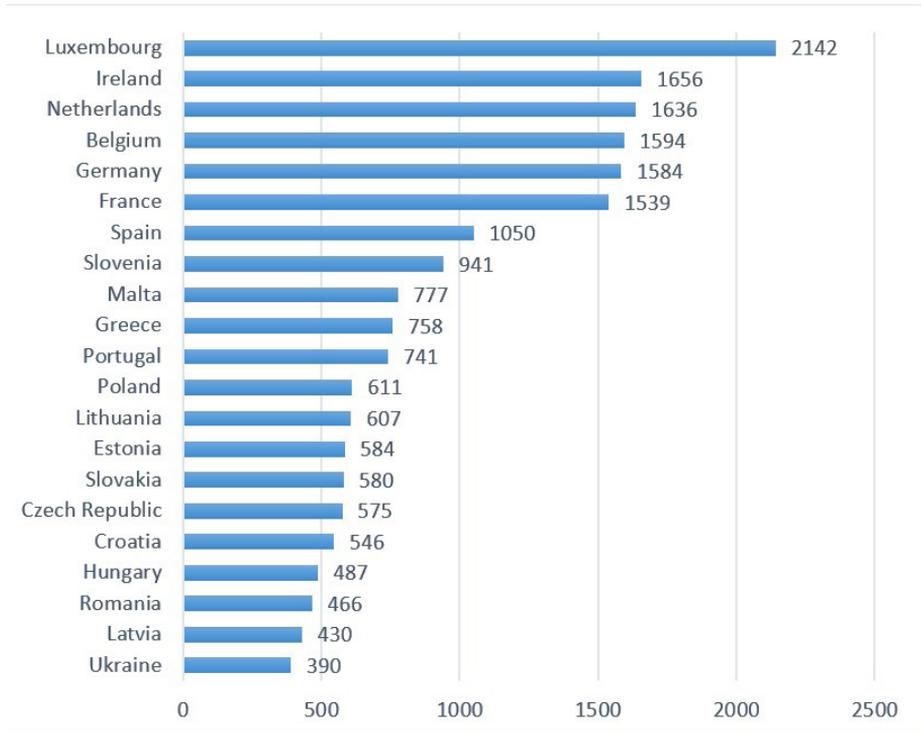


Figure 1.2. List of European countries by average monthly wage in 2020, USD

In general, the average salary in Ukraine was about twice lower than in Poland, Lithuania, and 5 times lower than in Germany. Map of countries and territories by net average monthly wage in 2020 is presented in Figure 1.3.

It should be noted that an important factor in the outflow of population in search of work abroad is the high level of poverty in Ukraine, especially in the Western regions. Almost 70% of migrants were residents of western Ukrainian regions.

The outflow of labor led to the fact that after getting a job abroad, Ukrainians applied for permanent residence status in the recipient country.

Figure 1.4 shows a rapid increase in the number of Ukrainian citizens who had long-term migrant status in the EU. Just in 2020, 3,400 people were naturalized in Germany, 2,700 – in Italy, 2,400 – in Poland, about 2,000 in Portugal and 1,200 in Czech Republic.

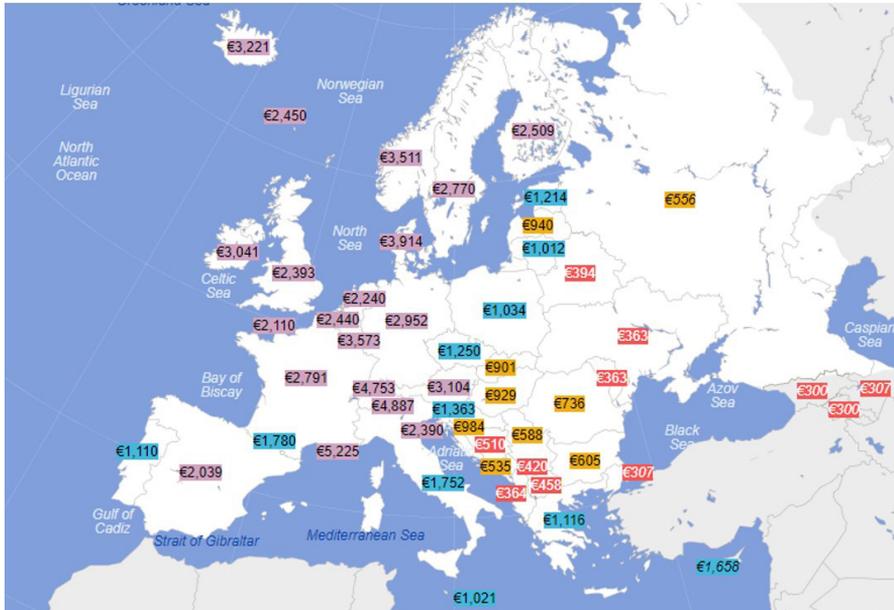


Figure 1.3. Map of countries and territories by net average monthly wage in 2020, EUR

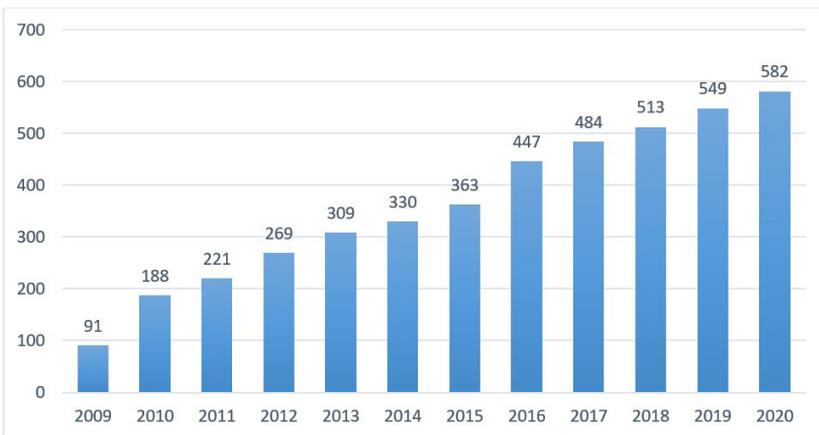


Figure 1.4. Number of Ukrainian citizens with long-term migrant status in EU countries, thousand people

At the end of 2021 more than two thirds (68.5 %) of Ukrainian citizens in the EU, holding a residence permit, resided in one of three EU Member States: Poland (41,5%), Italy (14,7%) and Czechia (12,3%) (Figure 1.5).

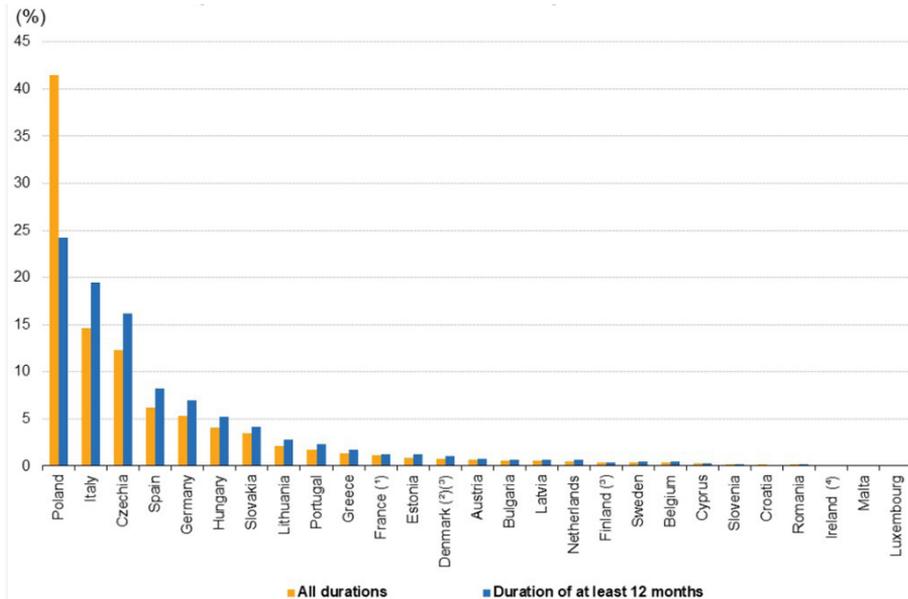


Figure 1.5. EU Member States' shares in the total number of Ukrainians holding a valid residence permit in the EU at the end of the year, 2021 (%)

Source: Eurostat (*migr_resvalid*) and (*migr_pop1ctz*)

Insufficient number of highly paid vacancies, rising prices for goods and services, especially housing and communal services, increase the pressure on the social security system of Ukrainians. Rising prices and tariffs for housing and communal services has led to the fact that the population of Ukraine was unable to pay – the debt of the population of Ukraine to pay for housing and communal services increases annually by 16.5-17%.

Considering the level of employment and its dynamics, it should be noted that until 2013 there was a slight increase, but the unstable political situation and the conflict in the East led to a sharp decline in 2014 (for comparison: in 2013 the employment rate was 60.3 %, in 2014 – 56.7%). The corresponding trend continued in both cities and villages. The number of economically active population was constantly declining and the unemployment rate was rising, which amounted to almost 10% in 2020.

Table 1.1. Economically active and employed population in 2014–2020, thousand people

Years	Total population	Economically active population	Employed population	Unemployed population	Unemployment rate, %	Number of registered unemployed
2014	42 928,9	19 035,2	17 188,1	1 847,1	9,7	458,6
2015	42 760,5	17 396,0	15 742,0	1 654,0	9,5	461,1
2016	42 584,5	17 303,6	15 626,1	1 677,5	9,7	407,2
2017	42 386,4	17 193,2	15 495,9	1 697,3	9,9	352,5
2018	42 153,2	17 296,2	15 718,6	1 577,6	9,1	341,7
2019	41 902,4	17 381,8	15 894,9	1 486,9	8,6	338,2
2020	41 588,4	16 917,8	15 244,5	1 673,3	9,9	459,2

The situation in the labor market was characterized by a rapid increase in the number of people employed in the informal sector of the economy.

According to the regional analysis, the rather difficult situation in the field of employment and unemployment in the eastern regions of Ukraine has been confirmed. Thus, the highest unemployment rates in 2019 were in Luhansk (13,7%), Donetsk (13,6%) and Kirovohrad (11,0%) regions, while in 2006 the highest unemployment rates were in the western regions: Rivne (9,3%), Chernivtsi (9,3%), Ternopil (9,2%), Zhytomyr (9,1%) regions. During the study period, there was an increase in unemployment in almost all regions of Ukraine, except Lviv, Kharkiv, Khmelnytsky, Chernivtsi regions. In Ukraine as a whole, the unemployment rate in 2020 compared to 2016 increased by 0.2%.

Table 1.2. Employment and unemployment levels in Ukraine by regions, %

Regions	Labor force participation rate		Employment rate		Unemployment rate	
	2016	2020	2016	2020	2016	2020
<i>Ukraine</i>	62,2	63,4	57,9	58,2	9,7	9,9
Vynnytsia Oblast	61,8	64,0	57,7	58,0	6,6	9,4
Volyn Oblast	63,2	56,9	57,6	50,9	8,8	10,6
Dnipropetrovsk Oblast	62,1	64,4	58,9	59,5	5,1	7,7
Donetsk Oblast	62,8	58,9	59,2	50,9	5,7	13,6
Zhytomyr Oblast	63,7	64,7	57,9	58,5	9,1	9,6
Zakarpattia Oblast	63,5	60,9	59,0	55,4	7,1	9,1
Zaporizhzhia Oblast	62,6	64,1	58,6	58,1	6,4	9,5
Ivano-Frankivsk Oblast	56,1	61,0	51,5	56,6	8,3	7,2
Kyiv Oblast	62,6	63,1	58,8	59,3	6,2	5,9

Table 1.2 (continued)

Regions	Labor force participation rate		Employment rate		Unemployment rate	
	2016	2020	2016	2020	2016	2020
Kirovohrad Oblast	62,2	62,5	57,1	55,6	8,3	11,0
Luhansk Oblast	60,2	68,1	55,8	58,8	7,2	13,7
Lviv Oblast	61,2	61,9	56,1	57,8	8,3	6,5
Mykolayiv Oblast	63,3	65,1	57,7	59,1	8,9	9,3
Odesa Oblast	59,3	62,0	56,2	58,3	5,1	5,9
Poltava Oblast	63,0	63,3	58,6	56,6	7,0	10,6
Rivne Oblast	61,5	63,7	55,7	58,4	9,3	8,3
Sumy Oblast	62,8	64,8	57,9	59,8	7,8	7,7
Ternopil Oblast	56,3	59,8	51,1	53,8	9,2	10,0
Kharkiv Oblast	62,6	65,4	58,8	62,1	6,1	5,0
Kherson Oblast	63,9	65,2	58,3	58,9	8,8	9,6
Khmelnyskiy Oblast	63,4	61,9	57,9	57,0	8,6	8,0
Cherkasy Oblast	63,0	64,7	57,4	59,3	8,9	8,3
Chernivtsi Oblast	60,3	63,4	54,7	59,0	9,3	6,9
Chernihiv Oblast	63,7	65,6	58,4	58,9	8,3	10,2
Kyiv City	65,9	67,0	63,6	63,1	3,5	5,8

The best situation and relatively low unemployment rates in 2020 were in Kharkiv Oblast (5.0%), Kyiv City (5.8%), Kyiv Oblast (5.9%) and Odesa Oblast (5.9%).

The highest workload per vacancy in 2020 was observed in such oblasts as Cherkasy (34 people), Zaporizhia (26 people), Vinnytsia (24 people), while in 2016 the "leaders" were Ternopil (33 people), Cherkasy (27 people), Ivano-Frankivsk (20 people) regions (Table 1.3).

The lowest indicators of registered unemployed per vacancy in 2018 were in the city of Kyiv (1 person), Kyiv region (2 persons) and Lviv region (2 persons). In 2016, the lowest rates were in such Oblasts as Kyiv (0.2 persons), Dnipropetrovsk (2 persons) and Donetsk (2 persons). In the regional aspect of the assessment, the adverse impact of the military conflict in eastern Ukraine, which has led to significant changes in the direction of labor mobility across the country, is clearly visible.

The negative trend of recent years is the threat of rising unemployment, especially among young people. One third of the unemployed registered during the coronavirus pandemic was that category of workers. At the same time, the largest number of migrants falls on people aged 15–24 years and 30–44 years.

Table 1.3. Load of registered unemployed per vacancy by regions of Ukraine

Regions	2016	2020	Deviation (+/-)
<i>Ukraine</i>	5	6	1
Vinnitsia Oblast	14	24	10
Volyn Oblast	6	3	-3
Dnipropetrovsk Oblast	2	4	2
Donetsk Oblast	2	14	12
Zhytomyr Oblast	11	6	-5
Zakarpattia Oblast	6	4	-2
Zaporizhzhia Oblast	4	26	22
Ivano-Frankivsk Oblast	20	6	-14
Kyiv Oblast	4	2	-2
Kirovohrad Oblast	8	9	1
Luhansk Oblast	5	17	12
Lviv Oblast	9	2	-7
Mykolayiv Oblast	11	12	1
Odesa Oblast	5	4	-1
Poltava Oblast	8	5	-3
Rivne Oblast	11	9	-2
Sumy Oblast	14	11	-3
Ternopil Oblast	33	8	-25
Kharkiv Oblast	3	7	4
Kherson Oblast	15	20	5
Khmelnyskyi Oblast	15	8	-7
Cherkasy Oblast	27	34	7
Chernivtsi Oblast	13	4	-9
Chernihiv Oblast	5	10	5
Kyiv City	0,2	1	0,8

The outflow of workers abroad during that period explained by the difficult working conditions of employers during COVID-19. The practice of forcibly sending staff on unpaid leave had been introduced at the industrial enterprises due to the reduction of production orders. Another measure was to reduce the working hours of employees. The labor legislation of Ukraine allows to reduce the wages of employees only if the corresponding reduction of working hours. That is, companies considered this option as another mechanism for adaptation and reduction of operating costs. In fact, changes to the labor legislation of Ukraine have allowed companies to implement actively this practice of reducing labor costs.

Surveys of workers in the industrial sector showed that the share of workers who worked less than the usual 40 hours per week almost doubled during quarantine: from 7% to 20%. Despite strict labor laws, a wave of layoffs took place in Ukraine in 2020. This indicates both an increase in the number of registered unemployed and the number of mass layoffs. That means, businesses only partially had taken advantage of other adaptation mechanisms and at the end they had been forced to release people.

1.2. Estimation of the minimum wage level in Ukraine

One of Ukraine's competitive advantages over the placement of production facilities in Ukraine by foreign companies was the relatively low level of wages, which was one of the lowest in Europe that noted more thoroughly in paragraph 1.1 (Figure 1.2). The size of wages in dollar equivalent decreased significantly due to the devaluation of the hryvnia against foreign currencies in 2013–2015. During that period, the exchange rate of the hryvnia against foreign currencies, including the US dollar and the euro devalued several times. Thus, the US dollar grew 2.4 times and the euro 2 times (Table 1.4). This affected the size of wages in terms of freely convertible currencies, and according to this indicator, the average salary in Ukraine was even lower than in Moldova.

Table 1.4. Change in the exchange rate of the hryvnia against the US dollar and the Euro in 2013–2021, UAH

Currency	Years									Deviation 2021/2013
	2013	2014	2015	2016	2017	2018	2019	2020	2021	
USD	8,0	11,9	21,8	25,6	26,6	27,2	25,8	27,0	27,3	+241,4%
EUR	10,6	15,7	24,2	28,3	30,0	32,1	29,0	30,8	32,3	+204,5%

The growth of the minimum wage in those years was minimal and began to grow actively in dollar terms only in 2016. Thus, in 2016–2021, the minimum wage increased 2.8 times – from 62.6 dollars. US up to 236.4 US dollars (Table 1.5).

The attractiveness of the industry in terms of employee interest is influenced by the size of the proposed salary. As a rule, in Ukraine the minimum wage is set for a large number of positions, but in industry the average monthly salary in dollar equivalent is on average 3-4 times usually higher than the minimum wage set in Ukraine.

Table 1.5. Dynamics of the minimum wage and wages in the industry of Ukraine in 2016–2021

Indicators	2016	2017	2018	2019	2020	2021
Minimum wage, USD	62,6	120,3	136,9	161,4	185,2	236,4
Change to previous year, %	12,1%	92,1%	13,8%	17,9%	14,7%	27,6%
Average wages in industry, USD	318,4	426,2	452,3	639,6	625,3	760,6
Change to previous year, %	24,1%	33,8%	6,1%	41,4%	-2,2%	21,6%
The ratio of wages in industry to the minimum wage, times	5,45	3,54	3,30	3,96	3,38	3,22

At the same time, the size of wages varies depending on the region (Table 1.6). In 2021, the highest paid workers were in Kyiv (\$ 769), Kyiv (\$ 537), Dnipropetrovsk (\$ 504), Mykolaiv (\$ 493) and Odesa (\$ 458) oblasts, and the lowest paid are Chernivtsi (\$ 412), Kherson (\$ 411), Kirovohrad (\$ 416) and Volyn regions (\$ 422).

Table 1.6. Dynamics of average monthly wages by regions of Ukraine, USD

Regions	Years						2021/2016	
	2016	2017	2018	2019	2020	2021	(+,-)	%
Cherkasy Oblast	199,2	273,2	317,2	387,2	431,3	443,1	244,0	222,5
Chernihiv Oblast	188,0	250,2	294,3	342,4	404,5	422,8	234,8	224,9
Chernivtsi Oblast	198,0	273,1	331,8	371,7	439,0	412,4	214,4	208,3
Dnipropetrovsk Oblast	231,4	310,0	374,6	467,5	487,5	503,7	272,3	217,7
Donetsk Oblast	278,3	371,7	415,4	509,7	545,2	538,5	260,2	193,5
Ivano-Frankivsk Oblast	195,4	260,7	306,4	372,3	447,7	432,9	237,5	221,5
Kharkiv Oblast	215,2	280,0	333,5	402,7	443,3	450,6	235,4	209,4
Kherson Oblast	205,8	270,9	312,3	380,2	429,1	411,4	205,6	199,9
Khmelnyskyi Oblast	208,0	284,2	330,0	419,5	479,7	455,0	247,0	218,7
Kyiv Oblast	250,7	327,8	409,8	512,9	529,6	536,5	285,8	214,0
Kyiv City	434,2	527,6	608,3	729,9	807,9	768,9	334,7	177,1
Kirovohrad Oblast	192,8	255,6	301,1	365,6	421,9	416,4	223,5	215,9
Luhansk Oblast	235,2	281,4	321,0	394,4	472,8	446,0	210,9	189,7
Lviv Oblast	220,1	296,2	337,2	402,9	463,6	463,3	243,2	210,5
Mykolaiv Oblast	252,4	331,9	374,9	496,4	540,9	493,4	241,0	195,5
Odesa Oblast	255,8	311,9	351,6	429,5	464,9	454,0	198,2	177,5
Poltava Oblast	222,0	294,7	367,8	421,9	470,8	483,1	261,0	217,6

Table 1.6 (continued)

Regions	Years						2021/2016	
	2016	2017	2018	2019	2020	2021	(+,-)	%
Rivne Oblast	223,2	288,6	351,4	446,9	521,8	458,2	235,0	205,3
Sumy Oblast	200,7	276,7	310,8	375,3	443,5	448,2	247,5	223,3
Ternopil Oblast	187,1	256,7	305,4	373,3	442,4	444,5	257,4	237,5
Vinnitsia Oblast	201,7	286,2	340,3	412,4	453,8	474,8	273,2	235,4
Volyn Oblast	201,6	272,5	326,0	399,7	430,6	421,7	220,1	209,2
Zakarpattia Oblast	219,1	305,5	365,7	425,7	485,4	453,3	234,3	206,9
Zaporizhzhia Oblast	239,7	312,2	383,6	473,8	504,5	500,4	260,6	208,7
Zhytomyr Oblast	195,6	270,9	317,1	380,3	437,2	434,3	238,7	222,0
Ukraine	253,4	330,0	388,7	474,4	525,1	519,4	265,9	204,9

Average wages by regions of Ukraine in December 2021 (in hryvnias) are presented in Figure 1.6.

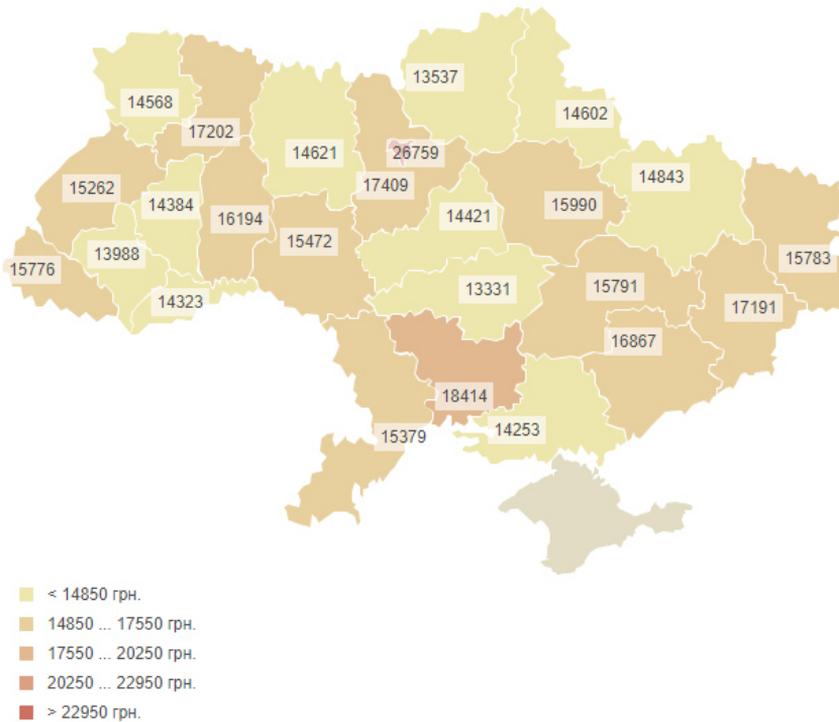


Figure 1.6. Average wages by regions of Ukraine in December 2021 (in hryvnias)

Wage growth in the regions of Ukraine could be explained due to a significant outflow of personnel abroad, as well as the hryvnia's devaluation and the need to retain existing employees in enterprises. The retention of employees involved in production lines and performing camera work has become especially important. A special increase in wages is noticeable in 2021. The reasons for this are increasing migratory pressure on the labor market. The opening of borders through vaccination and the revival of economic activity in Europe have helped to restore migratory sentiment. In addition, in many EU countries, governments have also increased the minimum wage in 2021. Employers abroad are also actively recruiting Ukrainian workers and are gradually resuming hiring Ukrainians to pre-crisis levels.

In addition, the structure of employment has changed due to quarantine and the corresponding economic downturn. Although companies abstained from layoffs during the 2020 pandemic, declining economic activity has led to staff reductions. At the same time, the least efficient and, accordingly, the lowest paid workers probably fell under the redundancies. In particular, 60% of all those who left employment in 2020 belonged to sectors where wages are lower than the average in Ukraine, which is generally in line with global trends. This probably had some statistical effect on the average wage.

Disparities between labor supply and demand also persist in the market. In recent years, with the exception of the pandemic period, the "lack of qualified personnel" factor has been steadily gaining weight in business surveys as one of the reasons for holding back corporate profits. During the corona crisis, the impact of this factor decreased due to reduced economic activity. However, since the beginning of 2021, the shortage of quality staff has increased again, which has affected the growth of wages.

1.3. Standard salary of employees of the back office and management in the automotive sector

Considering the salary proposals for different categories of employees offered by different employment sites, we observe significant differences and fluctuations. Thus, the average salary of a production line operator fluctuates on average at \$ 400–450. The highest average salaries are offered in Zaporizhzhia, Poltava, Lviv and Dnipropetrovsk regions, amounting to \$ 500–560 (Figure 1.7).

In the Lviv region in early 2016, most companies paid employees less than \$ 100. The amount of 28,000 hryvnias was indicated in the job search

advertisements and another part of the amount was paid in an envelope. In 2017, salaries of \$ 300 were announced, and in 2018-2019 – already \$ 400. In fact, due to the massive outflow of workers to earn money abroad, the need to raise wages for lower-level workers has increased.

