

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Humanities



Bachelor Thesis

Coronavirus pandemic and its impact on the socio-economic development of Ukraine

Iryna Ryzhkova

© 2022 CZU Prague

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Iryna Ryzhkova

Business Administration

Thesis title

Coronavirus pandemic and its impact on socio-economic development of Ukraine

Objectives of thesis

To describe the nature of economic crises, examine the development of the COVID-pandemic crisis on a global scale and its impact on the economic sector in Ukraine and describe the impact of the coronavirus crisis on the level of socio-cultural life in certain region(-s) of Ukraine.

Methodology

The methodology of the thesis based on the studying scientific literature concerning the topic, its analysis and synthesis. The methodology of the practical part based on a quantitative survey of public opinion, which is conducted using an online survey based on questionnaires created by the author, with closed questions that have already been given possible answers. Based on the results of obtained data, there will be identified 2 regions of Ukraine and 2-3 socio-age groups of people, whose answers and opinions will be taken for further in-depth analysis. A detailed processing and analysis of data will be done on the basis of mathematical and statistical methods.

The proposed extent of the thesis

40 – 50 stran

Keywords

crisis, coronavirus pandemic, economic cycles, socio-economic development, region, Ukraine, impact, regional policy.

Recommended information sources

- ACEMOGLU, D. *Introduction to modern economic growth*. Princeton: Princeton University Press, 2009. ISBN 978-0-691-13292-1.
- HALPERN, D. *Social capital*. Cambridge: Polity, 2005. ISBN 0-7456-2547-9.
- HVOZDÍKOVÁ, V. (2009): Is the Finance Crisis Failure of the State, Market or Ethics? In journal *Ekonomický časopis*, 57(5), pp 492 – 502.
- KRUGMAN, P R. – OBSTFELD, M. *International economics : theory and policy*.
- LYSANDROU, P. (2011): Global inequality as one of the root causes of the financial crisis: a suggested explanation, *Journal Economy and Society*, Vol. 40, No. 3 s. 323 – 344.
- PUTNAM, R D. *Bowling alone : the collapse and revival of American community*. New York: Simon & Schuster, 2000. ISBN 0-7432-0304-6.

Expected date of thesis defence

2021/22 SS – FEM

The Bachelor Thesis Supervisor

Ing. Jiří Sálus

Supervising department

Department of Humanities

Electronic approval: 14. 3. 2022

prof. PhDr. Michal Lošťák, Ph.D.

Head of department

Electronic approval: 15. 3. 2022

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 27. 03. 2022

Declaration of Honour

I declare that I have worked on my bachelor thesis titled "Coronavirus pandemic and its impact on socio-economic development of Ukraine" by myself and I have used only the sources mentioned at the end of the thesis. As the bachelor thesis author, I declare that the thesis does not break any copyrights.

In Prague on 30.03.2022

Acknowledgement

I would like to thank supervisor Ing. Jiří Sálus, my mother, family and friends for their advice and support during my work on this thesis.

Coronavirus pandemic and its impact on the socio-economic development of Ukraine

Abstract

This bachelor thesis aims to study the impact of the global pandemic crisis caused by COVID-19 on the socio-economic development of Ukraine and its regions. The work aims to test the hypothesis of whether the coronavirus pandemic can be considered as an economic crisis from 2020 to 2022 in Ukraine. The theoretical part is devoted to defining basic concepts necessary for processing and analyzing the problem in the practical part. It also describes the development of the pandemic and the spread of the crisis both globally and in Ukraine. Furthermore, it describes the economy of Ukraine and its current situation. The practical part is based on the collection of primary data from the crisis and post-crisis period, collection of secondary data from the pre-crisis period, comparing the socio-economic indicators of Ukrainians and identifying the differences between selected Ukrainian regions. It also analyses how the living standards of selected regions have changed after two years of quarantine restrictions compared to the time before the pandemic. Public opinion regarding changes in the socio-cultural and economic spheres of Ukraine and its regions is studied. Based on the analysis, it is determined whether the above hypothesis is confirmed. Systematically structure and visualize data using charts, graphs, and tables.

Keywords: crisis, coronavirus pandemic, economic cycles, socio-economic development, psychological factors, region, Ukraine, impact, regional politics.

Pandemie koronaviru a její dopad na socioekonomický vývoj Ukrajiny

Abstrakt

Tato bakalářská práce si klade za cíl studovat dopad globální pandemické krize způsobené COVID-19 na socioekonomický rozvoj Ukrajiny a jejích regionů. Práce si klade za cíl otestovat hypotézu, zda lze pandemii koronaviru považovat za ekonomickou krizi v letech 2020 až 2022 na Ukrajině. Teoretická část je věnována vymezení základních pojmů nezbytných pro zpracování a analýzu problému v praktické části. Popisuje také vývoj pandemie a šíření krize jak ve světě, tak na Ukrajině. Dále popisuje ekonomiku Ukrajiny a její současnou situaci. Praktická část je založena na sběru primárních dat z krizového a pokrizového období, sběru sekundárních dat z předkrizového období, porovnání socioekonomických ukazatelů Ukrajinců a identifikaci rozdílů mezi vybranými ukrajinskými regiony. Analyzuje také, jak se změnila životní úroveň vybraných regionů po dvou letech karanténních omezení v porovnání s dobou před pandemií. Studuje se veřejné mínění o změnách v sociokulturní a ekonomické sféře Ukrajiny a jejích regionů. Na základě analýzy je určeno, zda je výše uvedená hypotéza potvrzena. Systematicky strukturujete a vizualizujete data pomocí tabulek, grafů a tabulek.

Klíčová slova: krize, pandemie koronaviru, ekonomické cykly, socioekonomický vývoj, psychologické faktory, region, Ukrajina, dopad, regionální politika.

Contents

| | |
|--|----|
| 1 Introduction | 10 |
| 2 Objectives and Methodology..... | 11 |
| 2.1 Objectives | 11 |
| 2.2 Methodology..... | 11 |
| 3 Theoretical Part..... | 12 |
| 3.1 What is an economic crisis? | 12 |
| 3.1.1 Meaning of an economic crisis | 12 |
| 3.1.2 Economic crisis VS Financial crisis | 13 |
| 3.1.3 History and historical facts | 13 |
| 3.2 Grounds for the economic crises | 14 |
| 3.2.1 Psychological factors | 16 |
| 3.3 Economic cycles | 19 |
| 3.3.1 The four types of cycles..... | 19 |
| 3.3.2 Mechanism of economic cycles..... | 21 |
| 3.3.3 Impact on the economy and life | 22 |
| 3.4 Global pandemic crisis | 22 |
| 3.4.1 How did it start? | 23 |
| 3.4.2 The evolution | 24 |
| 3.4.3 The devastating effects of COVID-19 | 25 |
| 3.5 Economy in Ukraine | 26 |
| 3.5.1 Fundamental of the Ukrainian economy | 27 |
| 3.5.2 Economic development in Ukraine | 27 |
| 3.5.3 The current situation after COVID-19..... | 29 |
| 3.6 Pandemic in Ukraine | 31 |
| 3.6.1 Evolution of pandemic | 31 |
| 3.6.2 Vaccination..... | 32 |
| 3.6.3 Lockdown and restrictions | 33 |
| 3.6.4 Social-economic impact | 33 |
| 3.6.5 Covid-19 and Russian invasion 2022 | 35 |
| 4 Practical Part..... | 37 |
| 4.1 Ukraine | 37 |
| 4.2 Students and qualified employees | 43 |
| 4.3 Western Ukraine & Northern Ukraine..... | 51 |
| 5 Results and Discussions | 58 |
| 6 Conclusion | 61 |

List of Figures

| | |
|---|----|
| Figure 1: Monetary shortage and its usage | 38 |
| Figure 2: Covid effect on the quality of social and cultural life..... | 38 |
| Figure 3: Economic crisis in Ukraine, based on responses | 39 |
| Figure 4: Financial situation development. | 40 |
| Figure 5: Overcome of crisis | 41 |
| Figure 6: Vaccination, Q-14. | 41 |
| Figure 7: Nature development in Ukraine while ongoing pandemic, Q-19. | 42 |
| Figure 8: Assessment of Covid-19 impact on the development of social-cultural and economic sphere, Q-22. | 42 |
| Figure 9: Occupational assessment of pandemic effect, Q-6. | 44 |
| Figure 10: Negative aspects of Covid experienced, Q-11..... | 45 |
| Figure 11: Positive aspects of Covid experienced, Q-12. | 46 |
| Figure 12: Vaccination rate, Q-14. | 47 |
| Figure 13: Reasons for vaccination, Q-13. | 48 |
| Figure 14: Spheres to improve by the state, according to the participant's opinion, Q-18..... | 49 |
| Figure 15: Forecast of behavioural change, by participants, Q-21, Q-21 (Part-2)..... | 50 |
| Figure 16: Opinions of economic crisis, Q-20. | 51 |
| Figure 17: Financial effect of Covid-19 on households, Q-7..... | 52 |
| Figure 18: Reasons for financial improvement, Q-9..... | 53 |
| Figure 19: Vaccination choice, Q-14..... | 54 |
| Figure 20: Purpose of vaccination, Q-15..... | 55 |
| Figure 21: Decline in education, Q-17. | 56 |
| Figure 22: Assessment of the impact, Western Ukraine, Q-21. | 57 |
| Figure 23: Assessment of the impact, Northern Ukraine, Q-21 (Part-2)..... | 57 |

List of Pictures

| | |
|--|----|
| Picture 1: Phases of the business cycle..... | 21 |
|--|----|

1 Introduction

The Public Health Emergency of International Concern has announced on 30 January 2020, consequently, the world pandemic was on 11 March 2020. The overall impact of COVID-19 touched different states. Public health had experienced a massive overload of people who went through many obstacles which are directly linked with the lockdown, such as mobility of the world's population, supply chains that were stopped during whilst ongoing pandemic, millions of deaths and many more. The world had experienced a shock, from the economic and social points of view. Different states have taken various steps to combat the virus to decrease its spread of the virus. As a result, most of the EU states have announced a temporary lockdown and Ukraine was not an exception. However, even after the announcement of the disease on a global scale, the very first case in Ukraine was detected on the 3rd of March, in the Western region of Chernivtsi. The number of cases has been increasing since then and by the 25th of March, the number of confirmed cases reached 113, including deaths of people. However, officials had suspected that the number is slightly underrated and that the actual number might be much higher.

Additionally, the Ukrainian health system based on (Global Health, 2020) seemed to be not efficient to meet the population's needs and a series of obstacles are still going through reforms that are determined to solve the problem. The government of Ukraine has improved in way of increasing its spending on the health sector to make sure that rural areas have all the needed facilities in case of emergency, due to the fact if the complete breakdown of medical supplies and equipment and most importantly insufficient number of workers in the healthcare system, however not only Ukraine demonstrated unreadiness to such case, but the whole world didn't expect such circumstances to last for 2,5 years. In the very beginning Wuhan, where the density of population is one of the highest in the world, had received facility support from all over the world to stop the spread of the virus as soon as possible, however, it partly did not work.

That's why the author of the thesis, tries to assess the overall impact on the Ukrainian population and how did it manage to recover from it.

The whole bachelor thesis is structured in a way of two parts, where the first part is deeply focused on the theory of what the social and economic crisis is, and how people's reaction was developing. It was especially important to introduce the economy of Ukraine. However, the practical part is focused on assessing the impact on the population, where the author has used a survey with multiple-choice questions, to analyze how the population dealt with it.

2 Objectives and Methodology

2.1 Objectives

To describe the nature of economic crises, examine the development of the COVID-pandemic crisis on a global scale and its impact on the economic sector in Ukraine, analyse the impact of the coronavirus crisis on the level of socio-cultural life in a certain region(-s) of Ukraine.

2.2 Methodology

The methodology of the thesis is based on studying scientific literature concerning the topic, its analysis and synthesis. The methodology of the practical part is based on a quantitative survey of public opinion, which is conducted using an online survey based on questionnaires created by the author, with closed questions that have already been given possible answers. Based on the results of obtained data, there will be identified 2 regions of Ukraine and 2-3 socio-age groups of people, whose answers and opinions will be taken for further in-depth analysis. Detailed processing and analysis of data will be done on the basis of mathematical and statistical methods.

3 Theoretical Part

3.1 What is an economic crisis?

3.1.1 Meaning of an economic crisis

Today we are fortunate to be major observers, and some of us are even players in our beautiful world, where dramatic changes are taking place that affect all aspects of life - from geopolitics and economics to society, to the financial and commodity markets.

Any crisis in the economy, politics and consequently in society, leads to a process of change in the world order. If the crisis is small, say a local or regional one, then it will only affect a certain mass of the population or a certain type of industry. But a major crisis can go beyond human control and cause great damage to the area in which it originated and spread to other interrelated industries. So, what is a "crisis", how does it affect the economic sphere of our life and what does it ultimately lead to?

In their writings, scholars have been unable to find a common point of view on crises. Some scholars consider it synonymous with stress, panic, natural disaster, catastrophe or violence. Other economists argue that the concept of "crisis" applies only at the macroeconomic level, with less serious problems arising from inefficient production and management being more applicable at the micro-level. However, in post-Soviet countries, most tend to believe that crises are peculiar to the capitalist mode of production and cannot form under the socialist mode of production, which is characterized by "difficulty of growth". (Sciences)

Consequently, the concept of "crisis" (from the Greek 'krisis' - turning point) can be defined as a break, a state of abrupt transition in any process of a social system.

In economics, the term "crisis" describes many phenomena. One of them refers to economic crises. The traditional school of economic thought defines the economy as a machine that almost always develops predictably. There are times when machines go out of balance and need to be restarted to get back on track. But the economy is not a machine, although we prefer to talk about "growth engines" driven by "political levers". It is a complex adaptive system with huge interdependencies between its parts and potentially very non-linear results. There is no equilibrium in such a system that can be restored.

According to IGI-Global, an economic crisis describes a situation in which the economy of a country experienced a sudden downturn in its aggregate output or real gross domestic product (GDP). The result of the economic crisis is a decline in real income per capita and an increase in unemployment and poverty. (Tambunan, 2021)

The main objective of an economic crisis in any country is to identify and dismantle weak enterprises with an outdated mode of production and organizational structure.

3.1.2 Economic crisis VS Financial crisis

It is worth remembering that an economic crisis is not a financial one. We should understand the subtle difference between the two and be able to distinguish between them.

So, a financial crisis is usually associated with problems in the banking or financial sector, of which banks, financial institutions, the foreign exchange market and capital markets are part. Whereas an economic crisis affects the whole economy. If a country's major bank collapses or if a significant proportion of borrower's default on their debt, then it is a financial crisis.