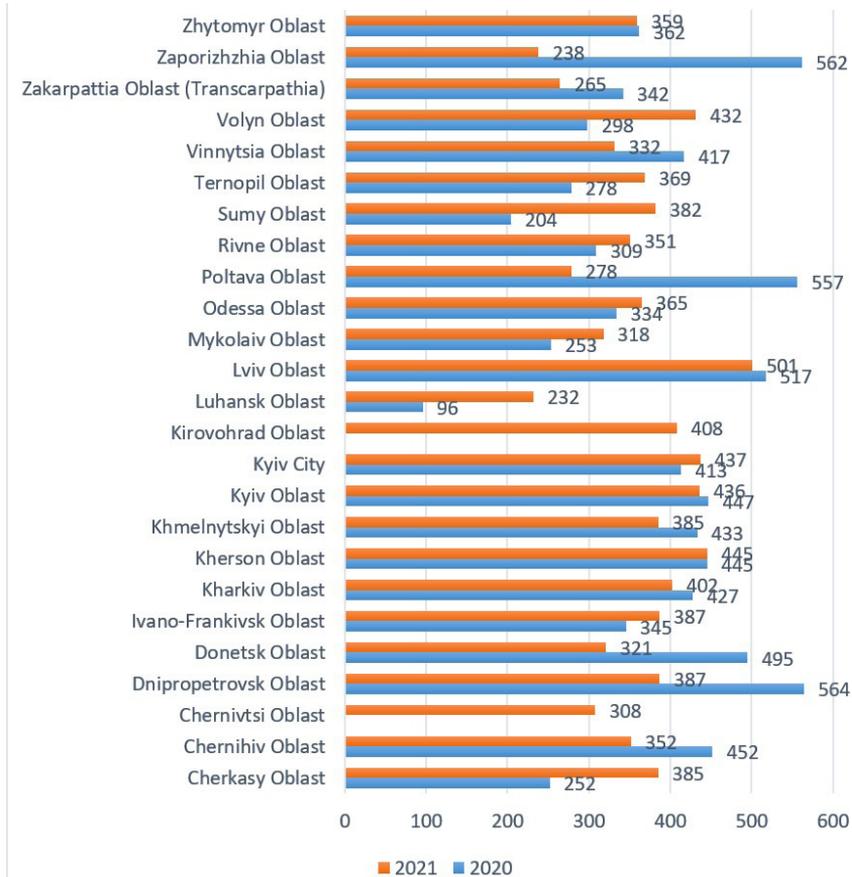


Figure 1.7. The average amount of the offered salary to the production line operators by regions of Ukraine for 2020-2021, USD

According to ODW-Elektrik, the average salary of employees at the plant is almost 14 thousand UAH (500 USD). Over the past five years, it has grown by more than 7,000 hryvnias.

It should be noted that at the end of 2021, 8.3% of vacancies in the field of production in Ukraine were announced for production line operators (Table 1.7).

Table 1.7. Distribution of vacancies of employees by regions of Ukraine at the end of 2021

Region	Production line operator	Logistics Manager	Sales Manager	Accountant	Chief Accountant	Category "Production"
Cherkasy Oblast	205	189	727	375	52	1 511
Chernihiv Oblast	157	147	406	191	8	708
Chernivtsi Oblast	175	119	668	310	42	486
Dnipropetrovsk Oblast	67	1 225	2 599	1 550	438	6 196
Donetsk Oblast	26	288	677	608	108	2 964
Ivano-Frankivsk Oblast	253	189	711	289	31	861
Kharkiv Oblast	26	1 057	4 096	1 814	361	5 541
Kherson Oblast	2	156	504	317	49	850
Khmelnyskyi Oblast	421	152	570	322	19	1 083
Kyiv Oblast	41	890	2 474	518	1 683	2 391
Kyiv City	27	4 165	8 376	4 323	21	9 048
Kirovohrad Oblast	12	644	438	236	1 053	842
Luhansk Oblast	49	36	119	140	20	507
Lviv Oblast	817	634	1 402	752	153	1 603
Mykolaiv Oblast	16	267	824	435	58	988
Odessa Oblast	32	838	1 985	974	70	2 413
Poltava Oblast	229	300	930	541	44	1 892
Rivne Oblast	43	133	617	301	41	1 546
Sumy Oblast	13	156	481	224	20	815
Ternopil Oblast	84	106	454	168	9	477
Vinnytsia Oblast	310	255	719	398	40	1 243
Volyn Oblast	204	152	447	290	21	701
Transcarpathia	437	110	448	255	34	475
Zaporizhzhia Oblast	85	430	1 192	625	199	2 170
Zhytomyr Oblast	331	255	568	346	24	1 071
Ukraine	4 039	12 892	32 432	16 301	4 599	48 380

Most vacancies are concentrated in the "manufacturing" category, but among middle managers, such positions as sales managers, logistics managers and accountants are most in demand in terms of the number of vacancies advertised.

Standard salaries of managers and accountants on average range from \$ 350–450 depending on the region (Table 1.8), but most of them

show a 20–30% increase in wages in 2021 compared to the previous one, which also confirms the thesis of staff shortages due to a significant outflow of workers to work in Hungary, Poland, Czech Republic, Slovakia and other European countries.

Table 1.8 contains information about changes in average wages by relevant categories of positions in regional context in Ukraine, calculated on data as of 2020-2021. The highest size of average wage in columns are highlighted in yellow and the lowest ones – in green.

From the given data we may see that Kyiv City has the highest size of average wage for positions of sales manager, accountant and chief accountant. The lowest indicators in four positions of six are in Luhansk Oblast.

The percentage of indicators deviation is fluctuating from one oblast to another in different positions. Thus, the largest deviation in the amount of average wage for production line operator position is observed in Luhansk Oblast (142,6%), for logistic manager position – in Kirovograd Oblast (81,4%), for sales manager position – in Poltava Oblast (42,6%). The largest increase in the average salary for the position of chief accountant was observed in Transcarpathia (80,2%). In the "production" category, the average wage level decreased in all regions in 2021. The largest decrease was recorded in Zaporizhzhia Oblast (- 57,3%).

In Transcarpathia, Jabil and Yazaki openly offer employees on the production line a salary of UAH 13,000 (USD 450) and managers on the production line (senior operators) – UAH 15,000 (USD 525). Competition creates conditions for wage growth in the region. At the same time, companies provide their employees with a certain social package to motivate work, which includes free transportation to work and home, free and discounted lunches (usually the maximum amount of lunch within which the cost of lunch is reimbursed is UAH 100 (about 4 \$), there is a possibility of internships abroad (existed before the pandemic). The company provides free foreign language courses for everyone, 62% of the automotive industry and related industries are actively involving young people in the workplace, and it should be noted that recent changes in Ukrainian law prohibit mention in job advertisements age limit or gender, as it is considered discriminatory in today's business environment.

As a rule, short-term contracts are concluded with the lowest level employees to establish the ability of the employee to adapt to the work performed by him. Common practice is establishing a probationary period of up to 3 months for them.

Table 1.8. Change in average wages in the regions of Ukraine by relevant categories of positions held in 2020-2021, USD

Region	Production line operator			Logistics Manager			Sales Manager			Accountant			Chief Accountant			Category "Production"		
	2020	2021	Change, %	2020	2021	Change, %	2020	2021	Change, %	2020	2021	Change, %	2020	2021	Change, %	2020	2021	Change, %
	Cherkasy Oblast	252	385	52,9	261	369	41,5	307	400	30,4	247	323	30,9	268	473	76,3	601	346
Chernihiv Oblast	452	352	-22,2	285	392	37,5	323	423	30,9	254	312	22,7	302	447	48,3	425	341	-19,8
Chernivtsi Oblast	–	308	–	351	389	10,8	389	419	7,8	250	349	39,6	322	460	42,9	453	351	-22,5
Dnipropetrovsk Oblast	564	387	-31,4	324	404	24,5	384	485	26,3	287	360	28,4	328	470	43,3	523	365	-30,2
Donetsk Oblast	495	321	-35,2	190	296	55,8	339	424	24,9	305	310	1,9	347	458	31,9	426	343	-19,5
Ivano-Frankivsk Oblast	345	387	12,0	197	323	64,3	434	427	-1,8	371	326	-12,1	343	426	24,3	398	337	-15,4
Kharkiv Oblast	427	402	-5,9	351	383	9,1	426	479	12,5	307	378	23,2	418	471	12,9	472	369	-21,8
Kherson Oblast	445	445	0,0	220	358	62,7	330	408	23,6	256	325	26,8	299	367	23,0	542	309	-42,9
Khmelnytskyi Oblast	433	385	-11,1	457	269	-41,2	362	401	10,9	286	346	21,1	244	334	37,0	423	333	-21,2
Kyiv Oblast	447	436	-2,5	423	433	2,3	568	552	-2,9	507	437	-14,0	521	521	0,0	619	394	-36,4
Kyiv City	413	437	5,8	500	438	-12,5	595	548	-7,9	540	444	-17,8	542	527	-2,8	646	391	-39,4
Kirovohrad Oblast	–	408	–	185	336	81,4	278	385	38,4	291	306	5,2	252	388	54,0	446	327	-26,7
Luhansk Oblast	96	232	142,6	224	275	22,5	286	361	26,2	231	287	24,3	290	398	37,2	482	284	-41,0
Lviv Oblast	517	501	-3,2	338	358	5,8	460	458	-0,3	304	359	18,1	381	485	27,1	698	361	-48,3
Mykolaiv Oblast	253	318	25,5	307	322	4,8	352	408	15,9	249	338	35,8	325	421	29,7	828	238	-71,3
Odessa Oblast	334	365	9,2	344	423	23,0	475	478	0,6	326	391	20,0	423	485	14,5	464	364	-21,6
Poltava Oblast	557	278	-50,0	242	395	63,2	296	422	42,6	226	313	38,8	317	410	29,1	447	333	-25,5
Rivne Oblast	309	351	13,6	277	315	13,4	314	417	32,8	267	308	15,4	469	456	-2,8	437	333	-23,9
Sumy Oblast	204	382	87,3	252	326	29,3	314	380	21,0	257	300	16,6	266	388	46,0	453	310	-31,4
Ternopil Oblast	278	369	32,6	353	390	10,4	308	389	26,3	246	327	33,0	238	430	80,1	501	348	-30,6
Vinnitsia Oblast	417	332	-20,5	341	363	6,3	350	418	19,3	361	325	-10,0	319	417	30,5	493	330	-33,0
Volyn Oblast	298	432	44,6	213	339	58,8	293	390	33,1	292	309	5,7	305	410	34,4	522	327	-37,5
Transcarpathia	342	265	-22,6	318	395	24,5	303	413	36,2	339	354	4,3	243	438	80,2	520	342	-34,3
Zaporizhzhia Oblast	562	238	-57,7	571	358	-37,3	415	414	-0,2	301	342	13,6	351	439	24,9	539	230	-57,3
Zhytomyr Oblast	362	359	-0,8	395	451	14,1	359	387	7,9	300	324	8,0	312	444	42,2	418	336	-19,6
Ukraine	490	342	-30,2	409	373	-8,8	458	458	0,0	358	332	-7,2	426	411	-3,3	620	325	-47,6

According to research, 30% of those wishing to get a job spend 1–6 months looking for a job. A survey of employers in 2021 showed that the replacement of top management vacancies takes 1–6 months, middle positions – from 2 weeks to 3 months, and the lowest position ("blue collar") – from 1 week to 2 months.

As for other administrative positions, the analysis of Work.UA data for 3 months during the study (November–December 2021 and January 2022) allowed us to draw the following conclusions about the size of the average standard salary of middle and senior managers in the automotive industry of Ukraine:

- **"Chief Engineer"** earns an average of 27,500 UAH – this is the median salary according to 224 vacancies posted on Work.ua with the title "Chief Engineer" and similar queries synonymous with "Chief engineer", "GIP", "Deputy Chief Engineer" etc.

- **"Head of Human Resources"** earns 27,500 UAH – this is the median salary according to 147 vacancies posted on Work.ua with the title "Head of Human Resources" and similar queries synonymous with "HR Director", "HR director", "HRD" etc.

- **"Technical director"** earns UAH 25,000 – this is the median salary according to data from 100 vacancies posted on Work.ua with the title "Technical director" and similar requests-synonyms "Technical director", "Chief technical officer", "Technical manager" etc.

- **"Quality Director"** earns UAH 25,000 – this is the median salary according to 10 vacancies posted on Work.ua with the title "Quality Director" and similar queries-synonyms "Quality director", "Quality Manager", "Chief on quality", etc.

- **"Project manager"** earns UAH 25,000 – this is the median salary according to 1130 vacancies posted on Work.ua with the title "Project manager" and similar queries synonymous with "Project manager", "Project coordinator", "Project manager" etc.

- **"Production Manager"** earns UAH 22,500 – this is the median salary according to 332 vacancies posted on Work.ua entitled "Production Manager" and similar requests-synonyms "Production Director", "Production Manager", "Deputy Director of Production", etc.

- **"Shift Manager"** earns UAH 17,500 – this is the median of wages according to 560 vacancies posted on Work.ua with the title "Master of the shop" and similar requests-synonyms "Shift Master", "Head of change", "Master of the site" and others.

1.4. Impact of Russian-Ukrainian war on the labour market

The full-scale invasion of Ukraine in February 2022 has caused massive civilian casualties and the destruction of civilian infrastructure, forcing people flee their homes seeking safety, protection and assistance. Since February 2022, millions of refugees from Ukraine have crossed borders into neighboring countries, and millions more have been forced to flee within the country. The Regional Refugee Response Plan developed by UN agencies together with national authorities, NGOs, as well as civil society organizations involved countries beyond Europe and globally [18].

According to the UNHCR data, as of 15 November 2022, 7.6 million Ukrainian citizens remained abroad because of the war. That said, around 3 million people stayed in Russia and Belarus, including due to their forced deportation to Russia [18, p.2]. Therefore, approximately 4.5 million Ukrainians stayed in other European countries, including 1.6 million are in Poland as of May 22, 2023 (Table 1.9). As of June 2023, Germany provided the status of temporary protection to more than 1 million migrants. More than 100 thousand Ukrainians are registered in Italy, Spain, Bulgaria, the United Kingdom, and France.

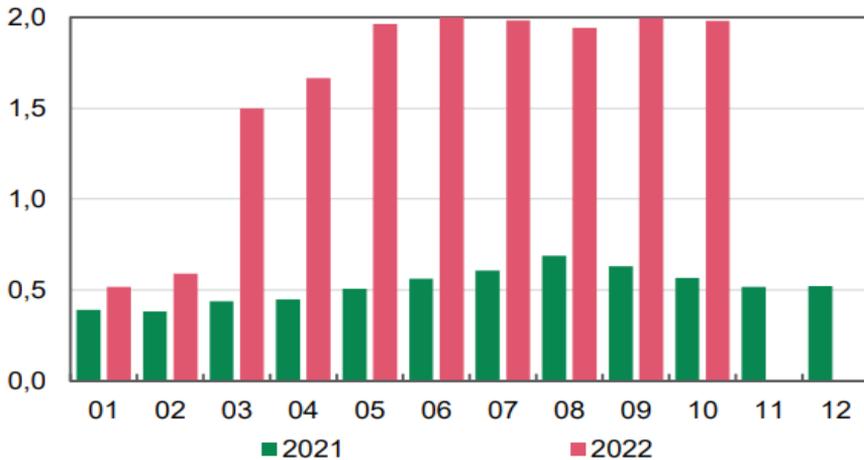
Table 1.9. Countries featured in the Refugee Response Plan

Country	Date	Refugees from Ukraine registered for Temporary Protection or similar national protection schemes	Refugees from Ukraine recorded in country
Bulgaria	23.05.2023	159 225	51 365
Check Republic	14.05.2023	519 964	520 234
Estonia	21.05.2023	45 690	71 215
Hungary	23.05.2023	36 313	36 313
Latvia	19.05.2023	47 948	31 527
Lithuania	19.05.2023	77 610	77 610
Poland	22.05.2023	1 605 738	1 605 738
Republic of Moldova	21.05.2023	Not applicable	108 889
Romania	20.05.2023	132 362	94 179
Slovakia	21.05.2023	116 718	116 718
Totally		2 741 568	2 713 788

Source: UNHCR statistics [18].

Meanwhile, due to the war, an increase in labor force and Ukrainian migrants' spending abroad are positive for the economies of host countries, although a large wave of migration created a number of challenges,

including for state finances. At the same time, according to calculations of NBU [18], the net fiscal effect will be positive for Europe in the long run, as Ukrainians are actively integrating into the European labor market and are paying taxes. Ukrainians' expenses abroad more than tripled in 2022 compared to the previous year, reaching USD 2 billion per month particularly in travel services (Figure 1.8).



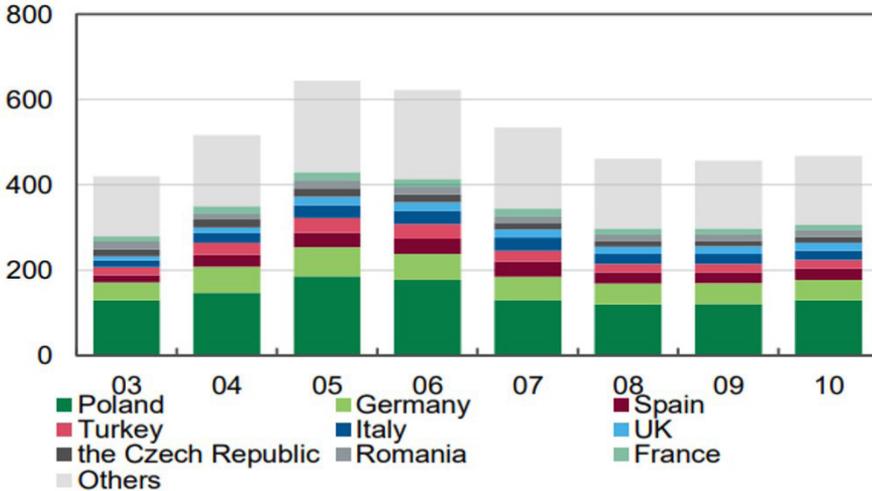
Source: NBU.

Figure 1.8. Imports of travel services, USD billions [18]

As Figure 1.9 shows, the volume of travel imports services rose more than 4 times in 2022 compared to 2021. Geography of retail network transactions made by Ukrainians in 2022 is presented in Figure 1.9.

In general, as the authors [18] point out, all studies confirm the positive impact of Ukrainian migrants on the economy of the host countries, including to the labor market. Thus, Strzelecki et al. (2022) who studied economic consequences of labor migration of Ukrainians to Poland stated that Ukrainian migrants added 0.5 pp to annual GDP growth for the period 2013–2018. Due to the war, the estimated additional contribution to annual GDP growth in Czechia, Poland, and Estonia will reach around 1.2 pp per year, and migrants' contribution to GDP of Hungary, Latvia, Slovakia, Lithuania, and Romania will be close to 0.8 pp. The authors also provide assessments results of another reputable organizations (Oxford Economics,

Deloitte etc.) which indicate the integration of Ukrainian migrants in Poland might add 0.2–3.5% to Poland's GDP growth.



* Based on surveys of five banks; data cover 84% of total.

Source: bank survey.

Figure 1.9. Geography of retail network transactions in 2022, USD millions [18]

Regarding the labor market of Ukraine, it was significantly transformed during the war and this trend continues. From the beginning of the full-scale invasion, many enterprises were destroyed or stopped working. Mobilization increased the shortage of highly qualified personnel. Occupation, constant shelling, blockade of the sea, lack of light – all this affected the work of business.

According to the European Business Association (EBA), which unites mainly large and medium-sized companies and enterprises with foreign investments, at the beginning of May 2023, 68% of the companies included in the association were fully operational. In addition to forced layoffs, the work of Ukrainian enterprises was significantly affected by mobilization.

As of June 2023, most regional companies had up to 20% of conscripted employees in the ranks of the armed forces. The tensest situation is in the Western region, where only 4% of companies do not have mobilized workers. According to statistics, mobilization affected

83% of companies in Ukraine. Moreover, half of the companies mobilized every tenth employee; almost 40% of those mobilized were highly qualified employees: engineers, IT specialists, electricians, mechanics, machinists, and drivers [8].

In accordance to the State Employment Service data, qualified workers in labor professions are in the greatest demand among employers for nowadays. Among all vacancies, companies are primarily looking for locksmiths, electricians, drivers, tractor drivers, salespeople, accountants, educators etc. The largest number of vacancies is registered in Kyiv, L'viv, Dnipropetrovsk, Khmel'nitsky, Kyiv and Odesa regions in the following prior sectors: security/security, construction, retail trade, finance, logistics and warehouses, transport.

According to the largest online job exchange Work.ua, the labor market in April 2023 practically returned to the indicators of 2021. Competition among job seekers has significantly decreased and practically reached the pre-war level. Nevertheless, competition is the highest for positions with the possibility of remote work.

On the one hand, a large part of Ukrainians went abroad, several million people became internally displaced persons. However, almost 50% of IDPs have still not been able to find a job. This is due to a sharp discrepancy between the skills of workers and the requirements of employers.

To sum up, estimates presented in this study are essential in the discussion about the contemporary influence of labor market on automotive development trends. We find that large-scale immigration from Ukraine due to the war is a significant factor that define labor potential and opportunities for further growth of the industry.

CHAPTER 2

CURRENT STATE AND DEVELOPMENT TRENDS OF THE AUTOMOTIVE MARKET IN UKRAINE

2.1. Overview of the automotive market in Ukraine for 2016–2021

The automotive market is one of the most dynamic market in Ukraine. Cars are durable goods, the demand for which is determined by such groups of factors:

– *Objective factors*: household income, car prices, exchange rate, interest on loans, interest rates on deposits;

– *Subjective factors*: consumer perception of the current situation, consumer sentiment index, willingness to take credit, expectations of change in the future etc.

External factors that shape the dynamics of the automotive market in Ukraine include:

- a significant reduction in all macroeconomic indicators (falling GDP, declining purchasing power, real wages, income and employment) affects the reduction of car sales;

- lack of a clear lending mechanism that can significantly expand the demand for cars in modern conditions (the terms of the vast majority of loan proposals remain short-term (1–3 years), and initial payments range from 30 to 70% of the cost of the car);

- the negative factor is the lack of a clear state target economic program for the development of the automotive industry and regulation of the car market (the share of the Ukrainian car market is declining; the domestic automotive industry is not receiving the necessary investment in development);

- additional competitive pressure on the new car market is exerted by the used car market (the development of the secondary car market allows national dealers to expand the service segment of their activities and improve the quality of cars, extending their life cycle and minimizing the burden on the environment);

- the main market trends in the car trade are: reducing the number of car dealers; transition to the system of sales "to order"; intensive development of the trade-in scheme, which allows you to buy a new car in exchange for an old one with a surcharge; increase in the number of environmentally friendly models (the cost of operating a "green car" up to 5 times lower than cars on traditional fuel, maintenance is slightly more expensive, but maintenance is cheaper).

Domestic production does not satisfy consumption, as sales of automotive products exceed production. Domestic production virtually ceases to function due to high competition with imported producers. Therefore, the important role in the sale of automotive products is played by trade infrastructure companies engaged in the trade of cars, which are divided into distributors, dealers, sub-dealers.

Car distributors can be divided into two groups: those that work with a wide range and those that specialize in the sale of cars of certain brands. At the time of the study, more than thirty companies sell domestic and imported cars and are dealers in the market.

The first group of distributors includes PJSC "Autoinvestbud" (AIS), PJSC "UkrAVTO" and PJSC "Bogdan" (ceased to exist in 2020), specializing in the sale of cars of several major foreign European and Asian manufacturers, as well as domestic cars production. The first group of distributors includes PJSC "Autoinvestbud" (AIS), PJSC "UkrAVTO" and PJSC "Bogdan" (ceased to exist in 2020), specializing in the sale of cars of several major foreign European and Asian manufacturers, as well as domestic cars production. PJSC "UkrAVTO" is currently the largest in terms of sales and controls about 30% of the Ukrainian passengers' car market. PJSC "AIS" and PJSC "Bogdan" accounted for 10% of the market. Thus, three corporations control about 50% of the passenger car market, which significantly increases the risk of monopolization of the Ukrainian market.

The second group includes companies such as PJSC Concept AUTO, which specializes in the sale of Toyota and Lexus cars, and ALFA automotive group, which sells Mazda cars. In addition, there are mono-profile (trend) objects of trade infrastructure and so-called multi-profile (3S centers) in the market, which, in addition to car sales, provide various services to customers, including those who bought cars in this center. It should be noted that completely independent distribution companies and companies that are part of corporate structures mediate the automotive market. The first include: LLC "Formula Motor Ukraine" (brands "Seat", "Lada"), JV "Auto Trading" (brands "Skoda", "Volkswagen", "Seat", "Audi", "Nissan"), LLC "Car World" (brands "Skoda", "Mitsubishi", "Fiat"). The second ones include "Ukrainian Automobile Holding" (brands "Lada", "KIA" and others), which were directly related to the corporation PJSC "Bogdan", LLC "UkrAvtoZAZ-Service" (brands "Opel", "Chevrolet"), LLC "SI. EY. Automotive" (brand "Chery"), part of the structure of PJSC "UkrAVTO".

Thanks to extensive dealer networks, that sales growth is ensured worldwide. Typically, automotive leaders sell their products through their own dealer networks, although significant sales are based on partnerships and dealership agreements. Coverage of the dealer network of Ukrainian regions is shown in Figure 2.1.

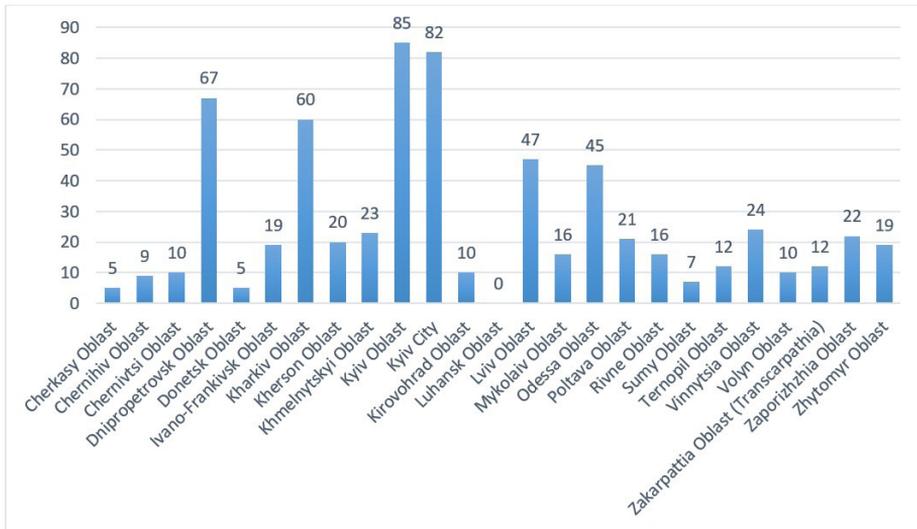


Figure 2.1. Regional distribution of the car dealer network in Ukraine in 2021

UkrAvto Corporation has a network of car service centers that provide customers with a full range of services from car sales to warranty and post-warranty service, currently the largest in Ukraine and has 54 centers. Due to the scale, the car owner has the opportunity to receive service in all regional and large district centers.