A financial crisis can turn into an economic crisis if it worsens and spreads beyond control, affecting macroeconomic conditions and affecting the whole economy with unemployment, GDP and inflation. (Market Business News, 2022)

3.1.3 History and historical facts

In all times of humanity, throughout all kinds of economic development in the world and under all great personalities, people have faced various crises, after which they have moved on to new levels of life. The lessons of history and the mistakes of the past do not allow us to forget any significant stage in human development.

Thus, the history of global economic crises began in 1857 with the stock market crash in the US and the ruin of many railroad companies. In Europe, on the other hand, stock markets crashed in 1873, due to the 'hard credit' of Latin America and the depreciation of real estate in Austria and Germany. The World War in 1914 and the decade-long drought that followed also triggered a crisis. (Amadeo, 2021)

One of the largest was the Great Depression of 1929 when the value of stocks fell overnight, business activity declined, with consequences in the form of unemployment, the bankruptcy of financial and manufacturing companies, inflation, and the collapse of the agricultural system. The exact causes of the "Great Depression" are not named, but they mainly boil down to the following

- the creation of a stock market bubble, monetarism, money supply shortages and the growth of marginal borrowing.

The most recent global financial crisis was the crisis of 2008 when a decade of growth in US housing market activity peaked in 2006 and housing starts declined. In 2007, the loss of mortgage-related financial assets began to strain global financial markets and the US economy slipped into recession in December 2007. The year was marked by financial difficulties for several major financial companies and significant turmoil in many financial markets. The Fed responded by providing liquidity and support through a series of programs aimed at improving the functioning of financial markets and institutions, thereby limiting the damage to the US economy. However, the recession intensified in the autumn of 2008 and eventually became deep enough and long enough to be called the "Great Recession" (Weinberg, 2013). Ultimately, the financial crisis of 2008-2009 led to a series of sweeping reforms in banking and financial regulation and congressional legislation that significantly affected the federal reserve system.

To summarize, whatever is not happening today is part of a wider change in the world order. Such economic and geopolitical crises have historically occurred on the eve of major modernization breakthroughs.

3.2 Grounds for the economic crises

In the early 1970s, a radically different economic situation (as opposed to Keynesian theory) emerged due to the boom and oil crisis. This opened a window of opportunity for new ideas and paved the way for a revival of the ideas of Friedrich Hayek and the Austrian School of Economics. For the representatives of this school, economics is the sum of the actions of countless actors in a changing context. Government politicians cannot manage the economy because of its complexity. The role of politicians is limited to controlling public finances and the money supply. This neoliberal paradigm dominated the 1980s and 1990's. (Nilsson, 2018)

Although the school of economics developed in Austria in the late 19th and first half of the 20th century, most of the "Austrian" economists were Americans living in the US. The two leading figures of the twentieth-century school (of Austrian origin) were Ludwig von Mises and F. A. Hayek, the winner of the Nobel Prize in Economics in 1974 (for his work on business cycles). (Ebeling, 2008)

It is interesting to note that the history of the Austrian school began in the fifteenth century, when followers of St Thomas Aquinas, who wrote and taught at the University of Salamanca in Spain,

tried to explain the whole spectrum of human activity and social organization. These later scholastics observed the existence of economic laws, inexorable causal forces acting in the same way as other laws of nature. For generations, they discovered and explained the laws of supply and demand, the causes of inflation, the action of exchange rates and the subjectivity of economic value - all reasons which made Joseph Schumpeter the first true economist. The scholastics also adhered to Ludwig von Mises's rule: the first task of the economist is to tell governments what they cannot do. In other words, this is called the Laissez-faire principle of a free economy, which in French means the principle of non-interference by the state in the economy. (Mises Institute)

The Austrian school of economics is a system of economic theory developed by economists who emphasized the importance of a product's utility to the consumer in determining its value. In 1871, when Karl Menger published *The New Theory of Value*, the British economist William Stanley Jevons independently published a similar theory. According to Menger, the value of a product lies in its ability to satisfy human needs, i.e. value is entirely subjective. Furthermore, the actual value depends on the utility of the product in its least important use (Britannica, 2018). If a product is in excess, it will be used in a less significant way. However, as the product becomes more and more scarce, less important uses will be discontinued and new less important uses will gain more utility. This idea is related to one of the basic laws of economics, the law of demand, which states that when the price of something goes up, people demand less. Thus the foundation of the Austrian school of economics is the theory of marginal utility, applicable to both production and consumption. (Britannica, 2018)

According to the Austrian School of Economics and its theory of economic cycles, the main cause of the economic crisis is the accumulation of a substantial number of "wrong investments" leading to an "overproduction crisis". Investors and business managers make such mistakes because of a systematic and gross misrepresentation of the information needed to make correct investment decisions. The Austrian school believes that money is one of the most important resources for the rapid expansion of production. We can conclude that a market economic crisis arises due to the money market situation caused by the central bank and the system with a reserve rate below 100%, which leads to an "undervalued" interest rate and an increase in the money supply. This subsequently leads to the creation of an economic boom. (Rothbard, 2019)

The Austrian school, led by Ludwig von Mises, F.A. Hayek, Murray N. Rothbard and other scholars, offers distinctive theories of money and capital, the business cycle, the role of the entrepreneur and the consequences of state intervention in markets. (Institute)

3.2.1 Psychological factors

Positive mental health is a state of well-being in which a person is aware of their ability to cope with the normal stresses of life, work productively and contribute to society (World Health Organization, 2011, p. 1). Good mental health can provide cognitive and emotional flexibility, a foundation of social skills and resilience in the face of stress. This spiritual capital is vital for the healthy functioning of families, communities and societies.

3.2.1.1 Economic crises and mental health

Mental health is an integral part of the public health of any power, as it has serious implications for a country and its human, social and economic capital (World Health Organization, 2011, p. 1). While economic crises have consequences for mental health, mental health problems have increasingly serious economic consequences. The economic consequences of mental health problems are mainly in the form of lost productivity, which is estimated at an average of 3-4% of gross national product in the European Union (EU). As severe mental illness often starts in adolescence or young adulthood, the loss of productivity can persist for a long time. It follows from the above that mental health is an important economic factor. The successful recovery of the European economy depends to a large extent on the mental health of the population. (World Health Organization, 2011, p. 2)

In the study *Crisis of Confidence: Recession and the Fear Economy*, sponsored by the Department of Psychiatry at the University of Pennsylvania and the Philadelphia Centre for Psychoanalysis, an interdisciplinary team investigated the psychological factors underlying the modern economy (Jureviciene, et al., 2020, p. 1153). Such factors include the insanity and over-optimism underlying the bubble, the lack of self-control in consumers with large debts, and the shock and betrayal of many who thought they were making safe investments but are now facing a crisis. Factors that lead to financial crises also include people's choices, as economic decisions affect financial crises before and during crises.

3.2.1.2 Mania Factor – Bubbles

At a time when the economy is booming, people's decisions can lead to speculative bubbles. Also, when a recession begins, raids on banks to withdraw deposits can destroy a well-functioning bank. "Bubbles occur when people simply believe they can sell something at a higher price," said Wharton finance professor Richard Herring. Bubbles often have a manic side (Wharton, 2009, p. 2). According to Herring, the real estate market is particularly prone to ups and downs because of

its nature: lack of central clearinghouses for price information, high transaction costs, infrequent transactions and a relatively fixed supply of real estate in the short term. Since cycles last for decades, it is difficult to calculate how much real estate should be worth in the long run. "We don't know what the price should be, so it is always difficult to say whether you are seeing a bubble or an improvement in economic performance". (Wharton, 2009)

3.2.1.3 An overly optimistic view of the future

Often people make irrational economic choices because they are too optimistic about the future. Buyers ignore the possibility that they won't be able to pay on time because they think home prices will rise and they'll be able to sell or refinance. Similarly, lenders ignore the possibility of default because rising house prices make it easier to write off bad loans. (Wharton, 2009, p. 3)

Many authors (for instance, John Maynard Keynes and George Cato) recognize that optimistic and pessimistic psychological attitudes have an important role in driving human behaviour in the market. Under the influence of a favourable climate, people tend to be more optimistic and therefore take more risks when the economy is growing, and vice versa (when the economy is in recession, people tend to be more pessimistic and cautious). The radiography of the crisis is a massive process with fluctuations in economic activity caused by a complex network of economic forces mixed with psychological and social forces. (Diacon, 2015, p. 277)

The authors analyze consumer spending, arguing that spending is a function of both individual purchasing power (consisting mainly of economic factors) and willingness to buy (consisting mainly of psychological factors such as personal attitudes and expectations). In response to this idea, the authors emphasize the importance of psychological as well as economic factors in understanding consumer behaviour and shaping business cycles. (Diacon, 2015, p. 278)

3.2.1.4 Self-control

The surge in consumer debt caused by the crisis is also a matter of self-control, says Angela Lee Duckworth, professor of psychology at the University of Pennsylvania. "Deferred gratification is an ancient human problem. All of us, from young children to the oldest and smartest, struggle with self-control issues" (Wharton, 2009, p. 4). Duckworth defines self-control as the ability to negotiate when faced with two options, one better and the other more attractive. During the housing market bubble, buyers could not control themselves when buying bigger houses than they could

afford. When lenders decide to issue unstable mortgages for short-term profits, they show no self-control.

According to Duckworth, self-control is an ability that can change dramatically throughout a lifetime. This is because the prefrontal cortex, the area of the brain that allows a person to control impulses and delay gratification, matures more slowly than the rest of the brain. (Wharton, 2009, p. 5)

To summarize, a better understanding of the psychology of self-control can help create public policies that must take into account the realities of human nature.

3.2.1.5 Irrationality in the decision-making process

People's financial decisions are directly influenced by their psychological, emotional, and financial knowledge. Financial behaviour is a combination of three separate sciences: psychology, sociology and finance. These three disciplines are distinct and at first glance seemingly incompatible, but a detailed analysis of various financial decisions leads us to believe that psychological and social factors can lead to irrational choices. In economics, rationality means that one chooses the most advantageous option available, in other words, one evaluates all costs and benefits. Consequently, rational economic decisions are based on calculations that evaluate all alternatives and their costs and benefits. Although, individual choices are often determined by other factors. According to De Bondt and Thaler, people's preferences may depend on their self-confidence and style of questioning, as well as the expected returns. Therefore, irrational economic decisions are not based on calculations, but more on personal emotions, intuition, or expectations. (Jureviciene, et al., 2020, p. 1153)

To sum up, decision-making processes have been studied by scientists working in various fields of science, especially behavioural economics. Researchers have shown that people's economic decisions can not only have a serious impact on a country's economy but can also be a driving force behind the financial crisis. (Jureviciene, et al., 2020, p. 1150)

The important thing to remember is that crises lead not only to negative emotions and behaviour but also to positive reactions. The latter may include coping, altruism, relief and the joy of surviving adversity. These experiences create feelings of elation, self-esteem, strength and growth. Often crises lead to changes in future perspectives, including an understanding of new risks (Jureviciene, et al., 2020, p. 1154).

3.3 Economic cycles

3.3.1 The four types of cycles

The development and functioning of the economic system are subject to repeated fluctuations, ups and downs, i.e. to the law of cyclical development (Tugan-Baranovsky, 2008).

Volatility and cyclicity are inherent in most socio-economic processes. There are numerous studies on this topic and their implementation has a long history. A detailed literature review is time-consuming, so it is worth limiting to a few reviews to consider only the main points of previous works by various authors on the topic. In this chapter, the author will focus on the work of four of the most prominent authors. They have worked on empirical and theoretical studies of economic cycles. They include Clement Juglar, who, in the mid-19th century, tried to prove the existence of 7-11-year business cycles; Nikolai Kondratiev, who, in the early 20th century, studied the existence of so-called long waves of 45-60 years; Joseph Kitchin, who, in the same period, sought shorter, 3-5-year stock cycles; and Simon Kuznets, who, in 1930, observed cycles of 15-25 years and linked them to fluctuations in population growth and immigration and delayed investment in construction, construction, transport infrastructure, etc. (Kwasnicki)

In assessing Clement Juglar's contribution to the development of business cycle theory, the Austrian economist Joseph Schumpeter draws attention to the centrality of Juglar's work, to the shift from a study of crises, which were seen as exogenous phenomena, and their causes to the observation and analysis of cyclical economic fluctuations, to economic debates. This became the starting point of modern theories of economic cycles (Bhoury & Mouha, 2015). Schumpeter described the technical aspects related to cyclical behaviour and proposed a classification of economic cycles by duration. Modernization of his classification allows us to distinguish four types of cycles: the Kitchin cycle (3 to 5 years); the Juglar cycle (8 to 11 years); the Kuznets cycle (15 to 25 years); and the Kondratiev wave (45 to 60 years). (Grinin, et al., 2014)

Juglar examines the fluctuations in prices, interest rates and gold reserves of French, British and American banks and shows their connection to economic activity, overselling and employment cycles. Juglar's most important achievement is that he provides ample evidence that crises are cyclical. This confirms the "cyclical law of crises". According to this law, a crisis was preceded by an era of growth, wealth and rising prices. This was followed by years of falling prices and slowing trade which plunged the economy into depression. Clément Juglar found that the so-called

"crises" of previous generations were not isolated events but were simply elements of a deeper wave movement. The crisis problem is gradually disappearing, and the cycle problem is emerging. Kitchin cycles are short-term cycles of 3-5 years, reflecting fluctuations in stock levels (Brouwer, 2016). Joseph Kitchin first studied these short-term fluctuations in the 1920s. Kitchin's business cycle relates to the inability to immediately assess market conditions. It takes time for a company to start ramping up production and decide whether to cut back. The delay is because entrepreneurs do not immediately understand what is trending in today's market - supply or demand. Then they have to verify this information. It takes time to carry out these processes and put solutions into practice. It is not easy to find new employees or dismiss old employees at once. Consequently, short Kitchin cycles are associated with delays in information gathering and processing. The awareness of the time lag between overproduction and underproduction creates the Kitchin cycle. However, reduced output sets the stage for a new phase of demand growth, which will restart the cycle. (2017-2018)

In explaining the cyclical movement of economic activity, Kitchin said that the capitalist process reflects the rhythmic movement of the mass psyche, so cycles are not accurate because of the nature of human behaviour. (Kostin, 2018)