Winner Ukraine is the second largest dealer network. It has 51 dealerships, including brands:

1) the **Ford** brand – 25 dealerships in Vinnytsia, Dnipro, Zhytomyr, Zaporizhzhia, Ivano-Frankivsk, Kyiv, Kramatorsk, Kremenchug, Lviv, Mariupol, Mukachevo, Mykolaiv, Odessa, Poltava, Rivne, Ternopil, Kharkiv, Kherson, Herson, Cherkasy, Chernihiv, Chernivtsi);

2) the **Volvo** brand – 9 dealerships (Dnipro, Kyiv – 3 dealerships, Lviv, Odessa, Poltava, Rivne (only service partner), Kharkiv, Kherson);

3) the **Jaguar** brand – 6 dealer centers (Dnipro, Kyiv – 2 dealers and 3 services, Lviv, Odessa, Kharkiv);

4) the **Land Rover** brand – 6 dealerships (Dnipro, Kyiv – 2 dealers and 3 services, Lviv, Odessa, Kharkiv);

5) the Porsche brand – 5 dealerships (Dnipro, Kyiv, Lviv, Odessa, Kharkiv).

The number of divisions distributes the brands: **Volkswagen** – 30 divisions (including 4 separate service partners), **Audi** – 11 (of which 2 – service partners) and **SEAT** – 17 (including 11 service partners). Representation reflects consumer demand, as well as the desire to provide their customers with official quality service in accordance with company standards.

Ukr-Uz Auto, which represents the **Ravon** brand, has 42 dealerships in all regions of Ukraine, except Zakarpattia. Hyundai Motor Ukraine currently has 36 official service centers. They are located in the following cities: Vinnytsia, Dnipro, Zhytomyr, Zaporizhzhia, Ivano-Frankivsk, Kyiv, Kramatorsk, Kremenchuk, Kropyvnytskyi, Lutsk, Lviv, Mariupol, Mukachevo, Mykolaiv, Odessa, Poltava, Pavlograd, Sumy, Ternopil, Kharkiv.

Renault Ukraine has 35 dealerships, each of which provides after-sales service (ie has a service station). They are located in 26 cities: Bila Tserkva, Vinnytsia, Dnipro, Zhytomyr, Zaporizhzhia, Ivano-Frankivsk, Izmail, Kramatorsk, Kyiv, Kremenchuk, Kryvyi Rih, Kropyvnytskyi, Lviv, Lutsk, Mykolaiv, Mariupol, Odessa, Poltava, Rivne, Ternopil, Kharkiv, Kherson, Khmelnytsky, Cherkasy, Chernihiv, Chernivtsi.

Toyota Ukraine has 31 dealerships from the Toyota brand and 6 dealerships from the Lexus brand. Toyota centers operate in Bila Tserkva, Vinnytsia, Dnipro 2, Zhytomyr, Zaporizhzhia, Ivano-Frankivsk, Kyiv 3, Kirovohrad, Kremenchuk, Kryvyi Rih, Lutsk, Lviv, Mariupol, Mykolaiv, Poltava, Odessa 3, Rivne, Sumy, Ternopil, Uzhhorod, Kharkiv 2, Kherson, Khmelnytsky, Chernihiv and Chernivtsi. According to the Lexus brand – in Dnipro, Kyiv, Lviv, Odessa and Kharkiv.

Nissan Motor Ukraine, Nissan's dealer network in Ukraine, currently has 31 dealerships, which allows the brand to be represented in almost all regional centers of the country. The official Infiniti service is available in Kyiv, Odesa, Dnipro, Kharkiv and Khmelnytskyi.

AIS Group of Companies with a wide brand portfolio is represented in almost all regions of Ukraine. The service network is represented by both own service stations and partner ones. In the period 2018-2019, several new stations were opened. Today, AIS is represented in 19 oblasts, 23 cities (mostly oblast centers, but there are also stations in small towns), and the number of service stations is over 30.

MMC currently has 29 dealerships for the sale and maintenance of Mitsubishi cars. They are located in Vinnytsia, Dnipro, Zhytomyr, Zaporizhia, Ivano-Frankivsk, Kyiv 4, Kramatorsk, Kryvyi Rih, Kropyvnytskyi, Lutsk, Lviv, Mukachevo, Mykolayiv, Odesa 2, Poltava, Rivne, Ternopil, Uzhhorod, Kharkiv 2, Kherson, Kherson, Cherkasy, Chernihiv, Chernivtsi.

The company "AWT Bavaria Ukraine" has 27 dealerships, including BMW – 19, MINI – 6, Rolls-Royce – 1, Aston Martin – 1. The BMW centers are located in Vinnytsia, Dnipro, Zhytomyr, Zaporizhia, Ivano-Frankivsk, Kyiv, Kramatorsk, Kremenchug, Lviv (2), Mykolaiv, Odessa, Poltava, Rivne, Uzhhorod, Kharkiv, Kherson, Khmelnytsky. MINI brand is located in Dnipro, Kyiv, Lviv, Odessa, Kharkiv, and Rolls Royce and Aston Martin are in Kyiv.

Today **Mazda** has 21 dealerships under the Mazda brand: Kyiv (3), Dnipro (2), Kharkiv (2), Vinnytsia, Zhytomyr, Zaporizhia, Ivano-Frankivsk, Lviv, Mykolaiv, Odessa, Poltava, Rivne, Ternopil, Khmelnytsky, Kherson, Cherkasy, Chernivtsi.

Haval currently has 12 dealerships in Zaporizhia, Ivano-Frankivsk, Odesa, Kyiv 2, Kropyvnytskyi, Lviv, Lutsk, Poltava, Sumy, Kharkiv, Kherson, Cherkasy, and Chernihiv. In general, the distribution of the existing dealer network in Ukraine is shown in Figure 2.2.

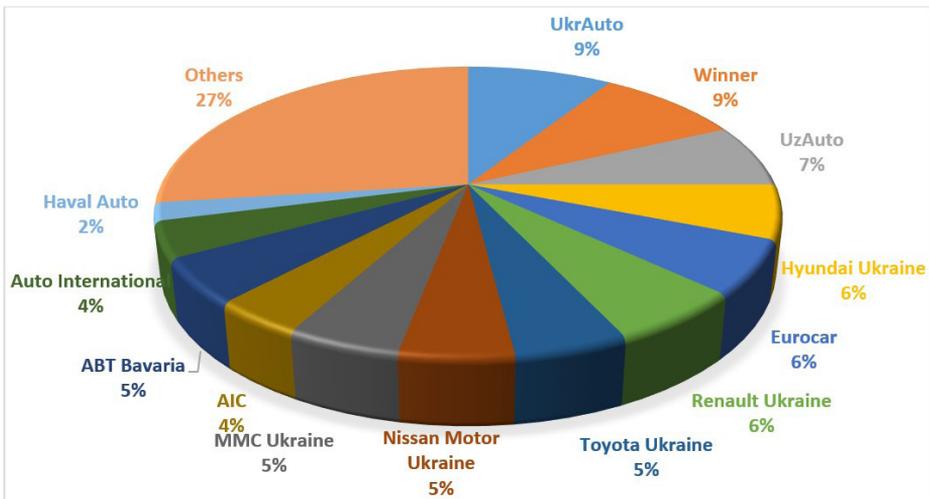


Figure 2.2. The main operators of the car market in Ukraine by the number of dealer network in 2021

Considering the range of passenger car sales, it should be noted that until 2016, more and more cars were sold in the high and middle price segments, while sales of cars in the low-price segment were constantly declining. According to leading domestic car dealers, the decline in sales in 2016 affected most cars in the higher price segment, while the decline in sales in the low-price segment was less.

The distribution of regional markets by sales (in thousands of euros) and share of sales in total car sales revenue in Ukraine in 2020 compared to 2016 are presented in Figures 2.3-2.4.

The red bars in both figures show the revenue from the sale of new cars in each region. Thus, if in the Zakarpattia region the turnover from car sales amounted to 27.29 million euros in 2016 and to 38,5 million euros on 2020, then in Kyiv – 2321.4 and 2578,8 million euros respectively.

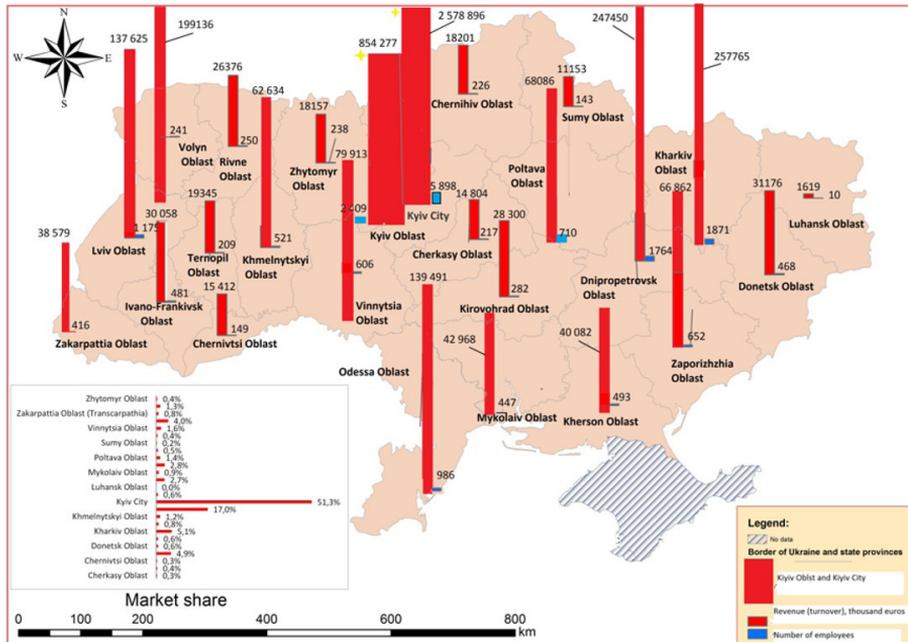


Figure 2.3. Revenue (turnover) from car sales (TEUR) in Ukraine in the regional context and the share of regions in the formation of revenue (%) in 2020

The share of each region in total sales is indicated in the lower left rectangle. The above data show that in 2016, almost 63% of all new car sales were in the city of Kyiv, and Khmelnytsky region accounted for 12%

of this market. In 2021, the share of Khmelnytsky region increased to 17%, and the city of Kyiv decreased to 51.3%.

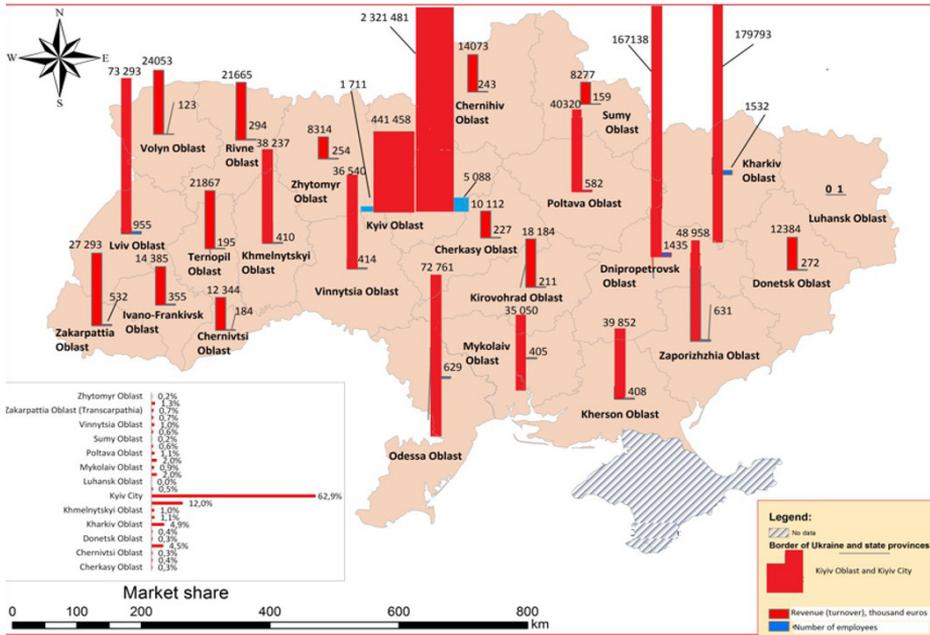


Figure 2.4. Revenue (turnover) from car sales (TEUR) in Ukraine in the regional context and the share of regions in the formation of revenue (%) in 2016

The figures also show the number of employees involved in this area. From these data it is possible to draw conclusions about the effectiveness of staff. Thus, we can state that the southern regions of Ukraine with fewer staff can provide more car sales and generate more revenue. For example, in Odesa Oblast, revenue of € 72.7 million in 2016 was provided by 629 employees, while in Lviv Oblast, revenue of € 73.3 million was generated with a total of 955 employees. The same situation is in 2020 – revenue of € 139,49 million with 986 employees in Odesa Oblast looks pretty much better than Lviv Oblast, where revenue of € 137,6 million was with a total of 1175 employees.

In general, since 2016, there is a growing trend in the number of new cars sold in Ukraine (Table 2.1). The exception is 2020, when the results of the year due to quarantine measures in the world and particular in Ukraine, the number of sales decreased by 3.3% compared to the previous year.

Table 2.1. Dynamics of car market capacity in Ukraine in 2016–2020

Indicators	Years					Deviation 2020/2016	
	2016	2017	2018	2019	2020	+/-	%
Domestic production, <i>thousand units</i>	4,5	7,8	5,8	6,4	4,3	-0,2	-105%
Imported new cars, <i>thousand units</i>	65,5	80,5	78,4	83,0	85,5	+20,0	-69%
Import penetration rate, %	93	91	93	93	95	+3,0	–
Imported used cars, <i>thousand units</i>	22,2	70,8	146,9	440,2	385,9	+363,7	+1538%
Total market, <i>thousand units</i>	92,2	159,1	231,1	529,6	475,7	+383,5	+316%

The increase in market capacity was due to actions that facilitated the preferential import of cars to the secondary market. In particular, the situation changed dramatically in 2015, when on August 1, 2015 the Law 1389-VIII "On Amendments to Subsection 5 of Section XX of the Tax Code of Ukraine to Stimulate the Development of the Used Vehicles Market" came into force. This Law introduced a reduction in the excise tax rate on the import of used vehicles. This contributed to the fact that since 2017 the import and registration of used cars in Ukraine has intensified and their market share has increased from 24.1% in 2016 to 81.1% in 2020. At the same time, the share of imported new cars decreased by market from 71.1% in 2016 to 18% in 2020 (Figure 2.5).

In 2021, the total number of new cars sold on the Ukrainian market amounted to 103,650 units, which is 22% more than in 2020. This is the highest figure since 2013.

The leaders in sales in 2016–2021 were Toyota and Renault. Kia took third place in the ranking, replacing the Volkswagen (Table 2.2). The year 2021 turned out to be quite successful for the automobile market of Ukraine. However, the market for new cars in Ukraine has been at a minimum since the 2014 crisis. The Ukrainian economy is recovering year after year, while Ukrainians' purchasing power is growing.

The annual result of 104,000 new cars, although a record for the last 8 years, is small compared to EU countries. For example, in neighboring Poland in 2021 new cars were sold four times more.

Even in general, the last year was easier for the global car industry than the quarantine year 2020, but at the same time it was very difficult. The

main problem in restoring the demand for cars was their shortage due to lack of components. According to independent estimates, due to the lack of semiconductors, the production shortage amounted to about 4 million cars. In Ukraine, the shortage of new cars has been avoided. Although delivery time have increased for certain models and brands, dealers have generally managed to meet the needs of customers in 2021.

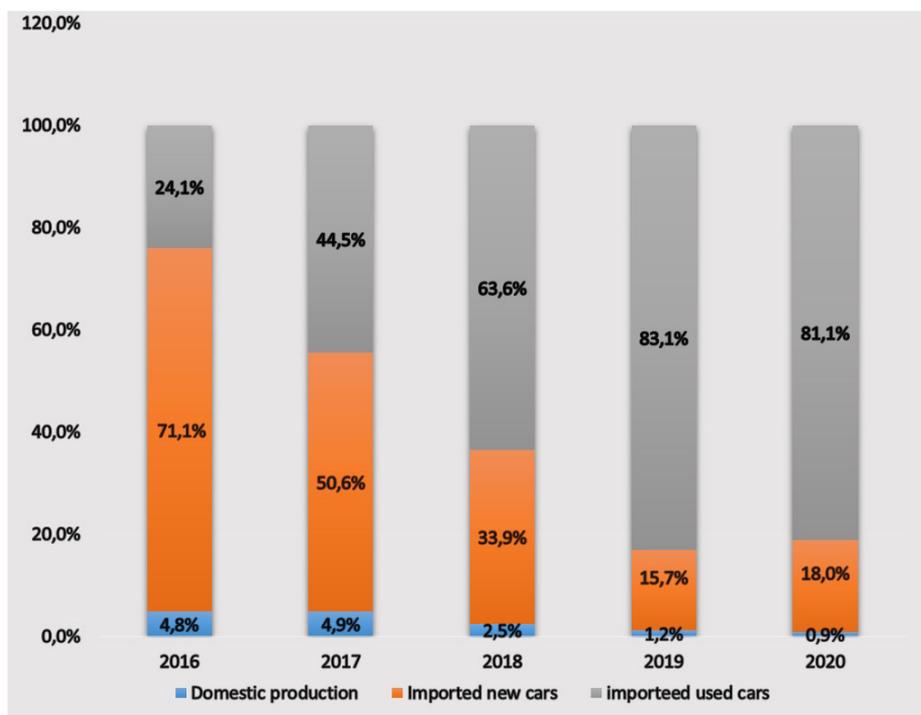


Figure 2.5. Share of used and new cars in the automotive market of Ukraine in 2016–2020, %

Table 2.2. Car sales leaders in Ukraine in 2016–2021, units

Place of sellers by years	Years, name of sellers and number of units					
	2016	2017	2018	2019	2020	2021
1	TOYOTA 8 832	TOYOTA 11 069	TOYOTA 11 645	RENAULT 14 603	RENAULT 14 360	TOYOTA 15 272
2	RENAULT 6 389	RENAULT 8 671	RENAULT 8 722	TOYOTA 12 570	TOYOTA 13 315	RENAULT 13 475
3	VW 5 001	VW 6 525	VW 6 183	KIA 7 586	KIA 6 089	KIA 9 138

Table 2.2 (continued)

Place of sellers by years	Years, name of sellers and number of units					
	2016	2017	2018	2019	2020	2021
4	SKODA 4 145	SKODA 5 675	NISSAN 5 982	SKODA 6 231	SKODA 5 061	SKODA 6 172
5	KIA 3 982	KIA 5 320	SKODA 5 403	NISSAN 5 333	NISSAN 3 834	NISSAN 4 815
6	FORD 3 612	NISSAN 4 757	HYUNDAI 4 979	HYUNDAI 5 099	HYUNDAI 4 031	HYUNDAI 4 797
7	NISSAN 3 444	HYUNDAI 4 356	KIA 4 881	VW 4 675	CHERRY 1 974	CHERRY 4 653
TOTAL	65 562	82 248	81 937	88 437	85 450	103 650

2.2. Automotive manufacturing trends by region of Ukraine

An integral and strategically important part of Ukrainian machine-building complex and industry is the automobile industry, represented mainly by passenger cars. Decades ago, Ukraine had a powerful automotive complex, occupying a leading position among automakers in Eastern Europe. Unfortunately, today we have a situation when Ukraine's automotive industry is in a difficult situation due to the crisis of domestic potential and the intense negative impact of numerous environmental factors.

Ukraine's automotive industry has declined significantly since independence, and the periodization of this process can be described as follows:

1. The automotive potential of Ukraine was laid in Soviet times. Until 1991, the automobile complex of Ukraine included 4 automobile plants: for the production of passenger cars – Zaporizhia and Lutsk car plants; for the production of trucks – Kremenchug Automobile Plant; for the production of buses – Lviv Bus Plant. The projected annual capacity was: Zaporizhzhya Automobile Plant – 300–350 thousand units, Lutsk Automobile Plant – 17 thousand units, Kremenchug Automobile Plant – 35 thousand units and Lviv Automobile Plant – 16 thousand units. Automobile plants served more than 60 enterprises of Ukraine, which produced components, and more than 300 enterprises of various branches of the USSR. The loss of former markets and the lack of understanding of the new business conditions led to the achievement in 2000 of a historic low of production activity in the automotive industry of Ukraine.

2. The impetus for the revival, especially of the automobile industry, was the establishment of partnerships with South Korean automakers

Daewoo, Kia, Hyundai on the joint production of cars and the organization of car assembly activities on the basis of Ukrainian car plants. In the early 2000s, investors invested more than \$1 billion in the development of such modern enterprises as:

1) *Eurocar plant* in Transcarpathia – a project designed to produce up to 100 thousand cars a year;

2) *Bogdan Corporation plant* in Cherkasy – a new modern enterprise with a full production cycle of up to 150 thousand cars per year;

3) Renovation and large-scale re-equipment of the *Zaporozhye Automobile Plant* (150 thousand cars per year) and a number of other industries.

More than 37,000 people worked at car assembly plants alone. The share of the industry in total GDP reached 4%, and its export revenue amounted to almost USD 900 million.

3. 2008 was a fatal year for the domestic automotive industry. In connection with Ukraine's accession to the World Trade Organization, preferences for domestic automakers were abolished and the rate of import duty on imported cars was reduced. The automobile complex of Ukraine was not ready to compete effectively with foreign automobile concerns. Coincidentally, it was at this time that Ukraine's economy was negatively affected by the global financial crisis. As a result, in 2009 the volume of car production in Ukraine decreased by 83.6% – this is the most significant decrease in car production in the world.

4. The industrial engineering sector has been significantly affected by the outbreak of COVID-19. At the same time, the pandemic has revealed that engineering companies need digital processes with a high degree of autonomy to ensure uninterrupted production during the crisis.

5. The current war as unprovoked and unjustified military aggression of Russia against Ukraine started in February 2022. The military conflict between Ukraine and Russia has led to the severance of economic ties with the countries, and as a result, the cessation of car production. This not only negatively affected the domestic automotive industry, but also negatively affected the forecasts of the world production of passenger cars (Wayland M., 2022). The conflict has caused logistical and supply chain problems as well as parts shortages of critical vehicle components. The problems add to an already strained supply chain due to the coronavirus pandemic and an ongoing shortage of semiconductor chips.

Up to nowadays, the automotive industry of Ukraine is represented by only six companies – PJSC "ZAZ" (since 2016 it is called PJSC

"Promavtoinvest"), Corporation "Bogdan", PJSC "Eurocar", Corporation "Etalon", PJSC "Bus Chasivoyarsky Plant", PJSC "Cherkasy bus". PJSC Eurocar and PJSC ZAZ remained the only car manufacturers, producing 7,377 cars in 2021 (Table 2.3).

Table 2.3. Dynamics of manufactured cars in Ukraine in 2016–2021, units

Types of cars	Years						Deviation 2020/2016	
	2016	2017	2018	2019	2020	2021	+/-	%
Passenger Cars	4 340	7 296	5 660	6 254	4 202	7 342	+3 002	+69
Commercial Vehicles (CV)	123	486	132	136	51	35	-88	-72
TOTAL	4 463	7 782	5 792	6 390	4 253	7 377	+2 914	+65

In general, for the period 2016–2021, the total number of manufactured cars increased by 65.3%, with an increase in passenger car production (+ 69.2%) and a significant decrease in commercial vehicle production (-71.5%).

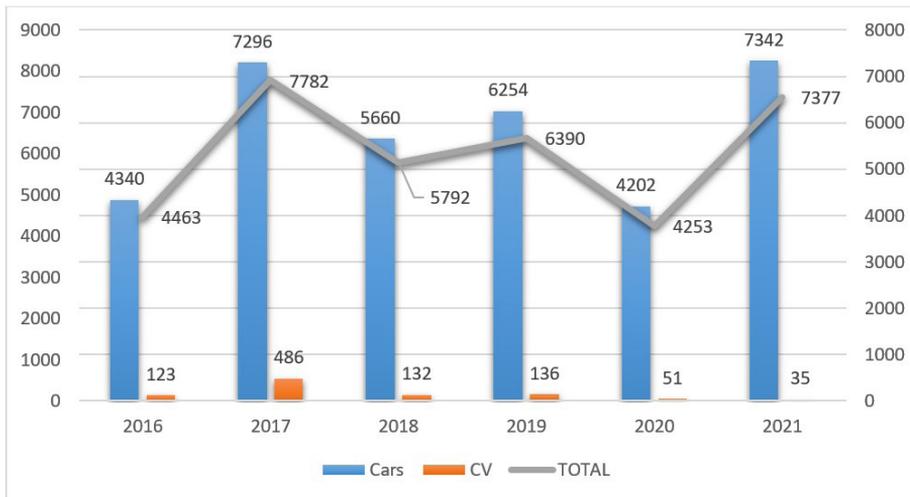


Figure 2.6. Dynamics of manufactured cars in Ukraine in 2016–2021, units

As of 2021, the production capacity of automobile enterprises in Ukraine amounted to about 250,000 cars per year, including large-scale assembly, in particular, ZAZ (150,000 units), Eurocar (50–100,000 units), Cherkasy Bus (20,000 units). At the same time, since 2008 part of the pro-

duction capacity – more than 200 thousand cars a year – has been liquidated. These are KrASZ (40,000 units), Vipos (45,000 units), Illichivsk Automobile Units Plant (50,000 units), KrymavtoGAZ (5,000 units), Bogdan Corporation (50,000 units).