The classic Kuznets curve shows what happens to various social inequalities (e.g. income, assets, political representation) as developing countries transition economically to developed countries or what happens with the emergence of new technologies of socio-economic productivity (Smart, 2019). Kuznets analyses fixed capital investment as a source of economic growth. He proved that investment in the industrial sector is formed in certain industrial clusters with a fairly pronounced 30-year cycle. He distinguished two main sectors – the primary (mining, agriculture) and secondary (industrial production). He explained the dynamics of economic growth by a change in the period when the ratio of product prices in these sectors favoured industrial profits, and periods when this ratio was more favourable to the primary sector. Such mirror price dynamics create a dispersion of sizes and directions of investment flow in the two interrelated sectors of the economy. (Kuzmenko, 2012, p. 133)

Nikolai Kondratiev was one of the first to study the nature of various economic cycles and their systematic interactions. Kondratiev proposed basic classifications of waves (short, medium and long). In 1922, M. Kondratiev for the first time proposed the main provisions of the theory of long cycles in his book *The World Economy and its War and Postwar State*. Since until that time there were practically no cycles other than those characterized by cycles of 7-11 years in the economic

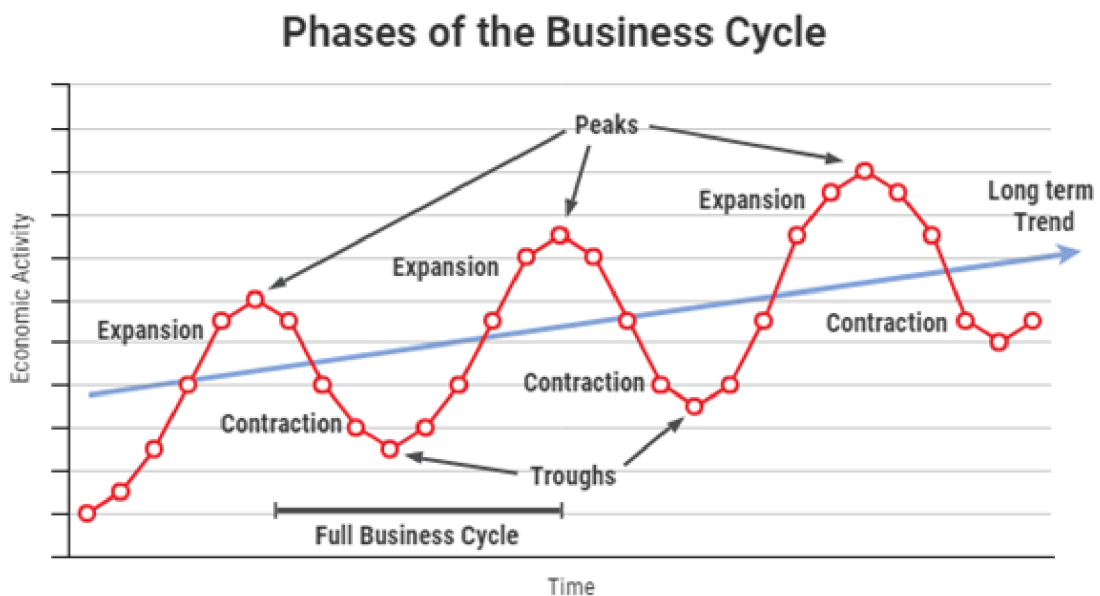
literature, Kondratiev quite logically called them "short cycles". However, already in 1925, he began to call the same cycles "medium cycles" in his work "The Long Cycle of Conjunction". (Grinin, et al., 2014)

3.3.2 Mechanism of economic cycles

According to Figure 1, we can see that each cycle of economic development consists of several phases, which in the classical view include crisis, stagnation, recovery and prosperity. These cycles have the form of waves, and the mechanism of their formation is the same, but the duration of these cycles is different.

The circulation of capital in its various forms is the subject of economic research within cyclical development theories, while chrématismes treat cyclical changes in economic conditions as a "business cycle", an abstract sine wave with repeating phrases. The latter ignores the nature of a given crisis, its conditions and underlying causes. According to Schumpeter, different cycles overlap - one peak may correspond to another downturn, thus creating a business environment between full-blown prosperity and extreme crisis conditions.

Picture 1: Phases of the business cycle



Source: Bonham, 2006.

3.3.3 Impact on the economy and life

Today, there are many orthodox views on how economic processes work. According to unorthodox theory, long-term economic growth is characterized by a roughly cyclical process lasting 40-60 years, driven by the emergence of new ways of doing things. Schumpeter's "creative destruction" occurs periodically as old ways of doing things give way to new ones. Emerging industries are on the rise. A new wave of investment supports new methods and disrupts more traditional and less profitable ways of making money. Gradually, lifestyles are changing dramatically. Whereas people used to walk, they now drive a car. In the next iteration, the car will drive itself. People who used to communicate through slow messengers or mail now use the phone and internet for instant communication. (Grinin & Korotayev, 2014)

To summarize, the most important aspect of economic cycles is that these fluctuations are not only related to one aspect of the economy but also extend to the entire economic system, having a complex impact on it. The research and development of business cycle theory have led many analysts to understand the behaviour of economic dynamics. The need to study these cycles is that their occurrence affects the short- and long-term economic behaviour of countries and their development strategies. (Spinola)

3.4 Global pandemic crisis

Coronaviruses (CoV) are a wide range of viruses that can cause diseases ranging from the common cold to more global diseases (Nations).

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people who are infected develop a mild to moderate respiratory illness. Such people can cure themselves without special treatment. However, some need medical attention. The elderly and people with underlying diseases, such as cardiovascular disease, diabetes, chronic respiratory disease or cancer, are more likely to develop the severe disease (WHO).

While the COVID-19 pandemic inscribes one of the worst pages in human history, causing severe illness, death and bringing global changes to daily life, UN DESA is supporting the world to contain this scourge. As the pandemic poses a challenge to national health systems, shutting down businesses large and small and locking millions of people in their homes, it exposes the most vulnerable segments of society to the most devastating consequences. UN DESA experts continue

to monitor closely the economic, financial and social impact of the crisis to help the Member States navigate the policy decisions ahead and leave no one behind. (Nations)

"The best way to prevent and slow down the transmission of the virus is to be well informed about the disease and how the virus spreads" (WHO).

3.4.1 How did it start?

In July 2020, WHO and China began preparing studies to unravel the origin of the virus. Terms of reference were agreed which defined a phased approach as well as the scope of the study, key principles and anticipated results. TOR called for short-term studies as the first step to better understanding how the virus was introduced and spread in Wuhan (Joint WHO-China Study, 2021, p. 6).

The wider spread of the virus in the population in December 2019 may explain cases unrelated to the Huangyan market, which, combined with the presence of earlier cases that are in no way related to that market, may suggest that the Huangyan market was not the source of the outbreak. Although other non-serious cases that have not been identified may indicate a link between Huangyan Market and the earlier cases (Joint WHO-China Study, 2021, p. 7).

For cases identified in Wuhan, data from patient samples with onset before 31 December 2019 were compared with baseline epidemiological data. Several samples from patients in the Huangyan market had identical viral genomes, suggesting that they may be part of a cluster. However, sequencing data also showed that some viral diversity was already present in the early stages of the outbreak in Wuhan, suggesting a non-selective transmission chain outside the South China market cluster. Consequently, there is no pronounced aggregation along with the epidemiological parameters of contact with raw meat or fur-bearing animals (Joint WHO-China Study, 2021, p. 7). After human-to-human transmission of SARS-CoV-2 was confirmed, on 20 January 2020, the Communicable Disease Prevention and Treatment Law of the People's Republic of China concluded to classify COVID-19 as a class B communicable disease but apply the preventive and control measures provided for class A communicable diseases (Joint WHO, 2021, p. 142).