Bogdan is an automobile corporation, one of the main operators of the automobile market of Ukraine. In July 2021, the corporation was declared bankrupt and liquidation proceedings were initiated. In the analysis of manufacturers, the data of Bogdan Corporation were used for the period 2016–2020.

For now, such enterprises as PrJSC "Zaporizhzhya Automobile Building Plant" and PrJSC "Eurocar" are currently engaged in the production of passenger cars in Ukraine.

Most manufacturers are involved in the field of bus construction: PrJSC "Zaporizhzhya Automobile Plant" (PrJSC "ZAZ"), Corporation "Bogdan", PrJSC "Boryspil Automobile Plant", PrJSC "Chasivoyarsky Buses", PrJSC "Chernihiv Automobile Plant" and PJSC "Cherkasy Bus". The latter one also produces commercial vehicles (Figure 2.7).

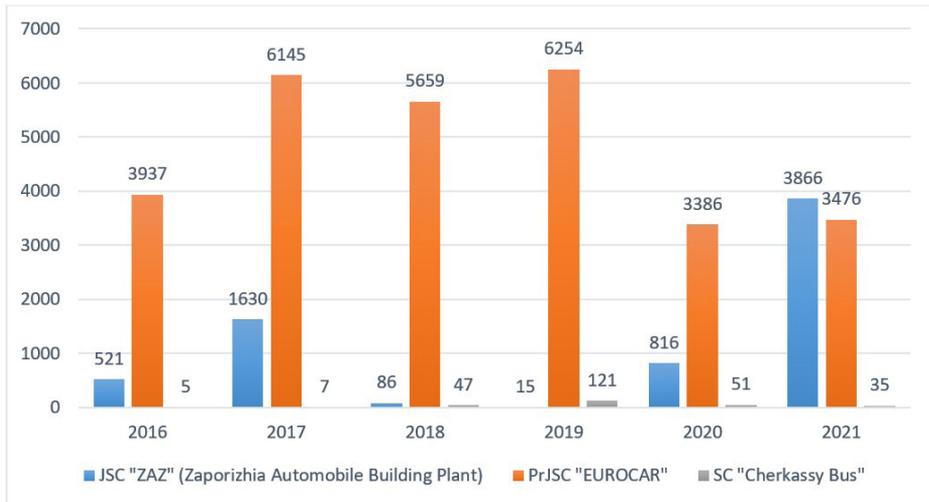


Figure 2.7. Production of cars by car manufacturers in Ukraine in 2016–2020

PrJSC "ZAZ" is the only enterprise in Ukraine that has a full cycle of passenger car production, which includes stamping, welding, painting, body equipment and car assembly. The main activities are large-scale (SKD) and small-unit (MKD) assembly of cars. The company has created and

is constantly improving a qualitatively new modern high-tech production. The company manufactures cars, trucks and buses. Resumption of car production at the plant "ZAZ" began in 2020 and in 2021 the number of cars produced by him prevailed over the production of PJSC "Eurocar" – 3866 units against 3476 units (Figure 2.7).

During the crisis of 2014-2015, PrJSC "ZAZ" (still public at that time) proved to be insolvent. Lack of clear anti-crisis programs and mechanisms, insufficient attention to development issues had led to the deterioration of the enterprise. Push factors of the company's difficult situation were the fall of the domestic market of new cars, the loss of foreign markets, aggressive environment. Debt liabilities on foreign currency loans had increased many times due to the jump in the dollar. 2015–2017 were unprofitable for the company. The bankruptcy case of ZAZ PJSC was initiated in December 2018. The Commercial Court of Zaporizhia Region approved the register of creditors' claims in that case. As a result of writing off the debt of UAH 1.4 billion in 2018 by Prominvestbank, PJSC ZAZ received a net profit of UAH 1.068 billion.

In the framework of the initiated bankruptcy case, the Commercial Court of Zaporizhia region on March 11, 2019 ruled on the rehabilitation of PrJSC "ZAZ" (term – 6 months). The content of the approved rehabilitation plan was to bring the company out of bankruptcy as soon as possible, to preserve the infrastructure of production facilities as much as possible, to resume passenger car production activities.

The main reasons that led to the introduction of financial rehabilitation at PJSC "ZAZ" were:

- difficult financial and economic condition of the enterprise;
- a sharp decline in the domestic market for new vehicles;
- loss of markets abroad;
- aggressive market environment and debt obligations on foreign currency loans, which had increased many times due to the sharp devaluation of the national currency.

During 2018, PrJSC "ZAZ" actually reduced production by 13 times – up to 131 units, mainly due to the almost complete cessation of production of cars (one car was produced against 1151 in 2017). In addition, the production of commercial vehicles decreased 5.6 times – to 85 units. In 2020, the Zaporozhye Automobile Plant again began mass production of cars, and his salvation was the signing of a contract with the Renault

Group. Prior to the start of the project, PJSC ZAZ underwent a large-scale modernization to meet the international quality standards of the Renault Group. The plant has implemented the Alliance Production Way quality control system used by Renault Nissan Mitsubishi. The plant launched the production of the Renault Arkana crossover in 2020 – the line works on the principle of large-unit assembly of machine kits. In September 2020, for the first time since the beginning of the year, ZAZ produced 248 cars, in total for 2020 – 816 cars and for 2021 – 3866 (Figure 2.7, Table 2.4).

Table 2.4. Structure of passenger car production by major manufacturers in Ukraine in 2016–2021

Corporations	Years						2021/2016	
	2016	2017	2018	2019	2020	2021	+/-	%
JSC "ZAZ" (Zaporizhzhia Automobile Building Plant)	521	1 630	86	15	816	3 866	3 345	642,0
Share in total, %	11,7%	20,9%	1,5%	0,2%	19,2%	52,4%	40,7%	–
PrJSC "EUROCAR"	3 937	6 145	5 659	6 254	3 386	3 476	-461	-11,7
Share in total, %	88,2%	79,0%	97,7%	97,9%	79,6%	47,1%	-41,1%	–
PJSC "Cherkassy Bus"	5	7	47	121	51	35	30	600,0
Share in total, %	0,1%	0,1%	0,8%	1,9%	1,2%	0,5%	0,4%	–
TOTAL	4 463	7 782	5 792	6 390	4 253	7 377	2 914	65,3

Another powerful company, engaged in the production of passenger cars in Ukraine – PrJSC "Eurocar". This company carries out full-scale production of cars and combines the main production processes of welding, body painting and installation. Production capacity is designed to produce 100 thousand cars a year, and allows increasing the level of car production localization with further prospects for export orientation. The total investment for all years of the company's existence was USD250 million. The company's share in car production in 2016 was 88.2%, but by 2021 it decreased to 47.1%, which is due to the intensification of car production at the plant "ZAZ" (Table 2.4).

PrJSC "Eurocar" has the following flexible competitive advantages, which were identified at the stage of formation and received further development:

- production and sale of Skoda cars and other brands of the Volkswagen Group;

- low labor costs of workers and employees of the enterprise, with their high qualifications;

- integrated system of flexible enterprise management in accordance with international standards ISO 9001: 2008 and certification for compliance with OHSAS 18001: 2007 standards;

- highly integrated channels and points of sale of manufactured cars throughout Ukraine through the group "Atoll Holding", which includes the company;

- flexible production capacity of the plant is 80 thousand cars per year (large assembly – 30 thousand cars, small assembly – 50 thousand cars per year) with high-capacity development and high adaptation to fluctuations in customer demand;

- flexibility of the production process is provided by modern technology, including modern equipment and lines "Transsystem" (Poland), "Hropinska Mechanical Engineering" (Czech Republic), "Eisenmann" (Germany) and other leaders in the manufacture of equipment for car production, as well as automated control at all stages production operations;

- railway terminal of PJSC "Eurocar" allows to provide transport services for the European Union, CIS countries and provides flexibility of external logistics processes (the plant is located two kilometers from the border with Hungary, Slovakia and close to Solomonovo Technopark, which reduces costs for delivery by machine and increase performance on emerging product sales needs);

- high integration with Solomonovo Technopark allows to master the production of new product models with minimal costs and to ensure the sustainability of existing competitive advantages and the development of new ones. Constant attention to the competitive advantages of PJSC "Eurocar" allowed to reach new levels of competition in the domestic market.

As of 2021, the entire model range of ŠKODA cars was being produced, but due to the lack of large markets, the company's capacity is used by only up to 4-5%.

It should be noted that the automotive industry of Ukraine is represented not only by car assembly companies, but also by companies producing components and parts for vehicles. This segment generates 7.7% of the value added of the machine-building industry of Ukraine. In 2020, a total of 321 business entities were functioning there with the number of employees over 51 thousand personals (Table 2.5).

**Table 2.5. Dynamics of the number of employees
in the automotive industry of Ukraine in 2016–2020**

Indicators	Years					2020/2016	
	2016	2017	2018	2019	2020	Абс.	%
Number of employees in full-time equivalent units	42 777	48 279	51 362	53 419	51 008	+8 231	+19,2
Growth rate, %	–	+12,9%	+6,4%	+4,0%	-4,5%	–	–

Sales in the segment in 2020 amounted to USD 512 million, while exports – USD 1 297 million, or 254% of production. The excess of exports over sales is due to the fact that most companies work on the scheme of production on tolling raw materials.

Accordingly, the volume of sales reflects only the cost of services provided, while exports – the full cost of production. The segment is characterized by an average level of value added in production (33.0% in 2020), with a tendency to decrease in recent years (from 47.6% to 33.0% in 2016–2020). This is due to the increasing importance of companies in the production of automotive cables, which actually carry out toll processing of imported raw materials or components. The main element in the production of components and parts for vehicles is electrical and electronic equipment for vehicles (78%).

Enterprises in this segment are concentrated in almost all oblasts, the largest of which are Lviv, Zakarpattia and Volyn oblasts, which together account for about half of the production volumes and employees of the industry (Table 2.6).

The largest companies in this segment are subsidiaries of multinational corporations: Yazaki Ukraine LLC, Leoni Waring Systems UA GmbH LLC, Kromberg & Schubert Ukraine LU LLC, SE Bordnetze–Ukraine LLC, Fujikura Automotive Ukraine Lviv LLC, Kostal Ukraine LLC and GENTHERM Ukraine LLC, etc. The majority of foreign automotive manufacturers are concentrated in Western Ukraine, which is primarily due to its logistical proximity to end users (Figure 2.8).

It is worth noting such a powerful company that operates in Transcarpathia, as Yazaki Ukraine LLC. This business entity is a part of the international corporation Yazaki, which manufactures products in the automotive industry. Yazaki Ukraine was established in 2002. The plant is located near the city of Uzhhorod, close to the border. Favorable geographical location is one of the conditions for establishing a company in Ukraine, as all the company's products are exported to European countries. The company's customers are such leaders in the automotive industry as JLR and BMW.

Table 2.6. The structure of income and employment in the automotive industry of Ukraine by region in 2016–2020

Regions	Share in income, %					2020/2016, %	Proportion of employed, %					2020/2016, %
	2020	2019	2018	2017	2016		2020	2019	2018	2017	2016	
Cherkasy Oblast	1,2	0,9	1,0	0,7	0,6	0,7	0,6	0,5	0,5	0,4	0,2	
Chernihiv Oblast	3,4	3,8	5,6	4,9	3,7	-9,7	2,3	3,1	3,3	2,9	-0,6	
Chernivtsi Oblast	1,0	1,4	1,0	0,5	0,0	2010,9	2,6	3,0	2,5	1,2	0,0	2,6
Dnipropetrovsk Oblast	1,2	5,0	4,7	2,1	3,4	-63,5	1,0	1,7	1,5	1,4	1,5	-0,5
Donetsk Oblast	0,3	0,3	0,5	0,6	0,8	-64,2	0,3	0,3	0,3	0,3	0,6	-0,2
Ivano-Frankivsk Oblast	2,5	2,5	2,3	2,8	2,4	3,6	7,2	7,0	5,5	6,9	6,2	1,0
Kharkiv Oblast	0,7	0,6	0,8	0,8	1,2	-44,9	0,6	0,7	0,7	0,8	0,8	-0,2
Kherson Oblast	0,0	0,1	0,3	0,6	0,9	-97,6	0,1	0,3	0,6	0,7	0,7	-0,7
Khmelnitskiy Oblast	1,0	1,0	1,2	1,3	1,5	-32,8	2,5	2,4	2,5	2,7	2,9	-0,4
Kyiv Oblast	12,6	9,5	8,9	8,9	7,4	69,8	3,2	3,0	3,3	3,2	3,4	-0,2
Kyiv City	7,1	5,9	4,8	6,8	5,4	32,6	2,2	2,0	1,9	1,8	1,3	0,9
Kirovohrad Oblast	0,1	0,1	0,3	0,3	0,4	-67,9	0,2	0,3	0,3	0,3	0,4	-0,2
Luhansk Oblast	0,1	0,1	0,1	0,2	0,2	-11,6	0,3	0,2	0,2	0,2	0,2	0,1
Lviv Oblast	19,3	20,3	14,1	12,7	13,2	46,9	22,3	21,8	22,7	22,8	22,9	-0,7
Mykolajiv Oblast	0,0	0,0	0,0	0,0	0,1	-63,1	0,0	0,1	0,1	0,1	0,1	0,0
Odessa Oblast	1,6	1,0	1,3	2,5	2,2	-28,3	0,6	0,5	0,5	0,5	0,4	0,2
Poltava Oblast	2,7	2,9	4,3	6,1	5,2	-49,1	2,3	2,5	3,1	3,3	3,7	-1,5
Rivne Oblast	0,4	0,3	0,4	0,5	0,5	-32,2	0,2	0,2	0,2	0,3	0,3	-0,1
Sumy Oblast	0,4	0,4	0,4	0,4	0,5	-17,7	0,3	0,3	0,3	0,3	0,3	0,0
Ternopil Oblast	7,6	6,0	5,5	4,7	4,4	73,6	13,8	11,9	10,3	9,1	9,4	4,4
Vinnitsia Oblast	2,1	2,1	1,8	0,7	0,8	173,6	4,2	3,9	3,2	1,1	1,0	3,2
Volyn Oblast	10,4	8,9	8,5	8,4	10,2	1,8	11,5	11,2	11,0	13,1	13,4	-1,9
Zakarpattia Oblast (Transcarpathia)	18,1	19,9	25,7	26,7	28,1	-35,3	12,5	13,7	15,3	16,2	18,9	-6,4
Zaporizhzhia Oblast	2,7	3,0	2,6	3,9	5,2	-47,4	2,7	2,8	3,3	4,7	5,1	-2,4
Zhytomyr Oblast	3,4	4,0	3,6	2,8	1,9	82,5	6,4	6,6	7,1	5,3	3,1	3,3
Ukraine	100,0	100,0	100,0	100,0	100,0	-	100,0	100,0	100,0	100,0	100,0	-

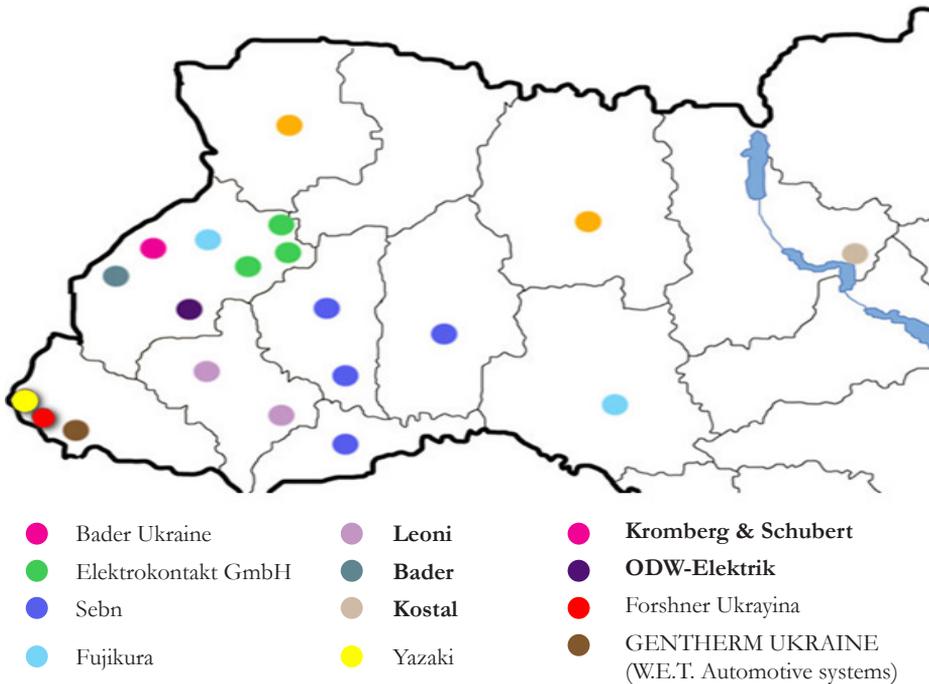


Figure 2.8. Allocation of the biggest foreign components' manufacturers in Western Ukraine

Uzhhorod also has a foreign-invested enterprise, Ungwire (Hungary), which produces finished car cable products. Ungwire carries out production activities on the leased areas of the Uzhhorod Mechanical Plant. Since 2010, the company is constantly developing and improving working conditions, motivation system, infrastructure and production. As a result, the company produced about 159 different types of finished products for VOLVO cars, in total production in 2020 amounted to more than 1.3 million units.

Currently, there are 22 global and regional manufacturers of car parts in Ukraine. About 50,000 jobs have been created at these enterprises, with a total investment of € 800 million in the sector. Ukraine has been and is interesting for the production of car parts. Ukraine has a developed infrastructure; there are free production sites and industrial parks, available and competitive skilled labor, a competitive level of operating costs.

Figures 2.9-2.10 present information on the allocation of component manufacturers by regions of Ukraine in 2016 and 2020. Number of manufacturers in each region is highlighted in yellow, revenue (turnover) is in red and number of employees is in blue.

About half of the plants produce cable networks. In 2013, the Japanese company Fujikura entered the Ukrainian market, specializing in the manufacture of cable products for cars of the German concern Volkswagen Group, including Porsche and MAN. In three years, Fujikura has opened two plants near Lviv, which currently employs about 2,000 people. Two years later, the company opened a branch of the plant in Nemyriv (Vinnytsia region), which employed 800 people [4].

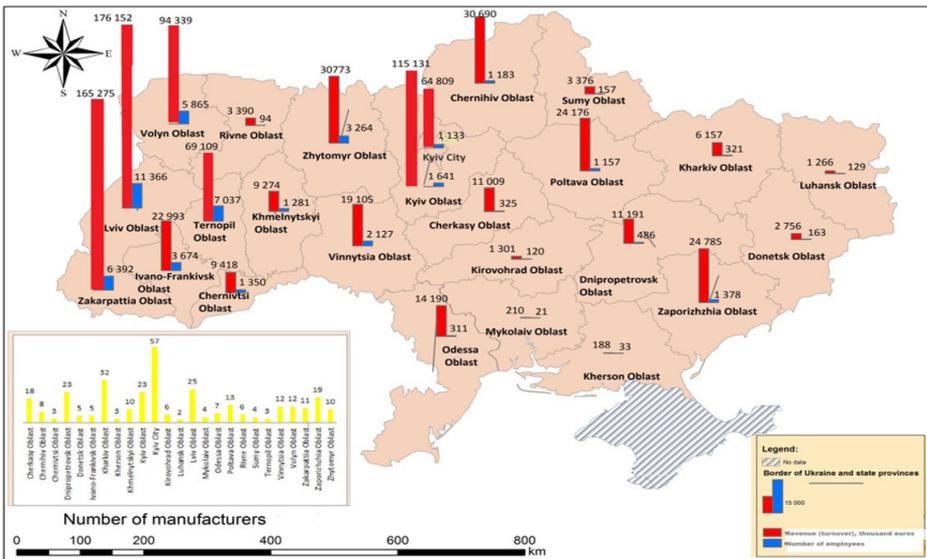


Figure 2.10. Allocation of car component manufacturers by regions of Ukraine in 2020

The German company LEONI has been operating in Ukraine since 2003. It manufactures cable networks for Opel, Porsche, Volkswagen, Audi, Lamborghini and MAN. Until recently, only one of their plants operated in Ukraine – in Stryi, Lviv region. In 2017, the German company built a second plant in Kolomyia in the Ivano-Frankivsk region. About 1.5 thousand people work there, and the plant is growing. Prior to quarantine, the company stated that the number of employees would increase to 3.5 thousand by the end of 2021. At the end of 2020, more than 5.9 thousand workers worked at both LEONI plants.

In 2017, Elektrokontakt Ukraine, a division of the German company Elektrokontakt GmbH, built a plant for the production of cable products

in Brody, Lviv Region. The German company belongs to the famous French concern Nexans. This is the company's third and largest plant in Ukraine, employing 2,500 workers. The plant manufactures cable networks for BMW, Opel, Audi, Mercedes and Porsche. Similar plants operate in Przemyśl and Zolochiv [4].

Another manufacturer of electric cable products for cars – Sebn – is slowly moving to the East. In Ukraine, a German-Japanese machine-building company opened its first plant in 2006 in the Ternopil region. Seven years later, Sebn decided to increase its presence in Ukraine so much that it opened two more plants within a year. The first is in Chortkiv in the Ternopil region, the second is in Chernivtsi. Three years ago, the group opened its fourth Ukrainian plant in Khmelnytsky [4].

The plant, owned by a German company with a 120-year history, Kromberg & Schubert, is located in Lutsk. It manufactures electric on-board cable systems for BMW, Audi, Mercedes and Volkswagen cars. Production in Lutsk was launched 15 years ago, employing 5.5 thousand people from Volyn. In 2016, the company opened another plant, this time in Zhytomyr, which employed 2,000 people. Although cable products are the most popular in the field of auto parts in Ukraine, the range of products is much wider [4].

In 2017, two large companies – Bader and Aunde, engaged in sewing seat covers for Audi, Mercedes and BMW, including the premium segment – Mercedes-Benz S-Class and Maybach, opened a joint venture in the Lviv region. Among the company's customers is even the American Tesla. Bader GmbH manufactures leather upholstery for seats, armrests, steering wheel, doors, instrument panels, gear levers. Aunde specializes in fabric seat covers. This is Bader's third plant in the Lviv region since 2006 and the first for Aunde in Ukraine. In total, Bader plants in the region employ about 3,000 people. The Bader-Aunde Ukraine joint venture employed 800 people [4].

Since 2003, ODW-Elektrik has been operating in the Lviv region, in Novy Rozdol, producing cables for Volkswagen, BMW, Porsche, Volvo, Opel cars, and magnetic coils, electromechanical structures for cars and motor tools [4].

Figure 2.11 shows the mentioned major components manufacturers' revenue obtained in Ukraine in 2016–2020.

There are also companies in Ukraine that receive orders for small batches of small products for well-known car brands. Thus, the Mukachevo

plant "Tochprylad" produces speakers, which are equipped with Land Rover and BMW cars [4]. A branch of the German company Bosch assembles and repairs starters in Krakovets, Lviv Region, which are installed on cars of many world manufacturers. In Pereyaslav–Khmelnyskyi, Kyiv Region, there is a plant of the German company Kostal, which specializes in the production of automotive electronics. It manufactures steering columns, switches, and contact systems for Ford, DAG, Audi, VW, Renault, Lamborghini, BMW, SEAT and Skoda [4].

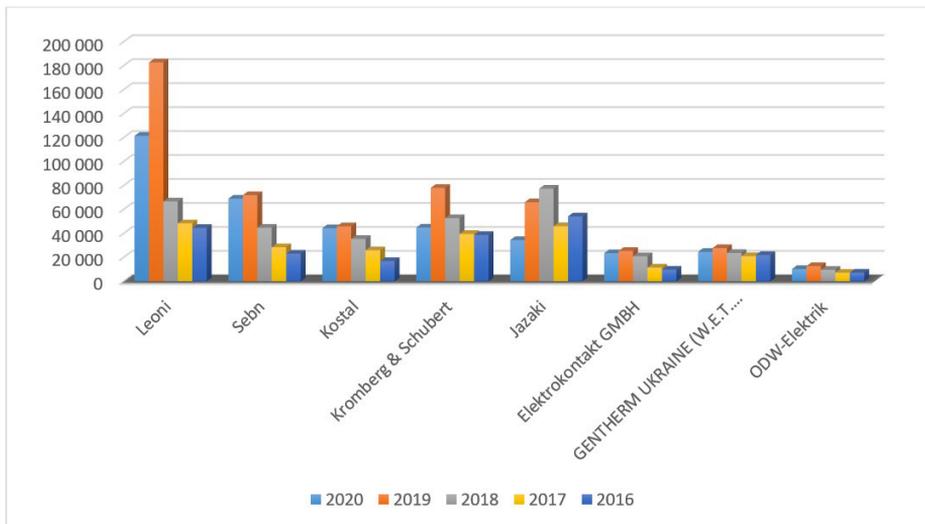


Figure 2.11. Major components manufacturers revenue in Ukraine in 2016–2020, thousand euros

LLC "Automotive Electric Ukraine" (a division of the international company Prettl) specializes in the manufacture of cable and wire products for cars. The company began operations in 2016 on the site of the former Graviton plant. At the beginning of 2021, Automotive Electric Ukraine LLC had more than 1,400 employees. The company is developing and increasing production capacity.

Mann + Hummel FT Ukraine Ltd. is a production division of the German company Mann + Hummel, which manufactures and sells car filters. The company is headquartered in Germany and has production facilities in about 80 countries. The peculiarity of this company is that the production is aimed at sales in Ukraine. Therefore, Mann + Hummel FT Ukraine LLC processes raw materials supplied by the Mann + Hummel Filtration

Technology Poland Limited Liability Company and produces ready-made filters and components at its own production facilities. Mann + Hummel FT Ukraine Ltd. is the exclusive distributor of WIX filters and filter elements for cars and road engineering in Ukraine. The activities of Mann + Hummel FT Ukraine LLC were characterized by uninterrupted production and supply of goods, maintenance of staff qualifications and updating the range and quality of goods. In order to increase the level of profitability, the strategic plans of the company to increase sales of existing products, expand markets and introduce new brands of filters in the Ukrainian market.

Among the enterprises producing electrical equipment, it is appropriate to single out two subsidiaries of TNCs, which produced about 2% of sales of this segment of mechanical engineering: Fujikura Automotive Ukraine Lviv LLC and Relpol_Altera LLC. Fujikura Automotive Ukraine Lviv LLC is part of the Fujikura group of companies, which unites 102 companies in 30 countries, was founded in Lviv in 2013. Its founders are Fujikura Automotive EUROPE SA (Spain) and Fujikura Automotive Romania SRL. The plant is a full cycle of electrical wiring for automotive companies around the world (including Volkswagen). Relpol_Altera is a manufacturer of electrical distribution and control equipment. The company exports almost all its products to Poland.

Russia's invasion of Ukraine has led to cut production and sales forecasts for the nearest future. The crisis has shuttered factories in Eastern Europe, and caused spikes in the prices of already precious raw materials. Some factories in Ukraine have tried to keep going amid the invasion. Nevertheless, several OEMs in Europe and Eastern Europe have paused or slowed their production due to a lack of parts from Ukraine-based suppliers.

The Russo-Ukrainian war severely disrupted the automotive value chain. Production halt and auto parts supply shortage are the immediate effect of this crisis. OEMs, including Toyota, Ford, Volvo, Jaguar–Land Rover, General Motors, and BMW, have ceased export operations to Russia, with many of them suspending Russian joint ventures in response to the invasion.

Russia's invasion of Ukraine has led to cut production and sales forecasts for the nearest future. In March 2022, S&P Global Mobility, formerly IHS Markit, cut its global auto production forecast by 2.6 million vehicles in both 2022 and 2023 because of the conflict. The worst-case scenario totaled as much as 4 million lost vehicles. European auto output is expected to fall about 9% – roughly 1 million cars [5].

2.3. Protectionism in the automotive market and barriers to entry

For almost thirty years, from the mid-1990s to the present, the Ukrainian car market has been distorted by the "protection of the domestic manufacturer". First of all, in the form of barriers to the import of used cars and high tariffs on new cars. These barriers gradually intensified in the 1990s at the request of a domestic manufacturer, the Zaporizhzhya Automobile Plant "Auto-ZAZ", until they became de facto banned with the formation of the JV "Auto-ZAZ-DEU" in 1997. This protectionism exists and nowadays partly.

Protectionism, by definition, is the establishment of certain barriers to the import of goods or services (rarely – the export of raw materials for their production), up to total forbiddance, de-jure or de-facto. The turbulent history of the Ukrainian car market makes it possible to trace the effects of protectionist measures on the car market in Ukraine, their further forced mitigation and to assess the economic effect, taking into account both direct and indirect effects.

Let's consider in more details, starting with the historical background. One of the main preconditions was the collapse of the USSR, after which the automotive industry, like other producers of consumer goods, was in crisis. As a result, most of all Soviet car plants went bankrupt, such as AZLK (Moskvich), or repurposed for the production of commercial vehicles, such as GAZ.

The Ukrainian plant "Auto-ZAZ", which had its own development "Tavria", should be sold to a powerful strategic investor who could restructure it and establish production of modern products – as the Czech Republic did with "Skoda" and Romania – with "Dacia". However, this would mean the dismissal of most of the management, as well as probably part of the workers, as it happened in the Czech Republic and Romania. Therefore, the management of the plant frantically resisted such attempts.

Global manufacturers such as Group PSA (Peugeot, Citroen) and Volkswagen offered billions of much-needed dollars to the country at the time, but the government took a different path – "protecting the domestic manufacturer". And the government had to protect it primarily from the import of used cars, because they were a real competitor to the Soviet car industry – because they fell into a close market niche for the price. Neither Tavria nor other products of the Soviet-post-Soviet automobile industry could compete with the new imported cars.

The excise duty on cars as a barrier to the import of imported cars, was introduced for the first time in the history of independent Ukraine by

the Law on Excise Duties, adopted on December 18, 1991. Then the rate of excise duty on cars was 25% of their value, and on GAZ cars – 35%.

On December 26, 1992, the Decree of the Cabinet of Ministers of Ukraine "On Excise Duty" was adopted, and on its basis the Resolution of the Cabinet of Ministers of Ukraine № 741 was adopted as well. By the same Decree all cars were divided into "domestic" and "imported". Cars made in Ukraine were subject to excise duty of 10% of the value, other cars – 35%.

In 1997, cars older than 8 years were banned from importing at all. In the same year, the government of Pavlo Lazarenko, known for its corruption, formed on the basis of the Ukrainian ZAZ plant a joint venture with the Korean company Daewoo Motors, no less famous for corruption scandals in a number of European countries. Half of the plant was sold without a single penny that would replenish the state budget, and without any active restructuring. Slightly modernized Tavria and its modification Slavuta remained on the assembly line. Plant management and developers of uncompetitive cars kept their jobs, and the votes in the JV board were divided exactly in half (50:50), which, in the end, as expected, led to his paralysis and complete freedom of management of "AvtoZAZ".

At the same time, in 1997, with active lobbying of Koreans and their Ukrainian partners, the Law of Ukraine "On Stimulating Car Production in Ukraine" was adopted. The Law exempted Ukrainian carmakers (represented by the then only JV "Avto-ZAZ-Daewoo") from duties and VAT on the import of components, taxes on land and income. Along with that it imposed prohibitive duties and excise taxes on used cars – so high that it became unprofitable to import them. The real purpose of those measures wasn't collecting the import taxes, but the complete cessation of such imports. The government managed to achieve its goal, the market responded to such restrictions immediately: in 1998 only 1,555 used cars were officially cleared through customs, in 1999 – only 646, and that was the absolute minimum in the history of the domestic car market.

Even if there is a need to resort protectionism, it is fundamentally important that any protectionist measures be implemented for a clearly defined period that cannot be changed. Otherwise, as the deadline approaches, industry representatives have a strong incentive to invest not so much in increasing competitiveness as in lobbying for protectionism. The Law of Ukraine "On Stimulating Car Production in Ukraine" (1997) was initially to be in force for a period of five years, during which Avto-ZAZ-DEU had to

achieve a number of indicators, including exports. Despite the fact that the plant did not actually fulfill any of the conditions, the Verkhovna Rada extended all protectionist measures for the next five years. Even more, a strong group of interests in support of protectionism has emerged over the years. It included the official importers of new cars, which, in turn, were powerful car concerns. Several new players also decided to take advantage of state protection and other privileges – in particular, Petro Poroshenko with Bogdan Corporation, Dmytro Sviatash's AIS group of companies, and UkrAvto by Tarel Vasadze. It is very characteristic that all of them had a strong political cover, because they understood perfectly well that without it, they would not be able to maintain for a long-time predatory norm against Ukrainian society, which enriched their private business. Roughly the same thing happened in most other countries that resorted to protectionist measures.

As a reaction to the artificial restrictions, the Ukrainian car market began to shade: cars with Lithuanian registration, temporarily imported into Ukraine, appeared en masse. At the end of 2002, that scheme was abolished, allowing the owners of already imported cars to clear their customs duties on preferential terms, but in no way changing the general "rules of the game".

Barriers had been implementing gradually. In 2005, Euro environmental standards were implemented for the first time. In 2009 an additional 13% of the duty on imports of used vehicles was implemented. In 2013 the market faced a special duty of 6–13% of the cost of the car, as well as an additional 5–30 thousand UAH of recycling fee for all imported machines.

Reducing historical barriers to trade is usually the result of years of bilateral or multilateral negotiations. In particular, as a result of such multilateral negotiations, the EU and other free trade areas were formed at one time, and later (with a larger circle of participants) – the WTO, which imposes restrictions on protectionism.

Ukraine has been a member of the WTO since 2008 and has an expanded free trade area with the EU, Canada and a number of other countries. It is in order to comply with WTO conditions in Ukraine that the ban on the import of used cars older than 8 years was lifted. However, domestic lobbyists have found a way to circumvent the restrictions of these international agreements by setting Euro environmental standards for used cars, introducing too high a fee for the first registration of such vehicles, high excise taxes and other barriers which are not formally belong to duties and quotas.

In 2008, the volume of automotive production in Ukraine amounted to 425.8 thousand units per year. Ukraine ranked 12th among European countries in terms of production. Such results were based on the state's internal market stimulation program, including concessional lending for new vehicles and protection of the domestic market from unfair competition, including from used cars. More than half of the cars and buses sold in 2008 were manufactured by Ukrainian enterprises.

With the acquisition of full membership in the WTO, Ukraine has received additional rights to use a set of measures to protect the internal market. However, these rights have not been fully exercised in relation to the national automotive industry. On the contrary, by signing the Agreement on Accession to the World Trade Organization (WTO), Ukraine reduced the import duty on imports of cars by 2.5 times, which negatively affected the domestic automotive industry and fully opened the market for imports of foreign cars to Ukraine. And for the period 2008–2012, the vehicle market has halved, and the share of foreign cars has increased from 50 to 89%. Production of Ukrainian passenger cars decreased 6 times (Figure 2.12).

In 2012, in violation of the Verkhovna Rada's Procedure Rules, the Law of Ukraine regarding certain issues of import into the customs territory of Ukraine and registration wheeled vehicles was adopted. The main goal was allegedly to improve the environment and harmonize national legislation with European, in fact – another manifestation of the protectionism of the "national manufacturer", official importers and dealers of new cars.

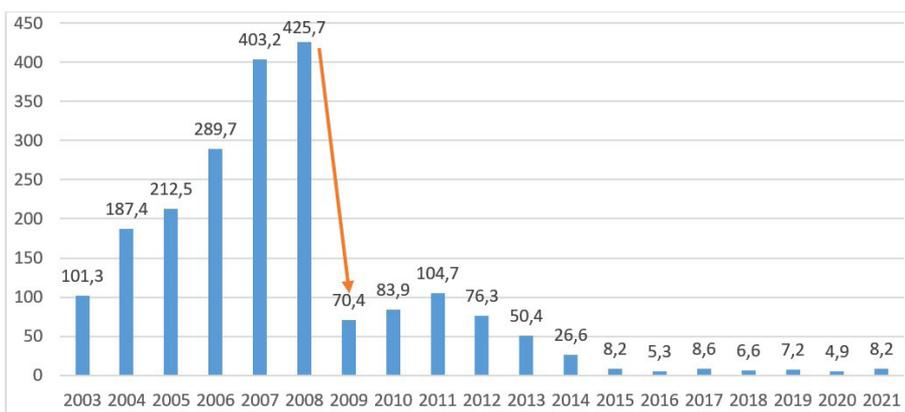


Figure 2.12. The volume of production of passenger cars in Ukraine in 2003–2021, thousands of units

When they restricted the official customs clearance of used cars, people began to look for workarounds: they used the "body replacement" scheme or imported so-called pickups and buses from abroad, later converting them into cars. Thus, from 2012 to 2014, about 250 thousand such cars were imported. There was a whole industry in Ukraine that was professionally engaged in this craft. However, in December 2014, an excise duty was also introduced on the import and re-equipment of small commercial vehicles weighing up to 3.5 tons, which stopped the operation of such a scheme.

At the time of entry into force of the Association Agreement with the EU, the importation into the customs territory and the first registration in Ukraine of cars and buses that do not meet the EURO environmental standard were prohibited 5. But under the same agreement, Ukraine has committed itself to reducing import duties on cars within 7 years to the level set by the agreement. And in four years, the rate of import duty on cars originating from EU countries has been halved.

Although Annex II to the Agreement "Special measures for passenger cars" stipulates that, for example, in 2018 sales of passenger cars originating in EU countries should not exceed 22% of the total Ukrainian market of new cars, and their number – should not exceed for 45 thousand units, but the actual share of cars originating from EU countries in total sales since 2018 was more than 70%.

At the same time, even constant state support did not help the once largest Ukrainian car manufacturer: in 2018, AvtoZAZ actually stopped producing cars. Production of other "domestic producers" fell to almost zero as well. From 2018 to 2020, only Eurocar JV operated in the Zakarpattia region, which carries out large-scale assembly of Skoda and some other models of the Volkswagen AG group of companies, in a meager number of 5-6 thousand cars per year.

The desire to encourage the purchase of new vehicles and support the domestic manufacturer has put the used car market in the shadows. "Euro-vehicles" (*Ukrainian name of used foreign-registered cars from EU*) began to appear en masse. In 18 years, from 1997 to 2015, 75,000 used cars were imported and officially cleared through customs in Ukraine. At the same time, in 2015 alone, about 600,000 foreign-registered cars were imported to Ukraine without paying any taxes. However, vehicles imported under such a scheme did not become the property of those who paid for them; in addition, they had to be taken abroad periodically in order not to face fines. Most

of the owners of such cars agreed to pay reasonable taxes (VAT and even customs duties) in exchange for full ownership and no hassle, but the state also demanded excise duty, which was several times higher than the cost of the car. This created a critical mass of dissatisfied people, who, unlike in the early 2000s, were able to organize and begin to defend their interests.

As a result, in 2016 there was a turning point: excise taxes on used cars, younger than 2010, equated to the level of new ones. For the first time in several years, taxes on the import of used cars were not increased, but reduced. Unfortunately, amendments to the bill by lobbyists (one car a year, personal import, ban on alienation) limited citizens' choices, blocked the car business and did not give a chance to solve the problem of "euro-vehicles". However, it was the first step towards the formation of a civilized car market in Ukraine: in 2017, more than 70,000 cars with mileage were imported to Ukraine. Among other things, with the reduction of taxes, revenues increased. However, the number of imported foreign-registered cars continued to grow every year.

Finally, under public pressure, at the end of 2018, the rules of customs clearance of used cars were changed even more dramatically. Environmental standards "Euro-5" for cars have been replaced by "Euro-2", a new formula of excise duty has been introduced, which provides for its linear dependence on engine capacity, on the one hand, and the age of the car – on the other. That eased the situation a bit, and the car market reached its historic high: in the year since the new rules came into force, more than 400,000 used cars have been imported. Currently, about 30,000 cars with mileage are cleared through customs every month.

The current uncompetitive plant owner will usually argue that without protectionism, production would perish, workers would lose their jobs, and the state would lose taxes. However, the production of cars at PJSC ZAZ did not survive even with the existing protectionist barriers: in January 2019, the plant did not produce a single car. In total, from 1990 to 2016, 4.5 million cars were built in Ukraine. Approximately the same number of cars were produced in Germany during the 2009 economic crisis. The number of cars produced annually in Ukraine is insignificant compared to EU countries.

According to the latest data, 8,153 vehicles were assembled in Ukraine in 2021, which is 65% more than in 2020. Monthly dynamics of motor vehicle production at Ukrainian production sites are presented in

Figure 2.13. From the total number, there were assembled 7,342 passenger cars (+ 75%), 43 commercial cars (-16%) and 768 buses (+ 10%). At the same time, 103.3 thousand new cars were sold. This is 21% more than in 2020, but 25 times less than in Germany.

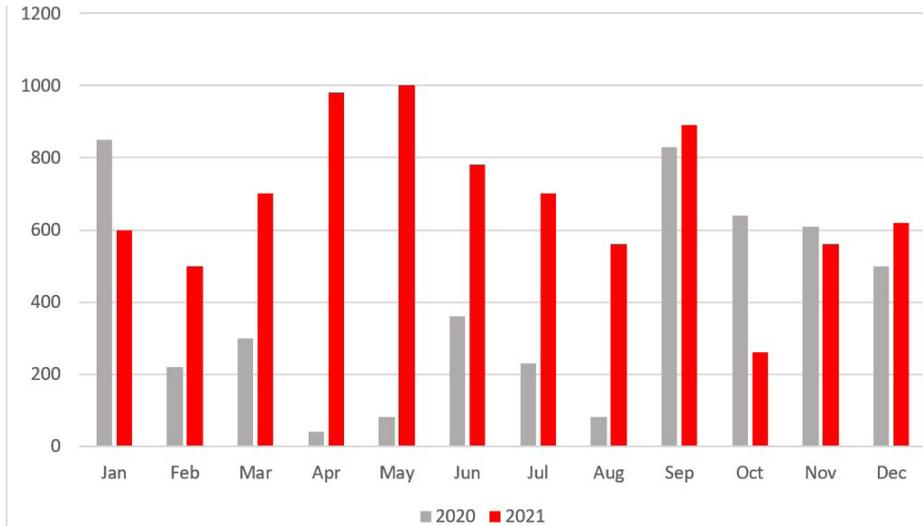


Figure 2.13. Monthly dynamics of motor vehicle production at Ukrainian production sites

Germany in terms of sales in 2021 took first place with the number of cars sold 2.62 million units. The second place in sales of new cars in Europe is France, where locals bought 1.66 million cars (+ 0.5%). The third position in the top 3 largest European car companies was occupied by the United Kingdom – almost 1.65 million cars (+ 1%).

Thus, the protectionism of the car market in Ukraine is ensured mainly by the excise tax, which is set relatively low on new cars (and there it performs a purely fiscal function), but much more – on used. Until 2016, car tax rates older than 5 years were 15 times higher than for new ones, which in fact made them banned – such cars simply did not make sense to import legally, and, accordingly, almost no one did. They were then replaced by a ban on the import of cars with an environmental standard lower than Euro-5, which was abolished in 2019 and replaced by an excise tax with an "age factor", i.e., proportional to age, up to 15 years. Such excise duty also becomes de facto prohibited for most models over the age of 10.

Regarding other types of tax duties on imports of second-hand vehicles into the EU from third countries, it should be noted that according to Directive 2016/1821 / EU of 6 October 2016, the conventional customs duty on cars is set at the rate of 10% of these vehicles' customs value. According to Directive 2006/112 / EU, imports of goods from third countries are also subject to VAT. Used cars are no exception. However, although this tax is harmonized within the EU, its rates for vehicles are set individually in each of the Member States. The only requirement when setting the tax rate is its minimum level, defined in the Directive itself, namely – 15%. Thus, the minimum cost of customs clearance of cars from third countries within the EU can be 25% of the cost of the vehicle. In addition, VAT should theoretically be refunded in the exporting country, but in practice for the secondary market this does not always work, because used cars are often bought directly from the owners – individuals for whom there is no VAT refund mechanism. Thus, even without any additional measures, new cars get a certain "advantage" compared to used ones.

Summing up a comprehensive analysis of the protectionism of the automotive industry in Ukraine, it should be noted that this phenomenon has emerged and persists not as a result of conscious economic policy based on facts and arguments, but purely as a result of lobbying of domestic manufacturers and car traders.

2.4. Prospects of the automotive industry in the Transcarpathian region

As it has proved above, Transcarpathia has an important leverage effect on state with number of employees employed, diversity and capacity of the component manufacturers, share in income of the domestic automotive industry. The region also has shown potential for growth in the automotive industry due to its strategic location, skilled labor force, and proximity to major European markets. Moreover, what is of a paramount importance for nowadays, the region is the safest place for living and running a business in conditions of the martial law in Ukraine.

The automotive sector in Transcarpathia was beginning to attract investments and attention, primarily in the form of component manufacturing, assembly, and related services. As shown in Figure 2.14, a large number of companies operating in the Transcarpathian region produce products for the automotive industry.



Figure 2.14. Production potential of the automotive industry in Transcarpathia [25]

Key market and financial indicators of main companies in the region are presented in Table 2.7. As it can be stated according to the given data, the largest companies on the market are Jabil, Eurocar, Yazaki and Flextronics – they occupy the first to fourth place in their market. Jabil and Flextronics simultaneously show a positive trend in increasing market share for the period 2018–2022. Their market share increased accordingly from 58% to 74% and from 18% to 32%.

Smaller companies (Tochprilad and Forshner), which occupy only 1-2% of the market share, also show a positive trend of improving their market positions (in terms of market share, market place and place in the sector) during the period.

When calculating the market indicators, the role of each company played in the relevant sector or market in view of the main activity was taken into account.

The concept of "sector" corresponds to the section according to KVED and outlines the company's branch affiliation in the broadest sense. For example, enterprises of the automotive industry correspond to section C – "Manufacturing industry". The company's indicators, calculated within the sector, indicate the general scale of the company's activities and the level of its influence on the country's economy as a whole.

Table 2.7. Key market and financial indicators of the automotive industry companies operating in the Transcarpathian region*

Indicator	YEAR	Jabil Circuit Ukraine Limited LLC	PrJSC Euro- car	LLC Yazaki Ukraine	FACTORY "FLEX- TRONICS LLC"	"Forshner Ukraine" LLC	Muk- achevsky plant "Toch- prilad"
Market share, %	2018	58,71	29,55	14,37	18,71	1,05	1,24
	2019	58,78	27,85	8,67	25,62	0,85	0,97
	2020	58,21	26,58	6,29	28,85	1,14	1,06
	2021	68,68	26,11	5,38	30,20	1,42	2,37
	2022	74,60	17,35	6,94	32,94	1,38	2,22
The company's place in the market	2018	1	1	1	2	20	16
	2019	1	1	4	1	19	19
	2020	1	1	5	1	18	13
	2021	1	1	6	1	15	8
	2022	1	2	4	1	12	9
Relative revenue growth for the year, %	2018	32,8	2,4	61,2	49,1	17,3	-2,8
	2019	-5,9	18,3	-29,0	36,1	-4,4	-19,0
	2020	-5,1	-8,9	-32,3	26,3	25,5	4,4
	2021	24,6	24,4	-4,0	27,6	39,1	45,7
	2022	15,2	-29,5	65,7	5,7	25,3	12,8
The company's place in the sector of its main activity by revenue	2018	191	84	94	267	1 292	1 629
	2019	212	74	152	195	1 390	2 034
	2020	221	77	223	144	1 166	1 925
	2021	189	70	251	117	819	1 260
	2022	153	97	139	107	746	1 311
Equity-to- Assets	2018	77,6	13,2	-5,6	-131,2	-227,2	79,3
	2019	66,8	20,5	-14,9	-47,3	-208,0	79,9
	2020	86,3	18,5	-29,1	-63,1	-150,8	68,4
	2021	82,2	23,7	-16,8	-29,6	-95,0	68,1
	2022	78,6	23,8	0,4	-39,0	-62,1	63,8
ROA,%	2018	9,1	7,9	-4,3	5,1	-102,4	2,1
	2019	-2,4	11,3	-2,8	27,6	-55,9	-2,2
	2020	4,9	-2,2	-26,8	-20,3	-66,6	6,2
	2021	7,0	3,7	-7,5	19,5	-13,5	1,3
	2022	8,0	3,9	-7,2	-11,5	4,5	8,5
ROE, %	2018	21,4	–	-161,8	–	-36 835,0	2,8
	2019	-3,2	122,8	–	–	–	-2,7
	2020	6,0	-10,5	–	–	–	10,0
	2021	9,4	18,6	–	–	–	1,9
	2022	11,4	19,6	-95,1	–	–	15,4
Net Profit Margin (NPM)	2018	8,4	7,1	-2,1	6,5	-49,6	2,9
	2019	-2,4	7,0	-1,1	35,2	-37,0	-3,7
	2020	5,1	-1,5	-19,0	-22,5	-60,4	12,6
	2021	6,7	1,9	-5,7	21,7	-16,2	1,8
	2022	7,7	3,3	-5,6	-13,0	6,1	13,3

*Source: compiled by the authors based on the YouControl data (<https://youcontrol.com.ua>)

The concept of "market" – for sectors A, B, C, D, G, H corresponds to groups, and for the rest of sectors – to sections according to KVED-2010. Thus, in sector C there are markets similar to groups 29 "Manufacturing of motor vehicles, trailers and semi-trailers", 27 "Manufacturing of electrical equipment", etc. The higher volume of aggregate revenue and the number of companies in the above-mentioned sectors, which requires a more detailed approach when dividing into markets, explains this feature of the methodology.

In order to understand financial potential of the chosen companies, a few financial indicators had been selected for analysis:

1. *Equity-to-Assets* is a solvency indicator characterizing the share of the company's equity capital in the total amount of funds invested in its activities. The higher this ratio, the more the company is financially independent from creditors. For non-financial corporations, the optimal value is $\geq 50\%$. As Table 2.7 shows, three of six companies (Yazaki, Flextronics and Forshner) have problems with their solvency during the given period, namely with their equity capital adequacy. Eurocar has a high dependence on debt capital, as the share of equity capital in the total assets by the end of 2022 was only about 24%. Only Jabil and Tochprilad have the optimal value of the indicator, since their share of equity in the balance sheet exceeds 60%.

2. *Return on assets (ROA)* is a profitability indicator that shows how much profit each hryvnia of the company's assets brings. The ratio gives an understanding of how effectively the management uses the firm's assets to generate profit. Negative values indicate losses, as in case with both companies Yazaki Ukraine LLC and Forshner Ukraine LLC. Such companies from the sample as Mukachevsky plant "Tochprilad" and Jabil Circuit Ukraine generate the largest return on assets – their ratios were 8.5% and 8% accordingly.

3. *Return on equity (ROE)* is a profitability indicator that captures the level of profit as a percentage of the company's equity. ROE provides insight into how profitable a company is for owners and investors. Negative values of ROE indicate losses. If the capital value is negative, the coefficient is not calculated. This situation with a negative value of equity is observed in three companies – Yazaki, Forshner and Flextronics. From the point of view of investors, the most attractive is Eurocar, which demonstrates positive dynamics of the indicator and has the highest value of ROE among the selected companies at the end of 2022, namely 19.6%.

4. *Net profit margin (NPM)* is a profitability indicator reflecting the ratio of net profit to the company's total revenue. The higher the net margin, the more efficient the company is in terms of converting sales into real profit. Negative values indicate losses. In this regard, the activities of Yadzaki and Forschner are completely unprofitable during the years 2018–2022, although the latter company went into profit-making activities in 2022.

In general, all the above-mentioned companies have shown a positive trend of increasing the volume of activity and improving financial stability and profitability over the past 5 years.

The presence of the following key factors is important for the further development of the considered and all other companies operating in the automotive industry in Transcarpathia, as well as for the prospects of the whole industry in the region, namely:

Geographical Location: Transcarpathia's proximity to European automotive hubs and markets, in particular due to proximity to the international highway M3, connecting the region with major European business centers, could make it an attractive location for automotive manufacturers and suppliers looking to establish production facilities or supply chains.

Skilled Workforce: Ukraine, including Transcarpathia, has a well-educated and technically skilled workforce, which is crucial for the automotive industry's success. The availability of skilled engineers, technicians, and labor can support various aspects of automotive production.

Cost-Competitiveness: Ukraine has generally offered lower labor and operational costs compared to some Western European countries. This cost advantage could potentially attract foreign investment in the automotive sector.