According to some studies, there are cases of the disease until December 2019, the time when the SARS-CoV-2 outbreak was identified in Hubei province.

In Italy, the first case of COVID-19 was reported on 21 February 2020 in Codogno, Lombardy. Since then, several studies have provided evidence of early circulation. For example, La Rosa detected the first positive samples in wastewater in northern Italy in mid-December 2019 using a nested PCR wastewater testing protocol (Joint WHO-China Study, 2021, p. 82).

On 27 November 2019, wastewater testing by RT-PCR in Brazil tested positive for SARS-CoV-2, much earlier than the first reported case in the Americas (Joint WHO-China Study, 2021, pp. 48-49).

In France, a patient admitted to the hospital on 27 December 2019 was found to be positive for SARS-CoV-2 RNA using OT-PCR. Subsequent serological testing showed a significant increase in the prevalence of neutralizing antibodies. And by mid-December, it was concluded that the virus had spread earlier.

While in the United States of America, a serological study of 7389 archived blood donor samples collected between 13 December 2019 and 17 January 2020 found 106 positive samples, indicating the possible introduction of SARS-CoV-2 into the US before the first case was detected in the country (Joint WHO-China Study, 2021, p. 47).

3.4.2 The evolution

According to the timeline „WHO's COVID-19 response“ that was created and published by the World Health Organisation (World Health Organization), there is a possibility to outline the evolution of the coronavirus development and the reaction of the national and international organizations to this:

31 December 2019. - The WHO office in China has taken a media report from the website of the Wuhan Municipal Health Commission on cases of "viral pneumonia" in Wuhan, PRC.

3 January 2020. - Chinese officials have passed on information about a cluster of "viral pneumonia of unknown origin" to WHO.

10-12 January 2020. - WHO has released a guidance package for countries covering topics related to the management of new disease outbreaks...

11 January 2020. - The first death from a new coronavirus according to Chinese media.

2 February 2020. - The first batch of OT-PCR laboratory diagnostic kits has been sent to WHO regional offices.

11 February 2020 - The World Health Organisation has announced that the new disease will be called COVID-19. To avoid inaccuracies and stigmatisation, it should not refer to geographical locations, animals, individuals or populations.

13 March 2020 - Europe has become the epicentre of the pandemic, with more cases and deaths than the rest of the world combined, except China, according to the Director-General.

4 April 2020. - More than 1 million cases of COVID-19 have been confirmed worldwide.

18-19 May 2020 - The 73rd World Health Assembly, held for the first time virtually, resulted in a landmark resolution that called for the world to join forces in the fight against the COVID-19 pandemic.

22 September 2020 - WHO publishes the first list for the possibility to use high quality rapid antigen-based tests for urgent detection of COVID-19.

31 December 2020 - WHO issued the first emergency authorisation for the use of the COVID-19 vaccine, stressing the need for equitable access worldwide.

5 January 2021 - Pfizer/BioNTech vaccine became the first to be approved for emergency use.

15 February 2021 - WHO has listed two AstraZeneca/Oxford vaccines against COVID-19 for emergency use and authorized their global distribution through COVAX.

7 April 2021 - On World Health Day, WHO calls for action: to accelerate equitable access to COVID-19 technologies between and within countries; to invest in primary health care; to prioritize health and social protection; to build communities of safety, health and inclusion; and to improve health data and information.

3.4.3 The devastating effects of COVID-19

For the labour market: Secondary services and production are directly affected due to the additional restrictions, which, among other things, lead to reduced working hours and jobs. Previously viable businesses run the risk of going bankrupt if they do not receive state aid. In countries with greater dependence on the service sector, greater informality and weak job security, initial unemployment is much higher. If appropriate measures are not taken, the consequences for business, employment and incomes will be more severe, especially as workers in these countries are less protected and earn lower incomes.

On the economic front: The fall in global commodity prices has further weakened the trade position of exporting countries, reducing employment in the export sector, resulting in lower fiscal revenues. Large capital outflows led to currency devaluation. This made debt servicing and food and medicine imports even more burdensome, all of which put additional pressure on developing countries' fiscal balances (ILO, 2020, p. 3).

Culture and education: in all countries, children from the poorest households are most affected because of their limited ability to maintain any educational interaction through distance learning.

Their access to the Internet is low. The use of television, radio and learning materials helps but cannot replace face-to-face learning. Only half of all learners in middle-income countries and only a tenth in the poorest countries have access to the Internet (Gill & Saavedra, 2022). Learning cannot simply mean spending a few hours watching TV or listening to the radio every day. As a result, the already high inequality of opportunity is exacerbated. In developing countries, COVID-19 could lead to slower growth, greater poverty and greater inequality within a generation, posing a serious threat to global prosperity.

It is encouraging to see schools opening in many countries by the end of 2021. Yet almost a quarter of the education system remains closed and many have only partially reopened. 1.5 billion children have returned to classrooms, but 300 million have yet to return to school safely. But that was before a variant of the Omicron virus emerged. These figures have changed since the beginning of the year (Gill & Saavedra, 2022).

The World Bank Group and the OECD have assessed distance learning over a two-year pandemic. The pandemic has shown that hybrid innovations in learning, combining face-to-face and distance learning through the intelligent use of digital technologies, will continue. In addition, investment in technology must match investment in learning skills. The pandemic has accelerated a change in attitudes towards the use of technology, and there is now little hope of getting teachers to use technology as part of the learning process.

School closures undoubtedly have many negative consequences, such as disruption of learning and loss of human interaction, which in turn are critical for social and behavioural development. Prolonged interruptions in education can lead to an increase in child labour and child marriage, further retarding the development of developing countries. A recent International Monetary Fund document shows that child marriage reduces the gross domestic product of low-income countries by 1% (United Nations, 2020, pp. 8-9).

3.5 Economy in Ukraine

Current trends in the world economy are characterized as post-industrial. This type of economy is called the "new economy", "information and innovation economy", "knowledge economy". Most of the world's leading economies are post-industrial economies. Countries such as the United States, Canada, Japan, Britain, Germany, Italy, and France are at the forefront of post-industrial processes. They serve as a model for many countries around the world in the process of transition to a post-industrial type of economic development. Having chosen the path of European

integration, Ukraine is focused on building a post-industrial economic system, an innovative economy. (Turchina, et al., 2019, p. 2)

3.5.1 Fundamental of the Ukrainian economy

Unfortunately, today the national economy of Ukraine remains unadapted to the requirements of post-industrial society, which implies the need for structural changes for further economic development and growth. There is reason to believe that today Ukraine, developing certain high-tech industries, remains an industrial-type country with elements of pre-industrial forms of economic organization. Thus, the national economy of Ukraine is characterized by the following features: technical and technological backwardness, significant physical and moral depreciation of fixed assets, low-capacity utilization, high material, energy, and resource consumption, lack or low level of innovation. (Ukrstat, 2021, p. 145)

For the last two and a half decades, the issue of structural transformation of the national economy to the modern requirements of post-industrial society and economic development of innovative type remains relevant for Ukraine. During the independence of Ukraine, the most technologically degraded large high-tech complexes, the potential of which should be the basis of economic development (Tabachuk, 2021, p. 45). The stability of economic development depends on the degree of development and efficiency of the economic structure. Changes in the structural proportions of the economy can affect the economic growth of the country and the welfare of its people (Gromyko, 2016, p. 128).