Investment and Infrastructure: Investments in infrastructure, transportation, and logistics can enhance the region's appeal for automotive companies. Improved roads and rail connections can facilitate the movement of raw materials and finished products. The region has the developed railway network and the country's main international railway hub near the border with Hungary and Slovakia. Airport in the city of Uzhhorod and proximity to international airports in Lviv (UA), Kosice (SK), Debrecen (HU), and Budapest (HU) is another additional advantage.

Supplier Networks: The development of a strong network of automotive component suppliers in the region could attract larger manufacturers who seek to source parts locally.

Government Incentives: Government policies and incentives aimed at promoting industrial development and foreign investment could further boost the automotive industry in Transcarpathia.

Therefore, the region in practice is a center of cluster initiative and a pioneer in the development of the cluster of the automotive industry and other high-precision industries. Prerequisites for its creation in the Transcarpathian region based on PJSC "Eurocar", which according to the integrated assessment has the highest innovation and investment potential among Ukrainian automakers, were laid down in 2016. An agreement had been reached in the form of a Memorandum on the creation of a cluster that was signed between the main participants of the automotive industry, local authorities and educational institutions in September 2016.

Then the prospects for the creation of such a cluster in the region were discussed in May 2018 at the Round Table, organized by the Federation of Employers of Ukraine and Eurocar with the assistance of the German-Ukrainian Chamber of Commerce. Representatives of the Zakarpattia Regional Council, Zakarpattia Regional State Administration, Yazaki-Ukraine LLC, leading top managers of large Ukrainian companies with foreign investments, heads of business associations, as well as chambers of commerce and industry took part in the Round Table. The participants of the meeting noted that the precondition for the cluster development in Transcarpathia could be the already formed pool of large car players – Eurocar, Jabil Circuit, Yazaki, Grocklin-Karpaty, Ungweier, Tochprilad, Flex, Fischer, Forscher, Gentherm Incorporated.

In November 2019, PJSC Eurocar hosted a Forum of Initiatives: Clusters organized by the Federation of the Automotive Industry of Ukraine and PJSC Eurocar and supported by the German-Ukrainian Chamber of Commerce, the Chamber of Commerce of the Austrian Embassy, the Transcarpathian Association of Employers' Organizations, Federation of Employers of Ukraine. The forum laid the foundation for the formation of the automotive cluster in Transcarpathia. According to [25] the Transcarpathian automotive cluster is as a platform for the interaction of independent, competitive enterprises of the automotive industry, authorities and educational institutions with the aim of creating a favorable environment for the development of the automotive industry and related industries in the region, and implementing joint projects in educational, industrial, innovative and other spheres. The main function of the cluster is solving the most urgent issues

of the business environment to enable enterprises to focus on increasing the efficiency and development of their own business processes.

Obviously, a successful automotive cluster relies on a combination of various conditions that foster its functioning and development. These conditions collectively contribute to enhancing competitiveness, innovation, and overall growth within the cluster. It is worth highlighting several defining conditions that affect the functioning and development of an automotive cluster (Table 2.8).

Table 2.8. Key factors for effective functioning and development of an automotive cluster*

Factor	Description
Proximity and Concentration	Physical proximity of automotive-related companies facilitates collaboration, knowledge-sharing and efficient supply chain management. Concentration helps create a critical mass of expertise and resources, making it easier for businesses to interact and cooperate.
Supply Chain Integration	A well-integrated supply chain within the cluster ensures efficient flow of materials, components, and services. Close collaboration between manufacturers and suppliers can lead to cost savings, reduced lead times, and improved product quality
Skilled Workforce	Access to a skilled and diverse workforce, including engineers, technicians, designers, and managers, is crucial for innovation and production within the automotive cluster
Research and Innovation	The presence of research institutions, universities, and innovation centers supports continuous research, development, and technological advancements. Clusters that promote innovation contribute to the creation of new products, processes, and technologies
Networking and Collaboration	Opportunities for networking and collaboration between companies, academia, and research organizations foster knowledge exchange, idea generation, and joint projects that benefit the entire cluster
Infrastructure and Logistics	Efficient transportation, logistics, and communication infrastructure are essential for seamless operations within the cluster and for connecting with external markets
Government Support and Policies	Supportive government policies, incentives, and regulations can encourage investment, stimulate growth, and attract both domestic and foreign companies to the cluster
Access to Markets	Proximity to major markets and transportation routes allows cluster members to easily distribute their products and services to customers
Access to Capital	Availability of financial resources, including venture capital, loans, and grants, facilitates business growth, innovation, and expansion within the cluster.
Clusters' Management and Leadership	Effective cluster management led by industry associations, local authorities, or dedicated organizations, plays a role in coordinating activities, fostering collaboration, and promoting the interests of cluster members.

Table 2.8 (continued)

Factor	Description
Technological Infrastructure	Availability of advanced technological infrastructure, such as testing facilities, prototyping labs, and advanced manufacturing technologies, enables companies to develop and produce high-quality products.
Cluster Culture	A culture of open communication, knowledge-sharing, and mutual support among cluster members helps create a conducive environment for innovation and growth.

**Source: developed by the authors.*

It is important to note that these conditions are interconnected and contribute to the overall health and vitality of an automotive cluster. Successful clusters often evolve over time, benefiting from a positive feedback loop where the presence of these conditions attracts further investment and development. Additionally, local factors and the specific characteristics of the automotive industry in a particular region can influence the importance and impact of these conditions on cluster functioning and development. Most of the prerequisites for the effective functioning of the cluster in Transcarpathia have been created up to 2022. The partners of the cluster [25] have even developed a project, the purpose of which is to create a favorable legislative environment for the development of the automotive industry and related industries. The implementation of this goal includes initiation and adoption at the legislative level of the state strategic document regarding creation of conditions for the future development of the automotive industry and the industrial state support.

Taking into consideration availability of many prerequisites, the effective functioning of the automotive cluster in Transcarpathia will allow:

- Ensure the possibility of joint development and use of the raw material base (ensuring uninterrupted supply of high-quality raw materials at reasonable prices);
- Rationally use the production capacities of enterprises included in the cluster, which will contribute to the reduction of production costs and the elimination of inefficient production;
- Reduce commercial risks;
- Increase management efficiency (subordination of business to a single strategy, reduction of administrative costs due to reorganization of the management system, etc.);
- Reduce costs along the entire chain of added value from the production of raw materials to the sale of final products;

- Ensure efficient scale of production;
- Ensure stable growth of budget deductions at the level of territorial communities for a relatively short time.

Successfully functioning cluster ensures the development of a whole group of enterprises that are part of a single technological chain. Finally, the automobile cluster is a more effective object for various forms of investment promotion applied by the state, as well as targeted budget financing. Despite the potential, there may be challenges to overcome, such as regulatory issues, political stability, and the need for continuous investments in education and infrastructure.

CHAPTER 3

INSTITUTIONAL ENVIRONMENT FOR ESTABLISHING A NEW BUSINESS IN THE AUTOMOTIVE INDUSTRY IN UKRAINE

3.1. State registration aspects of establishing a new business entity

The Law of Ukraine "On State Registration of Legal Entities, Individual Entrepreneurs and Public Organizations" regulates the procedure for state registration of a business entity in the form of a legal entity in Ukraine [12].

State registration of legal entities can be done in paper or electronic form. Registration on the basis of documents submitted in paper form (in person or by mail) is carried out by the state registrar exclusively in the executive committee of the city council of regional significance or in the district, district in Kyiv at the location of the legal entity. State registration of legal entities on the basis of documents submitted in electronic form is carried out regardless of their location.

If the documents are submitted in paper form, the applicant submits:

- passport of a citizen of Ukraine or other identity document;
- national, diplomatic or service passport of a foreigner or other identity document of a foreigner or stateless person (for foreigners or stateless persons);
- a document confirming the authority of the legal representative of the person, or a notarized power of attorney (in the case where the documents are submitted by a representative / legal representative) (part 2 of article 14 of the Law mentioned above).

Documents submitted for state registration must meet certain requirements, in particular the application for state registration must be signed by the applicant. In the case of filing an application for state registration by mail, the authenticity of the applicant's signature must be **notarized**.

Documents can be submitted in electronic form and a legal entity can be registered online here:

Online house of justice – an automated system for state registration of a legal entity (<https://online.minjust.gov.ua/registration-ur>);

Portal "Diia" – Registration of LLC based on the model statute (<https://diia.gov.ua/services/reystraciya-tov-na-pidstavi-modelnogo-statutu>).

For state registration of a legal entity (including as a result of spin-off, merger, transformation, division), the following documents are submitted:

1. *Application for state registration of a legal entity.* The application for state registration of a legal entity formed as a result of division, separation shall additionally indicate information on separate subdivisions in terms of their affiliation to the legal entity – the successor. The application for state registration of a legal entity of private law may state that it operates on the basis of a model statute, as well as the applicant's request for registration of a legal entity as a value-added taxpayer. If the model charter is multivariate, the application for state registration of a legal entity of private law shall indicate the wording of the model charter on the basis of which it operates;

2. *A copy of the original (notarized copy) of the decision of the founders;*

3. *Constituent document of a legal entity* – in case of creation of a legal entity on the basis of its own constituent document;

4. *A document confirming the registration of a foreign legal entity in the country of its location* (extract from the trade, banking, court register, etc.) – in the case of a legal entity, the founder (founders) of which is a foreign legal entity;

5. *Documents for state registration of termination of a legal entity as a result of merger and division* – in case of creation of a legal entity as a result of merger and division;

6. *A document confirming payment of the administrative fee* for state registration of a legal entity and entry in the Unified State Register.

7. For joint-stock companies (except for corporate investment funds) – *a document containing information on the amount of mandatory payments and other mandatory costs*, the payment of which is necessary to start the company;

8. *Ownership structure* according to the form and content determined in accordance with the legislation;

9. *Extract or other document from the trade, banking, court register, etc.*, confirming the registration of a non-resident legal entity in the country of its location – if the founder of the legal entity is a non-resident legal entity;

10. *Notarized copy of the document certifying the person who is the ultimate beneficial owner of the legal entity.*

Consideration of documents submitted for state registration and other registration actions is carried out within the following time limits: for legal entities – **within 24 hours** after receipt of documents submitted for state registration and other registration actions, except weekends and holidays.

The term of consideration of documents may be extended by the subject of state registration if necessary, but not more than for **15 working days**.

State registration may be carried out in a shorter time, except as provided by law. The Cabinet of Ministers of Ukraine shall establish the grounds, procedure and amount of the fee for state registration in a short time.

Grounds for refusal of state registration:

- documents are submitted by a person who does not have the authority to do so;

- the Unified State Register contains information on a court decision prohibiting registration;

- documents submitted to an improper subject of state registration;

- the grounds for suspending the consideration of documents within the established period have not been eliminated;

- documents contradict the requirements of the Constitution and laws of Ukraine;

- the procedure established by law for establishing a legal entity was violated;

- the requirement established by the participant for notarization of the signature during the decision-making on the activities of the legal entity and / or the requirement for notarization of the transaction, the subject of which is the share of such participant in the authorized (composed) capital (share fund) of the legal entity;

- non-compliance of the name of the legal entity with the requirements of the law;

- in relation to the founder (participant) of the legal entity being created, the state registration of the decision on termination of the legal entity as a result of its liquidation was carried out;

- in respect of a legal entity in respect of which the Unified State Register contains a record of a court decision recognizing completely or partially invalid decisions of the founders (participants) of a legal entity or their authorized body, declaring changes to the constituent documents of a legal entity its part is declared invalid, changes to the constituent documents of the legal entity are the basis for registration actions;

- inconsistency of the information specified in the application for state registration with the information specified in the documents submitted for state registration or with the information contained in the Unified State Register or other information systems, the use of which is provided by law;

- inconsistency of the information specified in the documents submitted for state registration with the information contained in the Unified State Register or other information systems, the use of which is provided by law.

The message about the refusal to conduct state registration must contain a reference to a specific rule (paragraph, article) of the law indicating what was violated during the execution and submission of documents, and must indicate which paragraph or article of the applicant's document (statute, protocol) etc.) does not comply with legislation.

Refusal of state registration for reasons not provided for in this article, as well as refusal of state registration (legalization) of a trade union, its organization or association is not allowed.

Refusal of state registration is carried out within **24 hours** after receipt of documents submitted for state registration, except weekends and holidays.

Notifications about refusal of state registration indicating the exclusive list of grounds for refusal and the decision of the subject of state registration on refusal of state registration are posted on the portal of electronic services or using the Unified state web portal of electronic services on the day of refusal of state registration.

In case of refusal of state registration, documents submitted for state registration (except for the document on payment of administrative fee) are returned (issued, sent by mail) to the applicant no later than the next working day from the date of receipt of the applicant's return. After eliminating the reasons that were the basis for denial of state registration, the applicant may re-apply for state registration.

State registration administrative fee is charged of the following amount:

- 0.3 of the subsistence level for able-bodied persons – for state registration of changes to information on legal entities (except public associations and charitable organizations) contained in the Unified State Register, except for amendments to information on communication with legal entities;
- 75 percent of the administrative fee established by this part – for state registration on the basis of documents submitted in electronic form.

The administrative fee is not charged for the state registration of changes to the information:

1. about the legal entity, including changes to the constituent documents related to bringing them in line with the law;
2. on legal entities and their constituent documents related to changes in the administrative-territorial structure of Ukraine, as well as changes in the location of the legal entity in connection with the change of name

(renaming) of streets, avenues, squares, squares, embankments, bridges, other objects of toponymy of settlements.

If the laws set a deadline for compliance with them, the administrative fee is not charged when making changes to the information, including changes to the constituent documents, within the period specified by law.

An administrative fee of 30% of the administrative fee shall be charged for the correction of a technical error caused by the applicant's fault.

In case of refusal of state registration, the administrative fee is not refundable.

The following fee is charged for providing information from the Unified State Register:

- 0.05 subsistence level for able-bodied persons – for providing an extract for affixing an apostille and an extract in paper form;
- 0.07 subsistence level for able-bodied persons – for providing a document in paper form contained in the registration file;
- 75 percent of the fee established by this part for the provision of the relevant document in paper form – for the provision of an extract in electronic form and a document in electronic form contained in the registration file.

The administrative fee and fee for providing information from the Unified State Register shall be collected in the appropriate amount from the subsistence level for able-bodied persons established by law on January 1 of the calendar year in which the relevant documents for registration or request for information from the Unified State Register are submitted, rounded up to the next 10 hryvnias.

Note: The Law on the State Budget, which entered into force on January 1, 2022, sets the following main indicators and minimums for the current year:

- minimum wage – in the monthly amount: from January 1 – UAH 6500, from October 1 – UAH 6700; in an hourly rate: from January 1 – 39.26 hryvnias, from October 1 – 40.46 hryvnias;
- subsistence level (for able-bodied persons): from January 1 – UAH 2481, from July 1 – UAH 2600, from December 1 – UAH 2684.

It should be mentioned some aspects regarding liquidation procedure of legal entities. According to the Article 104 of the Civil Code of Ukraine the legal entity is terminated as a result of reorganization (merger, acquisition,

division, transformation) or liquidation. In case of reorganization of legal entities, property, rights and obligations pass to successors.

Thus, liquidation is one of the forms of legal entity termination.

A legal entity can be liquidated:

1. *by the decision of its members (shareholders) or the body of the legal entity authorized to do so by the constituent documents, including in connection with the expiration of the term for which the legal entity was established, achieving the purpose for which it was created, as well as in other cases constituent documents;*

2. *by a court decision on liquidation of a legal entity due to violations committed during its creation, which cannot be eliminated, at the suit of a participant of a legal entity or a relevant public authority;*

3. *by a court decision on the liquidation of a legal entity in other cases established by law – at the request of the relevant public authority.*

It is important to properly determine the company liquidation method. Meanwhile, a lot of various aspects should be taken into account, in particular: a company legal status; its financial position; the occurrence of such encumbrances as pledges; litigations (with debtors, creditors) or a property seizure, etc.

In order to determine the company liquidation method, the first thing to be done is to assess its financial position, assets and liabilities. If the company financial position is positive or zero, then it can be liquidated by its shareholders' decision. If its assets are insufficient to comply with its monetary obligations, then the company should be liquidated through the bankruptcy procedure.

In case of liquidation of a legal entity by the decision of its shareholders or the body of the legal entity authorized to do so by the constituent documents, the procedure of termination of activity will be carried out in the following stages:

STAGE 1. Adoption of the decision of the owner (participants or shareholders) on the termination of the legal entity.

STAGE 2. Notifying the body that carries out state registration about the start of the liquidation procedure.

STAGE 3. Notifying the controlling bodies about the start of the liquidation procedure.

STAGE 4. Identifying the company creditors and receivables. Notifying creditors of the beginning of the liquidation procedure.

STAGE 5. Inventory and assessment of the company property, drawing up its interim liquidation balance-sheet and settlement with creditors.

STAGE 6. The company employee's dismissal.

STAGE 7. Closing bank accounts, revoking certificates, permits and removing them from the registers.

STAGE 8. Inspection of the controlling body.

STAGE 9. Receipt of certificates from SFSU and PFU.

STAGE 10. Handing over the company documents to the archival institution, destruction of seals and stamps.

STAGE 11. Entry into the Uniform State Register of the data on the legal entity termination.

The term for making claims by the creditors to the company may not be less than 2 (two) and more than 6 (six) months. This period determines the minimum duration of the liquidation process.

Deregistration of a legal entity in the controlling bodies is possible only after an audit by the Audit Department of the State Fiscal Service and receipt of certificates from the tax authority and social insurance funds on the absence of arrears of taxes, fees and contributions.

3.2. Assessment of the current tax environment for the industry, types and rates of taxes and features of their payment

The tax burden is one of the basic factors influencing the motivation of businesses to do business and fulfill tax obligations. Familiarity with the tax system of Ukraine and tax legislation is not necessary to know what tax rates will be set for business. It gives an understanding of what is required of a newly established business under tax law. This is especially important for foreign business representatives, whose goal is to start their business in Ukraine without losing money.

When talking about the issue of taxation, in parallel with the term "tax burden" is often used synonyms, in particular, close in meaning, scientists consider such concepts as "tax pressure", "tax press", "tax level". In modern economic dictionaries, the tax burden is interpreted as the degree, the level of economic restrictions imposed on taxpayers, which are due to the deduction of funds for the payment of taxes, distracting them from other possible uses.

The level of tax burden of the business entity can be influenced by various factors (Figure 3.1).

FACTORS AFFECTING THE TAX BURDEN OF BUSINESS ENTITIES

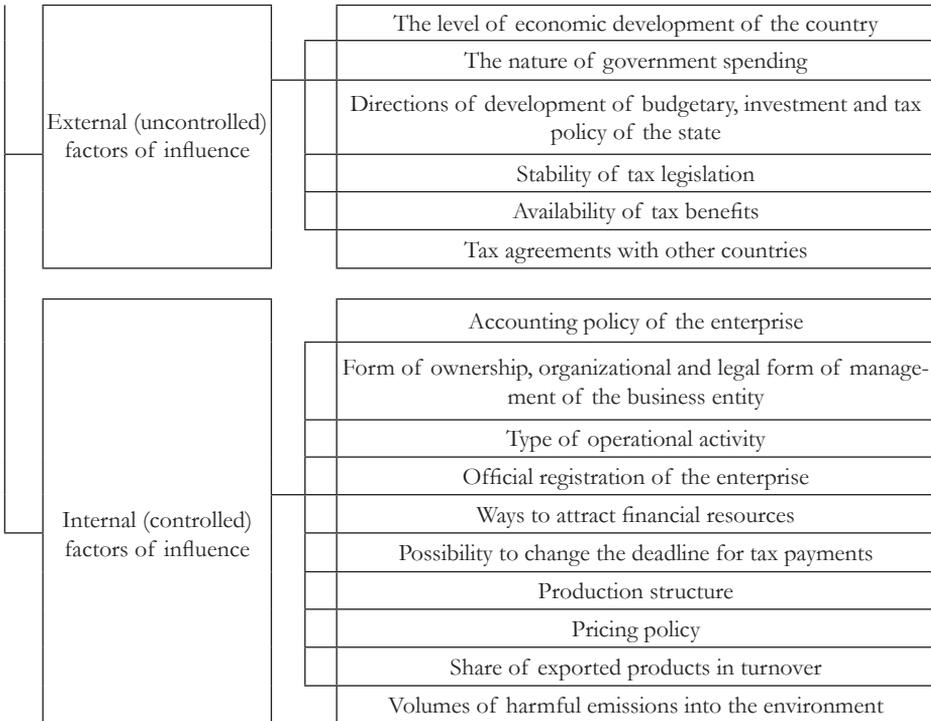


Figure 3.1. Factors influencing the tax burden of business entities

It is impossible to cover all the nuances of business taxation, or to develop a universal tax scheme for all types of business. Therefore, we will try to highlight the most important aspects and describe the most important situations that will help form a basic understanding of business taxation in Ukraine.

Being registered with the tax, the company or entrepreneur is automatically considered a taxpayer on general grounds. However, you can immediately apply for the transition to a simplified system of taxation, which involves replacing the payment of certain taxes and fees with a single tax with the simultaneous maintenance of simplified accounting and reporting. However, there is a number of requirements under which businesses cannot opt for a simplified taxation system:

- some activities (for example, gambling, lotteries, work with excisable goods, non-residents and others). Their list is clearly defined by law;
- annual income of the enterprise over UAH 7 million per year;

- taxpayers with both tax and financial debt;
- non-resident legal entities or enterprises.

The Tax Code of Ukraine (TCU) stipulates that the calculation of taxes is based on accounting data, which is regulated by the National Regulations (standards) of accounting (PSBO – in Ukrainian abbreviation). It turns out that the two main documents on which the accounting of enterprises is based on the general taxation system in Ukraine are the Tax Code and the PSBO. PSBO regulates the procedure for determining the income and expenses of the enterprise, the procedure for document management and forms of documents.

Legal entities that are on the general system pay the following basic taxes, fees and mandatory payments according to the TCU:

- value added tax (VAT) (main rate – 20% of the tax base, which is determined by Section V of the TCU and adjusted for "received" VAT from other payers of this tax);

- corporate income tax (rate – 18% of estimated profit, regulated by Section III of the TCU);

- depending on the chosen activity, the following fees and taxes may be added: excise duty, environmental taxes, duties, land tax, vehicle registration fee on the territory of Ukraine, etc.

A separate group of taxes is payroll taxes on employees:

- personal income tax (PIT) – 18%;

- military tax (fee) – 1.5%

- unified social contribution (USC) – 22% of the total wage bill.

Let's look at some peculiarities of collecting main taxes and mandatory payments.

1. Value-added tax (VAT)

There are three VAT rates: 20%, 14%, 7% and 0% [23]:

1) the rate of **20%** applies to all transactions subject to VAT except specific transactions subject to 7% and 0% VAT;

2) the rate of **14%** applies to import and supply of certain agricultural products (products of plant origin such as corn, soybeans, sunflower seeds and certain other goods) in Ukraine. The 14% rate applies starting from March 1, 2021.

3) the reduced rate of **7%** applies to supply and import of qualifying medicines and specific medical goods, as well as medicines, medical goods, and medical equipment for use in clinical trials.

The **0%** VAT rate applies to export and re-export of goods. The 0% rate also applies to the supply of international transport services (confirmed by a single international shipping document), toll manufacturing services (if the finished goods are then re-exported from Ukraine), and certain other services. Provision of services to a non-resident is not considered to be zero-rated. Such services are subject to 20% VAT or considered to be outside the scope of VAT (effectively exempt with no input VAT recovery), depending on the place of supply as determined by the legislation.

Transactions that **are subject to VAT** include the following [23]:

- The supply of goods and services with the place of supply in Ukraine, including when the supply is made free of charge (without consideration).
- Transfer of the object of a financial lease to the lessee when the place of supply is in Ukraine.
- The importation of goods into Ukraine.
- Exportation of goods (0% VAT).
- International transportation services (0% VAT).

Since 01.01.2022 B2C supplies of digital services to Ukrainian-based customers by non-residents would be subject to 20% VAT, unless specific VAT exemption applies. For these purposes, "digital services" are defined as services supplied via the Internet automatically using information technologies and mostly without interaction of people, including in a way of installing special applications on smartphones, tablets or other devices (subject to certain exceptions) [23].

Transactions that are **not subject to VAT** include the following (among others) [23]:

- The issue, sale, and exchange of securities.
- Assignment of claims, transfer of debt.
- The transfer of property from a lessor to a lessee under an operating lease and the return of property upon expiration of the operating lease (other than in the course of import operations).
- Transfer of property right of finance leasing object from one lessor to another.
- Interest/commission element of lease payments under financial lease agreements.
- Provision of financial loans and bank guarantees.
- Insurance and reinsurance services supplied by licensed insurers and services of insurance/reinsurance agents and brokers.

- Payment of royalties and dividends in cash.
- Reorganization of a legal entity (merge, spin-off, accession, division, and change of legal form).

Transactions that **are VAT exempt** include the following (among others):

- Transit of cargo and passengers through Ukrainian territory and services related to such transit.
- Supply and import of goods and services within international technical assistance projects or the import of humanitarian aid.

2. The Corporate Income tax (CIT)

In Ukraine, the corporate Income tax rate is a tax collected from companies. Its amount is based on the net income companies obtain while exercising their business activity, normally during one business year. Usually, we state that corporate income tax (CIT) is a direct tax paid by enterprises on profits from the sale of products (works, services), fixed assets, intangible assets, securities, currency values, other types of financial resources and tangible assets, as well as profits from leases, royalties and non-operating activities. Revenues from the Corporate Tax Rate are an important source of income for the government of Ukraine. The dynamic of corporate income rate is presented on Figure 3.2.

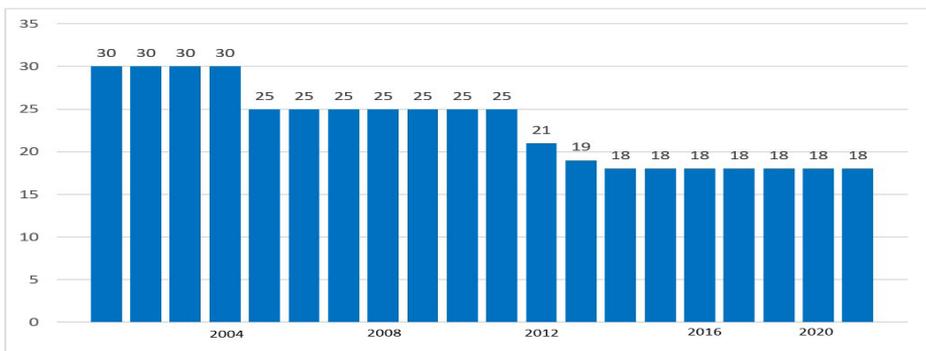


Figure 3.2. The dynamic of corporate income tax (CIT) rate in Ukraine during 2001–2021

Source: <https://tradingeconomics.com/ukraine/corporate-tax-rate>

From 2022, foreign legal entities can be recognized as residents of Ukraine – payers of income tax. To do this, Ukraine must be a place of

effective management of such legal entity, ie a venue of executive body meetings, decision-making and other operational activities, managing of bank accounts or personnel, accounting or managerial accounting. That is, there should be actual management of activities, regardless of the presence of formal (legal) powers of persons who carry out such management. Foreign legal entities, who are residents in Ukraine, are not recognized as controlled by foreign companies, and their profits with a source of origin outside Ukraine are not subject to taxation.

3. The Personal Income tax (PIT)

All income received from employment in monetary form or in kind during a calendar year is subject to personal income tax (PIT). This includes all basic pay, overtime pay, supplemental pay, awards and bonuses, compensation for unused vacation, all other monetary amounts, and additional benefits granted by employers to employees. Taxable income of foreign nationals who are residents of Ukraine is determined in the same order as for Ukrainians.

The standard tax rate of 18% applies to income received as salary and other benefits under employment and civil agreements, foreign income, and other income not covered elsewhere.

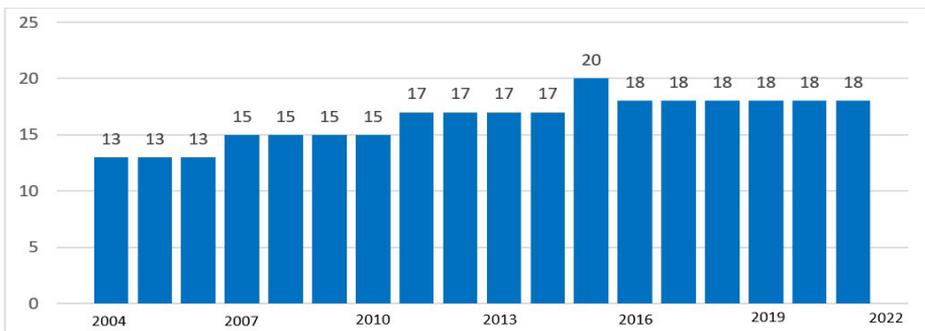


Figure 3.3. The dynamic of personal income tax (PIT) rate in Ukraine during 2004–2021

Source: <https://tradingeconomics.com/ukraine/personal-income-tax-rate>

Taxable income received from abroad is subject to a tax rate of 18% as well. The same rate also applies to all passive income (e.g., interest, dividends, royalties, investment profit), unless specified otherwise by a special article. Thus, dividends paid by resident CIT payers (except mutual invest-

ment institutions) are taxed at 5%. Dividends paid by non-residents, mutual investment funds, and non-payers of CIT in Ukraine are taxed at 9%. Dividends that are 'not ordinary dividends' are taxed like salary (i.e., 18%) [23].

Income earned by tax non-residents from sources in Ukraine should be subject to tax under the same order and rates as those for tax residents, unless otherwise specified by the Tax Code.

The PIT rate has been changing during over the last 15 years (Figure 3.3).

4. Military tax

A temporary 1.5% military tax on personal income was introduced in August 2014. This is effective until the reformation of the Ukrainian Military Forces is completed. The completion should be confirmed by the respective decision of the Parliament. Tax base for the military tax is the same as for PIT and is not capped [24].

Ukrainian employers and other tax agents are responsible for tax withholding. Military tax from income not withheld by a tax agent should be payable on a self-assessment basis within the deadlines for PIT [23].

5. Unified social contribution (USC)

The USC basic rate (the contribution of a company that pays employment income/remuneration under civil agreements to individuals) is 22% of the gross remuneration.

The taxable base subject to the USC is capped per individual per month. Starting from 2018, the cap is set at 15 times the minimal wage set for the respective month (e.g. UAH 97,500 starting from December 2021 and UAH 100,500 starting from October 2022).

The minimal USC contribution is 22% of the minimal wage set as of the 1st day of the month of the salary payment (e.g. UAH 6,500 starting from December 2021 and UAH 6,700 starting from October 2022).

One of the initiatives for 2022 is the abolition of the USC, which the legislator wants to compensate by increasing the personal income tax rate. Reducing the total rate of 41.5% (18% + 1.5% + 22%) by 25–30% of income tax looks economically attractive.

However, it should be kept in mind that USC is paid by the employer, while the employee pays personal income tax and military tax. It is hoped that employers will increase the salaries of employees at the expense of released funds (after exemption from paying USC) to compensate for the increase in the tax burden on the employee.

To sum up, during 2004–2014, due to the liberalization of taxation in Ukraine, in particular, the reduction of the corporate income tax rate by 7% and the unified social tax rate by 10%, Ukraine reached the best positions in international rankings in terms of tax burden on business. That was also influenced by other factors, namely: improved quality of tax administration (reduction of time for registration, submission of documents and payment of taxes from 2185 hours in 2005 to 328 hours in 2016, with an average world index of 240 hours per year) and reduction of the number of tax payments from 98 in 2005 to 5 (the world average index is 24 payments) in 2016.

The result of the effective tax policy of the Government of Ukraine was a reduction of the total tax burden on business from 60.3% in 2005 to 37.8% in 2016 with a global average index of 40.5%.

3.3. The foreign investment state regulation

Until 2014, the dialogue between the Ukrainian authorities and investors was mostly formalized and took place through the work of the Council of Local and Foreign Investors. At the end of August 2016, it was replaced by the newly established National Investment Council – an advisory body to the President of Ukraine, designed to establish a dialogue between government and investors. In addition, in terms of strengthening the dialogue with investors, a key element became the creation of the institution of an independent business ombudsman, which is a "lawyer" of business before government agencies. It is the key element of an anti-corruption initiative agreed between the Ukrainian government, international organizations (EBRD and OECD) and a number of Ukrainian business associations. The importance of this institute is evidenced by the results of its work: as of January 2022, since its inception, 10,423 complaints were considered, most of which relate to excessive tax audits, blocking tax invoices, electronic VAT administration, actions of state regulators (State Inspectorate for Architecture and Urban Planning (DIAM), State Service of Ukraine for Geodesy, Cartography and Cadaster, Antimonopoly Committee of Ukraine (AMCU), etc.), inaction of the National Police, etc. [1].

Among the territorial and organizational forms of FDI incentives that have become widespread in Ukraine are industrial parks. The purpose of their creation is to intensify industrial production, create new jobs, and stimulate economic development and infrastructure development. Since June 2012, when the Law of Ukraine "On Industrial Parks" was adopted, 52 industrial parks have been registered in the country (as of January 2022).

Regarding the encouragement of foreign investors in various investment periods, a number of regulations have been adopted on tax incentives and benefits, the vast majority of which are related to exemption from import duties, income tax, VAT. Among the "innovations" proposed by the government at the World Economic Forum in Davos (January 21–24, 2020) to foreign investors were tax holidays. They meant no payment of income tax for 5 years to those who would invest \$ 10 million in future privatization. In addition, personal managers (so-called "investment nannies") are offered for large investors who would like to invest (or have already invested) in Ukraine at least \$ 100 million [17]. This proposal, however slightly modified, was transferred to the Draft Law №3760 "On state support of investment projects with significant investments", which was voted on December 17, 2020 and which [13]:

- determines the organizational, legal and financial principles of state support for investment projects with significant investments (€ 20 + million, 80+ jobs; 115+% of the average salary in the industry / region);

- provides a number of benefits from the exemption of import duties on new equipment (equipment) and components imported into it for the implementation of the investment project, provides a preemptive right to use land of state or communal property for the investment project, at the expense of state and local budgets highways, communication lines, utilities required for the project) and establishes the status of a government agency, which includes investment managers ("investment nannies");

- the amount of state support may not exceed 30% of the amount of investment in the project, and the term of its implementation – up to 5 years;

- the document will not cover companies that have arrears of mandatory payments in excess of 10 minimum wages.

Companies that have not disclosed information about the ultimate owner, in which more than 50% of shares belong to offshore companies, companies with more than 10% of shares from the aggressor state and companies registered in it or on the sanctions list of Ukraine cannot apply for assistance.

Such offers are often perceived by investors as neutral, as it is not so much the benefits that are important as the ease of doing business, investment protection and the invariability of the rules of the game. In this context, it is appropriate to mention legislation that is in fact stimulating:

1. Law of Ukraine "On Amendments to Certain Laws of Ukraine on Removing Regulatory Barriers to the Development of Public-Private Partnerships and Stimulating Investment in Ukraine" №817 of November 24, 2015, which provides for expanding guarantees for private investors and resolving conflicts between legislation in the field of public-private partnership (PPP) [9]:

- the mechanism for transferring the right to use land plots provided in the prescribed manner to a private partner for the construction of a PPP facility has been simplified;

- additional mechanisms of state support of a private partner have been introduced by the possibility of providing payment for the readiness (availability) of the facility for operation and supply of the private partner with the necessary goods (works, services);

- it is given an opportunity to conclude a mixed agreement within the PPP, the terms of which are determined in accordance with the civil legislation of Ukraine;

- the right of a private partner to suspend the fulfillment of investment obligations is determined if the prices (tariffs) for goods (services) subject to state regulation become economically unjustified.

2. Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Removing Barriers to Attracting Foreign Investments" of May 23, 2017, (conditions and rules of employment of foreign citizens have been relaxed);

3. Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Stimulating Investment Activity in Ukraine" of September 20, 2020;

4. Resolution of the Cabinet of Ministers of Ukraine "On some issues of registration of representative offices of foreign economic entities in Ukraine" №893 of October 23, 2019. (Facilitation of opening of representative offices by foreign companies: registration fee reduced from \$ 2,500 to 1 subsistence level for able-bodied persons; registration period reduced from 60 to 20 working days).

5. Due to the introduction of currency liberalization on the repatriation of dividends, as well as the entry into force on February 7, 2019 of the Law of Ukraine "On Currency and Foreign Exchange Transactions", both businesses and individuals received more "currency freedom". The law enabled Ukraine's transition to a liberal and transparent regulatory system [10]:

- Currency control was abolished for foreign economic transactions in the amount of up to UAH 150,000, and for all transactions in the amount of over UAH 150,000 – currency supervision was introduced.

- In the case of free movement of capital, procedures are informative, not permissive.

- The deadline for settlements on foreign economic activity operations has been increased from 180 to 365 days. Sanctions in the form of termination of foreign economic activity for violation of terms of settlements under the concluded contracts are canceled.

- Canceled registration of loans from non-residents, etc.

Recent bills adopted on December 16, 2021, which could contribute to attract investment, are:

1. Law of Ukraine "On Amendments to the Tax Code of Ukraine to create favorable conditions for attracting large-scale investment in industrial production" (project №5688) – proposed to exempt from corporate income tax for ten consecutive years for activities in the territory and within industrial park and directing profits exclusively to development, without accrual and payment of dividends;

2. Law of Ukraine "On Amendments to the Customs Code of Ukraine to create favorable conditions for attracting large-scale investment in industrial production" (project №5689) – proposed to exempt from duty new equipment (equipment) imported by participants of industrial parks included in the Register of Industrial Parks, exclusively for own use for their activities in the field of processing industry, or research activities, provided that the relevant goods are manufactured not earlier than three years before the date of their importation into the customs territory of Ukraine and were not in use.

In total, over the years of independence, Ukraine has adopted more than 100 legal acts (laws, decrees, orders, regulations, instructions, etc.), which directly or indirectly relate to FDI and the activities of foreign investors. Some aspects of FDI are regulated by the Commercial and Tax Codes of Ukraine, currency, customs, banking and land legislation, legal acts on innovation, privatization, entrepreneurship, securities and stock market, as well as international legal acts to which Ukraine is a party.

Despite the fact that FDI is present in all sectors of the Ukrainian economy, their distribution is not balanced. In recent years, FDI in Ukraine has increasingly flowed into finance and trade, and less and less into the real sector of the economy.

Foreign investors in Ukraine focus mainly on the domestic market, especially on sectors with rapid capital turnover, not related to foreign trade, and those that do not require long-term investment and development of new technologies – wholesale and retail trade (accumulated \$ 5,662.5 million, or 15.8% of the total), financial and insurance activities (\$ 4,557.6 million, or 12.7%), and real estate transactions (\$ 4,595.7 million, or 12.5%).

The strong domestic market and the growing trend of consumption have led to the active activity of foreign investors in the field of retail. Today, international players such as Metro Group, Auchan, Rewe Group (Billa) and Spar operate in the market.

The undisputed leader in terms of available investment potential and investment activity among the regions of the country is the city of Kyiv. This is objective, because it is the capital of the state, where a significant part of financial resources circulates, market infrastructure is actively developing, trends in construction and transport development are improving every year. In addition, the chances of FDI inflows have industrialized regions, promising in terms of production and business potential. At the end of 2019, Kyiv accounted for 54% of all FDI, Dnipropetrovsk region – 10.6%, Kyiv – 4.6%, Donetsk – 3.9%, Odessa – 3.6%, Poltava – 3.3%, Lviv – 3.1%. The smallest amounts of investments came to Ternopil, Kirovohrad, Chervivtsi, Sumy and Rivne regions, where the total amount of FDI is slightly more than 1.4%.

In his speech at the Second Annual UkraineInvest Forum "MAKE in UA" in December 2021, the Prime Minister of Ukraine D. Shmygal outlined 7 key priorities on which the government is focused and which will promote economic development and attract investment in the coming years [2]:

- high-quality implementation of the law on state support of investment projects with significant investments;
- further digitalization, reduction of bureaucratic burden, as well as support of the IT sector;
- reducing the role of the state in the economy through the privatization of state-owned enterprises, as well as the development of public-private partnerships and concessions in various fields: from ports and roads to gas production;
- completion of land reform. Support for agriculture through the development of the irrigation system, as well as support for projects with significant added value;

- launch of industrial parks;
- cheap and long money for development;
- correct market design.

The Prime Minister reminded that in February 2020 the law "On state support of investment projects with significant investments in Ukraine" came into force, which provides customs, tax, infrastructure, land benefits for investment projects worth over 20 million euros. In addition, the Prime Minister noted that the Government continues to translate communication between the state and business into electronic form, so that such relations are as comfortable, transparent and convenient as possible. Currently, more than 30 electronic services for businesses and individuals are available on the Dija e-portal, and according to him, business registration services are one of the fastest in the world.

3.4. Bureaucratic environment, obstacles, existing risks and threats

For now, the vast majority of FDI is concentrated in a small number of Ukrainian regions, which provide access to capacious local markets and have access to foreign markets. At the same time, significant differences in the distribution of FDI are due to not only economic / industrial potential and business activity, but also the activity of local authorities in attracting and encouraging investors.

The investment attractiveness of the country's regions tends to change every year, due to various factors: the military-political conflict in the east (which led to a significant reduction in investment in Donetsk and Luhansk regions and the withdrawal of FDI), and the signing of the Agreement on association in 2014 and its full entry into force on September 1, 2017. This allowed increasing the investment rating of most regions, especially those that are territorially closer to European borders. FDI today can be a key factor in the development of economic activity in such Euroregions as the "Carpathian Euroregion", "Bug" and "Upper Prut", helping to increase the level of socio-economic development of territories [26, p. 252].

The growing degree of investment heterogeneity can lead to extremely negative consequences: social stratification of the population, the formation of depressed zones of economic development, weakening economic ties between regions, and so on. It should be noted that in recent years, there has been a change in the position of some regions in terms of investment "attractiveness", but this was mainly not due to improved situations in specific regions, but due to deteriorating economic performance in others.

The state – represented by the parliament and the government – plays a crucial role in creating a national system of attracting and distributing investment capital, but its "shortcomings" during the years of independence did not create an attractive investment climate, characterized by the presence of:

- *lengthy and costly administrative procedures*. The process of investor entry – creating a company / branch (or attracting investment through privatization), obtaining licenses, permits, certificates, allocating land, etc. – despite improving the country's position in the Doing Business-2020 ranking (Ukraine took 64th place, improving positions on indicators: "obtaining a building permit", "connection to the grid", "property registration", etc. [3]), still takes a long time, it involves a large number of public authorities, which does not allow to overcome numerous bureaucratic obstacles. The initial stage of large-scale investment projects lasts 1.5-2 years. This term is a deterrent to investment, especially in high-tech production, which leads to high transaction costs. In a UNCTAD report on global investment, S. Lall, a professor at Oxford University, said: "...*Creating a strategy for attracting FDI is an art, not a science ... you should just reduce the barriers to attracting them and minimize the cost of doing business...*" [22].

- *lack of strategic documents* that form the current priorities of socio-economic development and public investment policy. Most of the current documents are approved by other macroeconomic and foreign policy realities and do not meet the stated priorities of public policy. The system of state regulation of FDI is largely based on principles that differ significantly from those that determine the essence of the current economic situation. In addition, the current legal framework is still based on decisions, most of which were made in the 1990s and early 2000s.

- *weak coordination of actions of public administration bodies* involved in the implementation of investment projects. This often makes it impossible to consistently put into practice both policy orientations and real results. Such coordination should be facilitated by an institution with a leading role in ensuring interaction and coordination between FDI initiators and regulators.

Since the beginning of 2014, the deployment of hostilities in the east of the country and adverse economic processes, the adverse effects on foreign exchange and monetary policy have increased because of negative domestic political events. It is known from the theory that the increase in the exchange rate stimulates the inflow of foreign investment and at the same time the export of profits on foreign investment; the fall leads to a decrease in foreign capital inflows. The depreciation of the Ukrainian hryvnia

over the past 7 years should contribute to the inflow of export-oriented FDI. In practice, however, this has led to significant currency instability for foreign investors, most of whom have been forced to hedge the risks of currency fluctuations in international financial markets.

In order to summarize the risks associated with FDI flows in Ukraine up to 2022, a map of risks that hinder the interests of investors has been developed (Table 3.1). The map depicts the main risk groups for investors in Ukraine, the probability of their occurrence and the degree of their danger. In compiling the risk map, the authors focused exclusively on the conditions of the country in which the borrowed capital operates – Ukraine – and therefore the risks associated with intra-firm activities were not considered.

Table 3.1. Types of risks for investors in Ukraine as of the end of 2021

Types of risks	
<i>Non-economic origin</i>	<i>Economic origin</i>
<p style="text-align: center;"><u>Risk of political instability and Geopolitical Tensions</u> variability of political course, distrust of public authorities, weakness of political institutions</p>	<p style="text-align: center;">Risk of natural disasters and cataclysms natural disasters: floods, villages, earthquakes, hurricanes, etc.</p>
<p style="text-align: center;"><u>Risk of restriction of financial transactions in Ukraine</u> probability of losses from measures to restrict bank transfers, settlement transactions, export of capital abroad, etc.</p>	<p style="text-align: center;"><u>Risk of depletion of energy resources</u> limited extraction of raw materials (eg coal, coke, peat, natural gas, oil, etc.) to generate electricity and heat</p>
<p style="text-align: center;"><u>Risk of violation of property rights</u> nationalization, forced alienation, non-enforcement of property arbitration awards</p>	<p style="text-align: center;"><u>Risk of depletion of skilled labor</u> migration of highly qualified able-bodied population abroad</p>
<p style="text-align: center;"><u>Risk of legal instability</u> changes in business standards, administrative barriers</p>	<p style="text-align: center;"><u>Risk of depletion of raw materials,</u> limited extraction of mineral resources; depletion of minerals</p>
<p style="text-align: center;"><u>Risk of social instability</u> protests, riots, strikes, sabotage</p>	

The issue of assessing the risk system and identifying ways to minimize them was the subject of an expert survey conducted by the Razumkov Center from September 28 to October 20, 2017. The survey involved 109 experts

(university professors, researchers, representatives of NGOs, think tanks, ministries, regional state administrations and chambers of commerce and industry). Questionnaires were sent to the experts with a request to assess the level of probability of risks and the degree of their danger (low, medium, high).

Table 3.2. Assessment of the probability of risk and the degree of its danger (*percentage of surveyed experts*)

№	Types of risks	Probability of risk			
		<i>Low</i> (0-30 %)	<i>Medium</i> (30-60 %)	<i>High</i> (60-100 %)	<i>Difficult to answer</i>
a) risks of non-economic origin					
1	Risk of political instability	10,0	37,3	50,9	1,8
2	Risk of violation of property rights	42,7	33,6	21,8	1,8
3	Risk of legal instability	30,0	37,3	30,9	1,8
4	Risk of restriction of financial transactions in Ukraine	43,6	41,8	12,7	1,8
5	Risk of social instability	42,7	38,2	17,3	1,8
6	Risk of natural disasters and cataclysms	75,5	14,5	4,5	5,5
b) risks of economic origin					
7	Risk of depletion of skilled labor	31,8	36,4	30,0	1,8
8	Risk of depletion of energy resources	60,0	34,5	3,6	1,8
9	Risk of depletion of raw materials	64,5	25,5	8,2	1,8
№	Types of risks	Danger degree of risk			
		<i>Low</i> (0-30 %)	<i>Medium</i> (30-60 %)	<i>High</i> (60-100 %)	<i>Difficult to answer</i>
c) risks of non-economic origin					
1	Risk of political instability	10,0	36,4	51,8	1,8
2	Risk of violation of property rights	19,1	30,9	48,2	1,8
3	Risk of legal instability	20,9	45,5	31,8	1,8
4	Risk of restriction of financial transactions in Ukraine	23,6	43,6	30,9	1,8
5	Risk of social instability	27,3	39,1	31,8	1,8
6	Risk of natural disasters and cataclysms	41,8	37,3	15,5	5,5
d) risks of economic origin					
7	Risk of depletion of skilled labor	23,6	38,2	36,4	1,8
8	Risk of depletion of energy resources	42,7	35,5	20,0	1,8
9	Risk of depletion of raw materials	46,4	36,4	15,5	1,8

According to the results of data processing presented in Table 3.2, the vast majority of experts assess the *risk of political instability* for the investor as the most probable and one that carries the highest potential danger to the investor's activity in Ukraine. The weakness of state institutions, the lack of effective justice and the authorities 'disregard for investors' problems not only create political uncertainty, but also spoil the image of the state as a space for reliable business.

The extremely important issue for a foreign investor in his daily activities is the protection of his property rights. One third of respondents – 33.6% – classified the risk of property rights violations as medium probability, and almost half of respondents – 48.2% – as high risk. The specificity of *property risk* is that even in the presence of the necessary legal framework, when the "law on the side of the investor", in practice, the latter is not able to protect their property rights freely. Experts as "medium" probability (37.3%) and "medium" degree of danger (45.5%) classified the risk of *legal instability*.

Among the risks of economic nature, the *risk of depletion of skilled labor* experts noted as "medium" and "medium dangerous" – 36.4% and 38.2%, respectively. This state of affairs is explained by the fact that labor migration in Ukraine in recent years is becoming more and more widespread. Qualified personnel seek better working conditions and often find better jobs abroad after receiving training and internships at branches of international corporations.

The threat of this risk in conditions of uncertainty lies in the negative effects of external labor migration on national and regional labor markets, which is manifested in [6, c. 111]:

- shortage of highly skilled workers in Ukraine due to emigration to countries that offer better working conditions and higher wages;
- outflow of intellectual resources (largely to programmers, engineers, scientists), resulting in a decrease in R&D.

Given a number of gaps in investment policy (lack of clear restrictions for foreign investors, etc.), one of the risks as of 2021 was the growing share of foreign capital in certain sectors of the economy, which risked market monopolization.

The war started in February 2022 has significantly changed variety of risks, including those of non-economic origin. In the case of Ukraine, several non-economic and economic risks are still relevant:

Political Instability and Geopolitical Tensions: The ongoing geopolitical tensions and military actions between Ukraine and Russia can lead to unpredictability and affect investment decisions, confidence and stability in the region.

Security Concerns: The Russian invasion of Ukraine made the issue of ensuring the national security especially urgent not only within the country, but also for almost all European countries and affected global processes. The issue of safety for personnel, property, and business operations should be taken into account when making investment decisions by the global automotive brands operating in the region.

Corruption and Governance: Ukraine has faced challenges related to corruption, which can affect the business environment and create risks for investors. Inefficient bureaucracy, lack of transparency, and uneven rule of law can hinder business operations and expose investors to legal and regulatory risks.

Currency Fluctuations: The Ukrainian hryvnia (UAH) has experienced fluctuations in value against major currencies. Exchange rate volatility can affect the profitability of investments and create uncertainty for investors.

Infrastructure and Utilities: Inadequate infrastructure and inconsistent access to utilities (such as electricity, water, and transportation) can pose challenges to business operations and increase operational risks for investors.

Labor Market and Skills Gap: The availability of a skilled workforce and labor market conditions can influence the success of investments. A skills gap and brain drain could affect the quality and availability of human resources.

Given the set of factors influencing the automotive industry of Ukraine in the study conducted a SWOT-analysis (Table 3.3), which will provide a comprehensive understanding of the processes taking place in the industry at present.

It should be noted such a weakness of domestic automotive industry as a high degree of wear and tear of assets. It is a direct consequence of insufficient capital investments – the volume of capital investments in machine-building production in 2020 (220.9 million euros) was only 36.4% of the level of 2012 (607.0 million euros). For comparison, in Poland in 2019, capital investments in mechanical engineering reached EUR 6,269.6 million, which was 16.4 times higher than the similar indicator in Ukraine (EUR 381.9 million). The structure of capital investments in do-

mestic engineering is poorly diversified and irrational from the point of view of manufacturability. Thus, in 2020, 43.9% (against 41.4% in 2012) accounted for the production of motor vehicles, trailers and semi-trailers, and other vehicles; 32.9% (against 42.9%) – for the production of machines and equipment, not classified in other groups; 17.1% (against 12.0%) – for the production of electrical equipment and 6.2% (against 3.9%) – for the production of computers, electronic and optical products. The latter is high-tech and extremely important for ensuring the activity of the rest of the machine-building industries, therefore the growth of its share in the structure of capital investments is a positive trend, however, the amount of capital investments remains extremely small (13.6 million euros) [27].