3.5.2 Economic development in Ukraine

In 2019, the crisis in Ukraine's industry became more systematic. In contrast to previous years, when production showed a slight increase, in 2019 it fell by 0.5% (Zhalia, 2021, p. 4).

Declining trends and unsatisfactory dynamics of industrial performance in recent years against the background of accumulated systemic problems have led to low strength and high vulnerability of industrial enterprises to crisis trends caused by the spread of coronavirus in the world and the introduction of appropriate quarantine measures. The decline in economic activity due to the introduction of quarantine has made a significant contribution to accelerating the decline in industrial production in 2020, and production volumes, which showed negative dynamics a few months before quarantine, in 2020 decreased by 5.2% compared to 2019.

Since the beginning of 2020, the agricultural sector has shown a decline in production. Thus, in 2020 the index of agricultural products compared to 2019 was 88.5%. At the same time, if

agricultural enterprises reduced production by 14%, households - by 6.8%. The main reason for the decline was a decrease in crop production by 13.9%, while livestock production decreased by 2.6%. In 2020, the transport sector showed a reduction in freight and passenger traffic on all modes of transport. In 2020, freight traffic in Ukraine (excluding pipeline transport) decreased by 10.6% (59.3 million tons), passenger - by 39.7% (1693.7 million passengers) (Zhalia, 2021, p. 3)

In the real sector of the economy, systemic problems are associated with a rapid decline in the role of industry in economic growth (resulting not so much from the development of the services sector as the rapid loss of competitive position of Ukrainian industry in domestic and foreign markets), large-scale agrarianizing due to unbalanced exploitation resource potential, as well as the insufficient role of the transport sector in meeting the needs of economic growth, the loss of transit potential of the country.

In the ranking of countries in the world in nominal GDP, calculated according to the World Bank, in 2018 Ukraine ranks 60th out of 190 countries. Interestingly, the nominal GDP in Ukraine grew more dynamically than in neighbouring countries. However, the GDP growth rate of 20% does not give a complete picture, as real GDP grew by only 2.5%, considering inflation. According to this indicator, Ukraine is the undisputed leader both among neighbouring countries and in the post-Soviet space - 22.1%. Similar growth rates in Uzbekistan (19%) and Azerbaijan (16%). (Minfin)

The shadow economy in Ukraine is one of the biggest obstacles to the development of the country's competitiveness, the growth of social living standards and integration into the European community. It reflects the active criminalization of economic processes, high corruption of public authorities and low legal and tax culture of legal entities and individuals. State Statistics Service of Ukraine in recent years determined the size of the shadow economy on average from 15% to 18% of GDP. (Bochi & Povoroznik, 2014)

According to the International Center for Perspective Studies (ICPS) the most significant factors in the shadowing of the national economy include the following (Bochi & Povoroznik, 2014):

1. Ineffective state regulation of the economy - lack of business confidence in the state and the state in business, high bureaucratization, imperfect institutional and legislative support.
2. Inefficient administration of taxes. This is also facilitated by the large and unfair tax burden, increasing the share of unprofitable enterprises, low level of payment discipline, instability and imperfection of tax legislation, ignorance of this legislation, legal insecurity of taxpayers.

3. Labour market problems associated with low economic incentives for formal employment and rising unemployment. However, the biggest problem is the lack of an effective system of control and punishment for informal employment and non-taxation of wages.
4. Imperfect monetary regulation, which lies in the non-transparent refinancing of commercial banks and the establishment of a flexible exchange rate, excessive government activity in the loan market - the issuance of government bonds to replenish the state budget, which contributes to the concentration of capital around speculative transactions and interest rates, excessive money supply. and has deflationary or inflationary consequences.
5. Imperfection of the budget system, low control over the use of budget funds.
6. Imperfection of the judicial and law enforcement system, lack of a clear state program to combat organized crime.
7. The level of overall crime.

3.5.3 The current situation after COVID-19

In 2020, the domestic economy as a whole was directly and indirectly affected by the COVID-19 pandemic. As a result, according to the State Statistics Service, in the first quarter of 2020, the gross domestic product (GDP) of Ukraine decreased by 1.3% compared to the first quarter of 2019, in the second quarter of 2020 fell by 11.4%, as compared with the same period in 2019. However, in the third quarter of 2020, the reduction in GDP compared to the same period in 2019 was already much smaller. Thus, the National Bank of Ukraine states that “in the third quarter of 2020, real GDP decreased by 3.5% year on year”. At the same time, with the recovery of consumer demand and business activity after the easing of quarantine restrictions, real GDP in the third quarter, compared to the second quarter, grew by 8.5% in seasonally adjusted terms (Zhalia, 2021, p. 23).

A further factor in the fall in GDP remained the further reduction in investment. The decrease in gross fixed capital formation deepened to 23.8% YoY (year on year) and was observed in almost all activities, against the background of improving the financial results of enterprises. Businesses refrained from investing due to the spread of morbidity and uncertainty about the development of the pandemic. Unresolved issues in alternative energy also had a negative impact. Only postal and courier activities showed a significant increase in capital investment through the development of delivery and online trade services.

Instead, consumer demand has recovered. “This has been helped by easing quarantine restrictions, increasing incomes and making up for budget spending. In general, household consumption expenditures increased by 1.0% YoY. Public sector consumption also increased by 8.2% YoY. For example, budget expenditures on road infrastructure, medicine and defence have increased significantly”. It should be noted that last year's reduction of Ukrainian GDP in different sectors of the economy was also different. At the same time, the negative impact on the economy of the COVID-19 pandemic in Ukraine was compounded by unfavourable weather conditions for agriculture. As a result, in 2020, particularly high rates of GDP decline were observed in the field of accommodation and catering, the provision of certain services, including in the hotel and tourism business, agriculture, in the transport and processing industry. (Zhalia, 2021, p. 43)

Among the sectors of the domestic economy that have survived the corona crisis quite well is domestic trade. In general, in 2020 the turnover of retail trade increased by 8.4%, and the wholesale turnover of wholesale trade enterprises (legal entities) - by 2.9% compared to 2019. The sharp decline in the physical volume of retail trade turnover was observed in March and, especially, in April last year. In May-June, this sector of the domestic economy was in fact in a state of stagnation. In July 2020, its rather confident growth began. Although in this period the growth rate of domestic retail trade was lower than in 2019, still they were quite significant, especially compared to the dynamics of other sectors and sectors of Ukraine's economy. Another thing is that, due to administrative restrictions imposed by the government during quarantine in the retail sector, small businesses were the first to suffer. (Tabachuk, 2021, p. 46)

However, in contrast to retail trade, some other service sectors have been hit hard by the economic crisis caused by the COVID-19 epidemic. Even though the COVID-19 pandemic in 2020 provoked a significant economic downturn in Ukraine, its impact on certain macroeconomic indicators of the domestic economy was quite insignificant, and in some cases, paradoxically, even positive in the short term. (Melnyk, 2010, p. 144)

The global coronavirus pandemic has deepened the global economic slowdown. Under such conditions, the openness of the Ukrainian economy, its dependence on exports and raw material prices led to a rapid negative reaction of basic export-oriented industries. The study of industrial exports shows a reduction in export flows of investment products of the metallurgical and machine-building industries, while the volume of exports of raw materials and food products, on the contrary, mostly showed growth. In general, in 2020, compared to 2019, Ukraine's foreign trade (in US dollars) decreased by 6.4%, and the volume of trade exports - by 1.7%. Under

conditions of global uncertainty, the negative dynamics can quickly spread to other industries with high dependence on export markets, which are separate subsectors of mining, light, wood and other industries (Melnyk, 2010, p. 143).