The reduction in investment of machine-building industries in Ukraine, in turn, caused a drop in costs for innovation, the volume of which decreased by 41.9% during 2014–2019, while the share of own funds of enterprises in these costs reached 93.65% (against 63.35% in 2013). During this period, the number of innovatively active enterprises in mechanical engineering decreased by more than 2 times – from 397 to 194. As a result, the volume of innovative products sold by machine-building enterprises in Ukraine during 2009-2020 decreased by 84%, and its share in the total volume of sold machine-building products decreased by 12.1% [27].

Establishing a dialogue between a foreign investor and the government is a tool for finding compromise solutions. Such a dialogue is conducted through both formal and often informal ("backstage") negotiations and is implemented in the form of so-called "unannounced" agreements, agreements of intent and memorandums. The purpose of negotiations for the investor is to obtain the necessary guarantees of state assistance or non-interference of the latter in business processes. Third parties, such as international organizations, can also join the process.

The World Bank Group is an international body that provides guarantees for investment risks associated with foreign direct investment. For example, the risks covered by the organizations of this structure include: alienation of property, political unrest, terrorism, non-compliance with contract terms, non-compliance with state guarantees, non-compliance with arbitration awards, revocation of licenses, restrictions on movement and currency conversion, default. At the same time, the IBRD can, at its discretion, fully or partially cover the investor's political risks (except for reform risks) related to financial activities, IDA – only partially,

Table 3.3. Matrix of SWOT-analysis of the automotive industry in Ukraine

<p>Correlation matrix of SWOT-analysis</p> <p><i>Strengths of the domestic automotive industry</i></p> <p>1. <i>Skilled Workforce</i>: Ukraine has a well-educated and technically skilled workforce, particularly in engineering and manufacturing, which can contribute to the development and production of vehicles and components.</p>	<p><i>Opportunities:</i></p> <p>1. <i>Export Potential</i>: Ukraine can position itself as an attractive destination for automotive manufacturers looking to expand export capabilities.</p> <p>2. <i>Investment and Joint Ventures</i>: Collaborations with international automotive companies can bring technological expertise, investment, and access to global markets.</p> <p>3. <i>Electric and Hybrid Vehicles</i>: Ukraine can focus on the development and production of electric and hybrid vehicles to tap into the growing global demand for sustainable transportation solutions.</p> <p>4. <i>Local Component Manufacturing</i>: Developing a robust local supply chain for automotive components can reduce reliance on imports and enhance industry competitiveness.</p>	<p><i>Threats:</i></p> <p>1. <i>Political Instability</i>: Ongoing political tensions and uncertainties can negatively affect investor confidence and disrupt business operations.</p> <p>2. <i>Geopolitical Factors</i>: Relations with neighboring countries and potential trade disruptions can affect cross-border trade and supply chains.</p> <p>3. <i>Currency Fluctuations</i>: Volatility in exchange rates can influence the cost of imported materials and vehicles, affecting the industry's competitiveness.</p> <p>4. <i>Competition</i>: The automotive industry is highly competitive, and Ukraine may face competition from other emerging markets with established automotive sectors.</p> <p>5. <i>Technological Advancements</i>: Rapid advancements in automotive technology, such as autonomous vehicles and connectivity, require significant investment in research and development to stay competitive.</p>
	<p><i>Strengths + Opportunities field</i> (priority development objects):</p> <ol style="list-style-type: none"> 1. Increasing domestic sales through flexible financing systems. 2. Attracting foreign investors due to high potential market demand. 	<p><i>Strengths + Threats field</i> (objects of uncertainty):</p> <ol style="list-style-type: none"> 1. Maintaining domestic demand through a flexible price system. 2. Maintaining the interest of foreign producers through skilled and inexpensive labor.

Table 3.3 (continued)

<p>2. <i>Cost Advantage</i>: Lower labor and operational costs compared to Western Europe can attract international automotive manufacturers to establish production facilities in Ukraine.</p> <p>3. <i>Strategic Location</i>: Ukraine's proximity to major European markets offers the potential for easy access to export markets and supply chains.</p> <p>4. <i>Growing Domestic Market</i>: An emerging middle class and increasing consumer purchasing power can drive demand for automobiles within the country.</p>	<p>3. Expansion of markets for the production of hybrid cars and electric vehicles.</p>	
<p><i>Weaknesses of the domestic automotive industry</i></p> <ol style="list-style-type: none"> 1. Reduction of production in all segments of the automotive industry. 2. Relatively low quality and competitiveness of automotive products. 3. Regulatory Environment: complex and inconsistent regulatory frameworks, along with corruption and bureaucracy, can create challenges for investors and manufacturers. 4. Dependence on Imports: Ukraine heavily relies on imported vehicles and components, making the industry susceptible to currency fluctuations and trade barriers. 5. High degree of depreciation of fixed assets of automotive enterprises. 6. Low level of innovation activity of domestic automotive enterprises. 	<p><i>Weaknesses + Opportunities field</i> (objects of uncertainty):</p> <ol style="list-style-type: none"> 1. Attracting foreign investment in the automotive industry through the formation of a favorable investment climate. 2. Activation and stabilization of state support for the industry. 3. Improving product quality by modernizing production. 4. Improving product quality through the introduction of new technologies. 	<p><i>Weaknesses + Threats field</i> (objects of reform):</p> <ol style="list-style-type: none"> 1. The threat is an unstable exchange rate due to the high share of imported spare parts for vehicles. 2. The threat is the dependence of raw materials and fuels, which leads to a constant increase in the cost of gasoline. 3. Rising exchange rates and the cost of spare parts and fuel against the background of declining incomes can significantly reduce domestic demand.

IFC – can help diversify credit and currency risks, and GFI – provides comprehensive insurance against all risks listed above, except for non-fulfillment of obligations under state guarantees [21]. The mechanism of hedging against political risks, according to international experience, is quite complex and is accompanied by special requirements for the preparation of documents and structuring of agreements.

At the legislative level in Ukraine, the stability of the conditions for conducting investment activities, guaranteeing the rights and observance of the legitimate interests of the subjects of the process, including and foreign investors. According to the Law of Ukraine "On Investment Activity", "investments cannot be nationalized, requisitioned free of charge or measures identical in consequences cannot be applied to them. Such measures may be applied only on the basis of legislative acts of Ukraine with compensation to the investor in full for damages caused in connection with the termination of investment activities" [11].

Attracting investments in the automotive industry requires a multifaceted approach that involves both policy measures and practical strategies. It is necessary to implement a purposeful state industrial policy focused on:

• **Investor-Friendly Regulations and Policies:**

- Streamline and simplify regulatory processes for setting up and operating businesses.
- Implement transparent and predictable taxation policies to provide clarity to investors.
- Offer incentives such as tax breaks, investment grants, and other financial support for automotive companies.

• **Infrastructure Development:**

- Invest in transportation and logistics infrastructure to facilitate the movement of goods and materials.
- Develop and upgrade industrial parks, special economic zones, and manufacturing clusters tailored to the automotive industry.

• **Skilled Workforce Development:**

- Establish partnerships between industry and educational institutions to provide specialized training and education for automotive-related skills.
- Support programs that promote science, technology, engineering, and mathematics (STEM) education to develop a skilled workforce.

•Innovation and Research:

- Invest in research and development (R&D) infrastructure, innovation centers, and technology parks.
- Facilitate collaboration between universities, research institutes, and private sector companies to drive innovation in the automotive sector.

•Support Local Suppliers:

- Encourage the development of a strong network of local automotive suppliers to create a robust supply chain.
- Provide incentives for local suppliers to upgrade their capabilities and meet international standards.

•Market Access and Trade Agreements:

- Pursue trade agreements and partnerships that provide favorable access to international markets for Ukrainian automotive products.
- Foster relationships with neighboring countries and key trading partners to facilitate export opportunities.

•Promotion and Marketing:

- Actively promote the strengths and opportunities within Ukraine's automotive sector through marketing campaigns, trade shows, and industry events.
- Engage with foreign investors through targeted marketing efforts to display the benefits of investing in the country.

•Investment Protection:

- Strengthen intellectual property protection and enforcement to safeguard innovations and investments.
- Ensure a fair and efficient legal system for dispute resolution and contract enforcement.

•Government Coordination and Support:

- Establish a dedicated agency or task force to coordinate investment promotion efforts and assist potential investors.
- Engage in regular dialogues with industry stakeholders to understand their needs and address challenges.

•Sustainable Practices:

- Emphasize environmental and sustainability considerations in the automotive industry, which can attract environmentally conscious investors and align with global trends.

•Case Studies and Success Stories:

- Highlight successful investments and case studies within the automotive industry to highlight the potential and track record of success in Ukraine.

It is important for Ukraine to create a comprehensive strategy that combines these elements while also adapting to the specific strengths, challenges, and opportunities within its automotive industry. Consistency, transparency, and a long-term commitment to creating an attractive investment environment can help Ukraine establish itself as a competitive destination for automotive investments.

CONCLUSIONS

The global automotive industry is going through many big changes, with new technology and evolving consumer preferences. At the same time, in addition to global challenges, such as quarantine measures caused by COVID-19, the activities of Ukrainian industrial enterprises were negatively affected by unstable political and economic situation in the country due to the military and hybrid aggression by the Russian Federation, as well as volatile price policy for energy carriers, fuel and lubricants, a decrease in the solvency of the population and many other factors.

As the world moves towards a more sustainable and connected future, the automobile industry is set to play a major role in driving this change. Electric mobility, autonomous driving, connected cars, shared mobility and the use of lightweight materials are all trends that are going to make things better. Staying informed and adapting to these emerging trends is a very important skill for nowadays to make the most of all the great opportunities that are out there.

The authors attempted to disclose most important trends in the automotive industry in Ukraine related to the labor market, industrial development trends, the state regulation procedures, challenges, obstacles, existing risks and threats within the industry. The emphasis of the study is on industrial peculiarities in the regional section with a focus on Transcarpathian region. Thus, the assessment of the state of migration processes, the level of unemployment by regions, the impact of the COVID-19 pandemic on the labor market in Ukraine was made. The results of comparative analysis of the level of minimum wage in Ukraine in terms of regions, categories and positions are presented. Standard salary of employees of the back office and management in the automotive sector has been explored.

Investigating current state and development trends of the automotive market in Ukraine, authors highlighted the most important trends in this market for 2016–2021, assessed the state of the automotive industry in Ukraine. While analyzing development industry trends we focused on two aspects – trade and manufacturing sectors. In the sphere of sales, it was concluded that since 2017 the import and registration of used cars in Ukraine has intensified and their market share has increased from 24% in 2016 to 81% in 2020. Simultaneously, the share of imported new cars decreased by market from 71% to 18% in 2020. In 2021, the total number of

new cars sold on the Ukrainian market amounted to 103,650 units, which is 22% more than in 2020. This is the highest figure since 2013. The leaders in sales in 2016–2021 were Toyota and Renault. Kia took third place in the ranking, replacing Volkswagen.

The car manufacturers operating in Ukraine were presented using cartographic method in a geographical map and grouped by regions, number of employees, volume of revenue. It was found that during 2016–2020 there was a significant increase in the number of officially registered producers in Kyiv (from 34 to 57, i.e., more than 23 companies). It caused a doubling of revenue during this period (from 28,5 to 64,8 million USD) and an increase in the number of employees (from 557 to 1133 people). Proximity to the border with the EU, cheap labor and sufficient raw materials make Western oblasts of Ukraine attractive to partners of European auto giants.

By signing the Agreement on Accession to the World Trade Organization (WTO), Ukraine reduced the import duty on imports of cars by 2.5 times, which negatively affected the domestic automotive industry and fully opened the market for imports of foreign cars to Ukraine. In addition, for the period 2008–2012, the vehicle market has halved, and the share of foreign cars has increased from 50 to 89%. Production of Ukrainian cars and buses decreased 5.5 times.

The analysis of tendencies and regularities of development of the automobile industry of Ukraine is carried out. It was found that the strongest competitive positions of domestic automakers manage to maintain in the national bus market. While in the market of cars and trucks, domestic manufacturers lose in the competition with foreign brands. The exception is PJSC "Eurocar", which does not produce its own brand, but specializes in the assembly of cars of the Czech brand Skoda.

Transcarpathia plays an important role in creating a competitive environment for the development of the automotive industry, as an engine of economic transformation of the region and the country as a whole. About 30 enterprises in the region manufacture products for the automotive industry. Therefore, in practice, the region is the focus of a cluster initiative and a pioneer in creating a cluster of the automotive industry and other high-precision industries. In 2015, a platform for cooperation on cluster development of the region was launched with the authorities as the first step in creating an automotive cluster in Zakarpattia oblast. In 2016, higher

educational institutions of the region joined the cooperation, and in 2018, the local authorities decided to include the development project of the Zakarpattia automobile cluster in the Program for the Development and Increase of Competitiveness of the Transcarpathian Region for 2019-2020.

It was stated that the effective functioning of the automotive cluster in Transcarpathia depends on well-integrated supply chain, access to a skilled and diverse workforce, opportunities for networking and collaboration, supportive government policies and incentives, availability of financial resources and advanced technological infrastructure. Transcarpathian automotive cluster is an effective object for various forms of investment promotion. It will contribute to the development of a whole group of enterprises that are part of a single technological chain and ensure stable growth of budget deductions on both local and state levels.

The evolution of normative-legal provision of state regulation of the development of the automobile industry in Ukraine is traced. Radical changes in the state policy on the development of the automobile industry of Ukraine have been revealed: from the constant support of car manufacturers and stimulation of car production to the predominant indifference to the fate of the automobile complex.

It has been considered the procedure for establishing a new company in Ukraine, namely the procedure for state registration of a business entity, current tax environment for the industry, the foreign investment state regulation and bureaucratic environment, obstacles, existing risks and threats. It is important to note that the tax environment can vary depending on the type of automotive activity, such as manufacturing, sales, or import/export. Additionally, changes in government policies, trade agreements, and economic conditions can affect the tax landscape.

Among advantages of doing business in Ukraine is the significant progress of the tax system of Ukraine which was caused by the liberalization of taxation, namely by reducing the tax rates on corporate income tax and the single social tax, as well as improving the tax system. According to the results of data processing, the vast majority of experts assess the risk of political instability for the investor as the most probable and one that carries the highest potential danger to the investor's activity in Ukraine.

Russian military aggression and invasion of Ukraine in February 2022 has changed the priorities for nowadays. The first issue is to provide security as for Ukraine, so for the whole EU. For the post-war transformation

period, the authorities should apply simplified tools of economic policies to boost economic growth. Progress should be directly linked to financing Ukraine's recovery.

Ukraine needs urgent investment for pressing repairs – to energy infrastructure, roads, bridges, housing... Macroeconomic policy also needs tending to, and tax and customs procedures should be streamlined in line with EU practices.

Economic shifts and geopolitical developments can influence consumer purchasing power, trade dynamics, and investment decisions in the automotive sector. The shift towards electric vehicles (EVs) and autonomous driving technology is expected to continue. Governments around the world are implementing stricter emissions regulations, driving the adoption of EVs. Additionally, advancements in autonomous driving technology have the potential to reshape the automotive landscape by enhancing safety, reducing congestion, and changing the way people use vehicles.

Digitalization and Industry 4.0 trends will take place in the automotive industry. Therefore, business perspectives will be connected with embracing digital technologies such as artificial intelligence (AI), big data analytics, and advanced robotics to improve manufacturing processes, supply chain management, and customer experiences.

REFERENCES

1. Business Ombudsman Council. URL: <https://boi.org.ua> (last accessed: 16.09.2022)
2. Denis Shmygal outlined 7 key priorities of the Government to attract foreign investment. (In Ukrainian). URL: <https://www.kmu.gov.ua/news/denis-shmygal-okresliv-7-klyuchovih-prioritetiv-uryadu-dlya-zaluchennya-inozemnih-investicij> (last accessed: 16.06.2023)
3. Doing Business 2020. Economy Profile Ukraine. World Bank Group. Retrieved from: <https://www.doingbusiness.org/content/dam/doing-Business/country/u/ukraine/UKR.pdf> (last accessed: 19.06.2023)
4. Factories Working for Mercedes, Porsche and Audi. What Ukraine Produces for the Global Automotive Industry. (2021, July 19). GT Invest. URL: <https://good-time-invest.com/blog/factories-working-for-mercedes-porsche-and-audi-what-ukraine-produces-for-the-global-automotive-industry/> (last accessed: 26.05.2022)
5. Ferris R. How Russia's war is cutting global auto production. (2022, April 16). CNBC. Retrieved from: <https://www.cnbc.com/2022/04/16/how-russias-war-is-cutting-global-auto-production.html> (last accessed: 26.06.2023)
6. Hnatenko I. A., Rubezhanska V. O. Vplyv hlobalizatsii na natsionalnyi ta rehionalnyi rynky pratsi v Ukraini. Visnyk ONU im. I. I. Mechnykova. Seriia: Ekonomika. Odesa, 2016. T. 21. Vyp. 3. C. 109–112. (In Ukrainian) Retrieved from: http://visnyk-onu.od.ua/journal/2016_21_3/25.pdf (last accessed: 19.06.2023)
7. International Organization of Motor Vehicle Manufacturers. Production statistic. URL: <https://www.oica.net/production-statistics/> (last accessed: 26.06.2023)
8. Job search: how the labour market in Ukraine has changed during the war and what will happen afterwards. URL: <https://visitukraine.today/blog/1872/job-search-how-the-labour-market-in-ukraine-has-changed-during-the-war-and-what-will-happen-afterwards> (last accessed: 19.06.2023)
9. On amendments to some laws of Ukraine to eliminate regulatory barriers to the development of public-private partnerships and stimulate investment in Ukraine. Law of Ukraine of November 4, 2015, №817-VIII. Information of the Verkhovna Rada of Ukraine, 2016, №10, p. 97

10. On currency and currency transactions: Law of Ukraine of June 21, 2018. №2473-XII. URL: <https://zakon.rada.gov.ua/laws/show/2473-19#Text> (last accessed: 19.06.2023)
11. On investment activity: Law of Ukraine of September 18, 1991 №1560-XII. URL: <https://zakon.rada.gov.ua/laws/show/1560-12> (last accessed: 19.06.2023)
12. On State Registration of Legal Entities, Individual Entrepreneurs and Public Organizations: Law of Ukraine on May 15, 2003 №755-IV. URL: <https://zakon.rada.gov.ua/laws/show/755-15?lang=en#Text> (last accessed: 16.09.2022)
13. On state support of investment projects with significant investments: Law of Ukraine of 17.12.2020. №1116-IX. URL: <https://zakon.rada.gov.ua/laws/show/1116-20#Text> (last accessed: 19.06.2023)
14. Poyda-Nosyk N., Bacho R. (2022). Analysis of the automotive industry development trends in Ukraine. *Acta Academiae Beregsasiensis. Economics*. Vol. 2, pp.13–23
15. Savelyev Y., Kuryliak V., Darvidou K., Lyzun M., Lishchynskyy I. (2021) Transformation of Ukrainian Automotive Industry in the Context of Electromobility: Applying the Experience of Visegrad States. IV International Scientific Congress "Society of Ambient Intelligence – 2021" (ISCSAI 2021). SHS Web Conf., Volume 100. URL: <https://doi.org/10.1051/shsconf/202110001018> (last accessed: 19.06.2023)
16. Shevchenko I. Yu. (2019) *Rehuliuвання розвитку avtomobilebuduvannya Ukrainy: monohrafiia (Regulation of automobile development of Ukraine: monograph)*. Kharkiv: KhNADU. 556 p.
17. The year of V. Zelensky's presidency: achievements and failures. Razumkov Center. Kyiv, 2020. 124 c. (In Ukrainian)
18. Tucha O., Spivak I., Bondarenko O., Pogarska O. (2022). Impact of Ukrainian Migrants on Economies of Recipient Countries. Retrieved from: https://bank.gov.ua/admin_uploads/article/Migration_impact_2022-12-15_eng.pdf?v=4 (last accessed 29.06.2023)
19. Ukraine Refugee Situation. URL: <https://data2.unhcr.org/en/situations/ukraine> (last accessed 29.06.2023)
20. Wayland M. (2022). Russia's invasion of Ukraine will lower car production by millions of units over two years, S&P says. Retrieved from:

- <https://www.cnn.com/2022/03/16/russian-ukraine-war-to-lower-car-production-by-millions-of-units.html> (last accessed 29.06.2023)
21. World Investment and Political Risk. MIGA, World Bank Group. 2013. 88 p. Retrieved from: <http://documents.worldbank.org/curated/en/762801468171249924/pdf> (last accessed: 19.06.2023)
 22. World Investment Report 1997. Transnational Corporations, Market Structure and Competition Policy. United Nations. New York and Geneva, 1997. Retrieved from: http://unctad.org/en/Docs/wir1997_en.pdf (last accessed 15.01.2022)
 23. Worldwide Tax Summaries Online Corporate and individual taxes in 151 territories worldwide: Ukraine. Corporate – Other taxes. URL: <https://taxsummaries.pwc.com/ukraine/corporate/other-taxes> (last accessed: 20.09.2022)
 24. Worldwide Tax Summaries Online Corporate and individual taxes in 151 territories worldwide: Ukraine. Individual – Taxes on personal income. URL: <https://taxsummaries.pwc.com/ukraine/individual/taxes-on-personal-income> (last accessed: 20.09.2022)
 25. Zakarpattia Automotive Cluster. URL: <http://aczak.com.ua/> (last accessed: 20.06.2023)
 26. Маркевич К. Л. Поточний стан та перспективи прямого іноземного інвестування в економіку України. Науковий вісник Мукачівського державного університету. Серія: Економіка. Мукачево, 2015. №2(4). С. 244–255.
 27. Розвиток машинобудування в Україні: проблеми та шляхи їх вирішення: монографія; ДУ "Інститут регіональних досліджень імені М.І. Долишнього НАН України"; наук.редактор д.е.н., проф. С. О. Іщук. Львів, 2022. 137 с.

Б 32 Роберт Бачо – Ніна Пойда-Носик

Автомобільна промисловість в регіонах України: ключові підходи до оцінки ринку праці та перспектив бізнесу. Наукове видання (монографія) Закарпатського угорського інституту імені Ференца Ракоці II / Автори: Роберт Бачо та Ніна Пойда-Носик. Берегове: ЗУІ ім. Ференца Ракоці II, 2023. – 112 с. (англійською мовою)

ISBN 978-617-8143-07-7 (папітурка)

ISBN 978-617-8143-08-4 (PDF)

Дане дослідження зосереджено на трьох основних аспектах в автомобільній промисловості України, а саме на ринку праці, тенденціях розвитку та процедурах державного регулювання протягом 2016–2021 років. Ринок праці досліджувався на основі оцінки стану міграційних процесів, рівня безробіття в регіонах та рівня заробітної плати. Наведено результати порівняльного аналізу рівня мінімальної заробітної плати в Україні в розрізі регіонів, категорій та посад, а також рівня стандартної заробітної плати працівників бек-офісу й керівництва в автомобільній галузі. Монографія містить результати досліджень основних тенденцій на ринку продажу автомобілів та у сфері виробництва. Простежено еволюцію нормативно-правового забезпечення державного регулювання розвитку автомобільної промисловості в Україні. Виявлено радикальні зміни в державній політиці щодо розвитку автомобільної промисловості України: від постійної підтримки автовиробників та стимулювання виробництва автомобілів до бюрократичних бар'єрів, перешкод та існуючих ризиків і загроз. Монографія буде корисною не лише спеціалістам економічного профілю, а й усім, хто цікавиться проблемами розвитку автомобільної промисловості України.

УДК 338.45:621-047.44(477)

Наукове видання

Роберт Бачо – Ніна Пойда-Носик

**АВТОМОБІЛЬНА ПРОМИСЛОВІСТЬ В РЕГІОНАХ УКРАЇНИ:
КЛЮЧОВІ ПІДХОДИ ДО ОЦІНКИ РИНКУ ПРАЦІ
ТА ПЕРСПЕКТИВ БІЗНЕСУ**

Монографія

2023 р.

*Рекомендовано до видання у друкованій та електронній формі (PDF)
рішенням Вищої ради Закарпатського угорського інституту імені Ференца Ракоці ІІ
(протокол №8 від «31» серпня 2023 року)*

Підготовлено до друку Видавничим відділом спільно з кафедрою обліку і аудиту
Закарпатського угорського інституту імені Ференца Ракоці ІІ

Рецензенти:

*Василь Мікловда, член-кореспондент НАН України, доктор економічних наук, професор
(Ужгородський національний університет)*

*Наталія Внукова, доктор економічних наук, професор, Заслужений економіст України
(Харківський національний економічний університет імені Семена Кузнеця)*

*Ігор Орлов, доктор економічних наук, професор
(Закарпатський угорський інститут імені Ференца Ракоці ІІ)*

Технічне редагування: *Олександр Добош та Ласло Веждед*

Верстка: *Ласло Веждед*

Коректура: *авторська*

Дизайн обкладинки: *Ласло Веждед*

УДК: *Наукова бібліотека “Опаці Чере Янош” при ЗУІ ім. Ф.Ракоці ІІ*

Відповідальний за випуск:

Олександр Добош (начальник Видавничого відділу ЗУІ ім. Ф.Ракоці ІІ)

За зміст монографії відповідальність несуть автори

Зміст наукового видання було перевірено
на наявність збігів і запозичень сервісом «Unichesk»

Видавництво: Закарпатський угорський інститут імені Ференца Ракоці ІІ

(адреса: пл. Кошута 6, м. Берегове, 90202. Електронна пошта: foiskola@kmf.uz.ua)
Свідоцтво про внесення суб'єкта видавничої справи до Державного реєстру видавців, виготовлювачів і розповсюджувачів видавничої продукції Серія ДК 7637 від 19 липня 2022 року

Друк: ТОВ «РІК-У» (адреса: вул. Карпатської України 36, м. Ужгород, 88006. Електронна пошта: print@rik.com.ua) *Свідоцтво про внесення суб'єкта видавничої справи до Державного реєстру видавців, виготовників і розповсюджувачів видавничої продукції Серія ДК 5040 від 21 січня 2016 року*

Підписано до друку 10.12.2023. Шрифт «Garamond».

Папір офсетний, щільністю 80 г/м². Друк цифровий. Ум. друк. арк. 9,1.

Формат 70x100/16. Замовл. №2752



ISBN 978-617-8143-07-7



9 786178 143077