The coronavirus pandemic, as well as quarantine restrictions, have hurt the situation of agricultural producers (including small farms) and consumers of agricultural products. In particular, due to the application of measures aimed at preventing the spread of acute respiratory disease COVID-19 caused by coronavirus SARS-CoV-2 (Cabinet of Ministers Resolution of 11.03.2020 № 211 as amended), trade opportunities in agricultural markets were severely limited.

3.6 Pandemic in Ukraine

3.6.1 Evolution of pandemic

The first confirmed case of COVID-19 in Ukraine was registered on 3 March 2020 in the western district of the Chernivtsi region (Ukraine, 2020, p. 6). It turned out to be someone who had just arrived from Italy. The first death was registered on 13 March 2020. The Ukrainian government introduced quarantine measures on 12 March 2020, with the number of cases continuing to rise, probably due to delays in identifying existing infections and returning infected Ukrainians from abroad. Thus, from 6 April 2020, stricter measures were introduced, including the closure of schools, universities, shopping centres and a mandatory mask regime in public places. The established measures were then slightly relaxed on 24 April 2020 and many services resumed, although some restrictions were extended until the end of June 2020. As a result, the Ukrainian authorities took the epidemic very seriously from the outset and started implementing mitigation measures and related regulations almost immediately after a large number of cases were identified in the country. Meanwhile, the implementation of proposed mitigation measures depended on the region and compliance with these rules varied. (Gankin, et al., 2021, p. 2)

According to current data as of 12.03.22, there have been 4,888,473 cases of infection and 106,899 deaths from the coronavirus since the start of the pandemic (Reuters, 2022). The highest daily number of infections since the start of the pandemic was recorded on 4 February 2022, with 43 778 new cases. According to health authorities, the Omicron wave peaked in early February and is expected to continue until April. As of 25 February, the mortality rate was 2.2% and the recovery rate was 84.4%. (OECD, 2022, p. 1)

In Eastern Europe, the post-socialist economy and health care systems are fundamentally different from those in Western Europe. The SARS-CoV2 transmission models available in Eastern Europe

are based on a relatively simple SIR model in which people are grouped and it is assumed that all people in a given group have the same characteristics. (Gankin, et al., 2021, p. 2)

According to a study published in *Global Health*, the Ukrainian health system is one of the weakest among post-Soviet European countries. It is characterized by organizational and financial inefficiency, insufficient capacity to meet the health care needs of the population, and some of the remaining problems are being addressed through ongoing reforms. Efforts to modernize the system are still at an early stage and are being implemented only in certain parts of the country or as a pilot mechanism. The system scores poorly not only on health outcomes but also on access to services, with financial costs becoming an obstacle to equity and fairness. The Ukrainian government's health resources are limited and scattered throughout the existing infrastructure, and corruption in the health sector remains a persistent obstacle to accelerating health reform. The condition of the health care infrastructure remains poor. Practical use of health facilities may also be limited, particularly in rural areas. (Ukraine, 2020, p. 6)

3.6.2 Vaccination

To date, Ukraine has received at least 31,683,310 doses of the COVID vaccine. Assuming that each person needs 2 doses of vaccine, this is enough to vaccinate about 35.7% of the country's population (Reuters, 2022). By 25 February 2022, Ukraine had fully vaccinated 34.07% of its population, making it the least vaccinated country in Europe. In early 2021, the government signed contracts for the delivery of 42 million doses of the COVID-19 vaccine. In addition, the Ministry of Health is currently considering allowing vaccination of children aged 5-11 years after receiving approval in October 2021 to vaccinate children aged 12-17 years. (OECD, 2022, p. 2)

There are two interrelated problems that health officials often face to accelerate the pace of vaccination. The first is widespread scepticism among the public about the vaccine, fueled by distrust in medical institutions and the health system, and the second is illegal schemes to sell counterfeit COVID-19 identifiers. The government is taking new measures to promote vaccination and reduce the health impact of COVID-19 and reduce the health consequences of COVID-19. In October 2021, the Cabinet decided to allocate 25 million UAH from the state budget to strengthen the information campaign on vaccination against COVID-19. (OECD, 2022, p. 3)

The government is also offering financial incentives to vaccinate Ukrainians. Thus, on 19 December the government launched the 'ePidtrymka' program, which offers Ukrainians a financial incentive of 1,000 hryvnias (\$36) after receiving the COVID-19 vaccine. Just one month after the program was launched, the vaccination rate has increased from 33.1% to 34.6%. As of February

14, 8.6 million Ukrainians had benefited from the program. The program will run until 18 December 2022 and will be implemented in several stages. In the first stage, the financing will be available through the Diia application. During the second phase (2-3 quarters of 2022), an alternative offline mechanism for receiving funds will be offered which is currently under development. In addition, free smartphones will be provided to vaccinated persons over 60 years of age as part of the government's strategy to provide internet access to every citizen. (OECD, 2022, p. 3).

3.6.3 Lockdown and restrictions

When COVID-19 infections began to be reported around the world, many countries held back the spread of the virus by closing schools, workplaces and international borders (Reuters, 2022). In Ukraine, some of the early restrictions introduced at the beginning of the pandemic are still in place. These include wearing masks in closed public places, keeping a social distance or limiting gatherings to 50 people. As of December 6, 2021, new quarantine rules for unvaccinated citizens have come into force (mandatory testing, restricted access to public places, etc.). Ukraine now has an "adaptive" isolation regime, which runs until 31 March, with different measures depending on the epidemiological profile of the regions (divided into four levels: green, yellow, orange or red). (OECD, 2022, p. 3)

Regulatory response: The Government of Ukraine has imposed temporary restrictions throughout the country - restricting passenger transport and mass gatherings, and closing catering, cultural, shopping and entertainment facilities. The Government of Ukraine has also adopted laws establishing administrative consequences for violations of hygiene norms and increasing criminal liability for violations of hygiene rules and norms preventing the spread of infectious diseases. Only Ukrainian citizens and permanent residents, including accredited representatives of the diplomatic and international community, are allowed to enter the country during this period. Intercity trains and the city metro have also been suspended. Parliament has also adopted some measures to soften the economic impact on businesses, especially small and medium-sized enterprises, by amending the Tax Code (Ukraine, 2020, p. 7).

3.6.4 Social-economic impact

As seen in other countries, the employment impact of the pandemic has affected women more than men. The reduction in employment associated with social distancing measures has had a serious impact on sectors with a high proportion of female employment, with statistics showing that the reduction in employment has been greater for women than for men. In addition, the closure of

schools and kindergartens has significantly increased the demand for childcare services, which has particularly affected working mothers. An increase in the gender pay gap during quarantine restrictions by economic activity and region. According to UN Women and other expert sources, the labour force participation rate and earnings of women are likely to fall in the long run due to the crisis caused by COVID-19, affecting their economic security in the long run. (OECD, 2022, p. 5)

The COVID-19 crisis has further stimulated the digitization of Ukrainian public services. The Vdoma app helps to comply with measures of self-isolation. The portal and mobile app Dia, launched in February 2020, provide users with access to digital documents and government e-services such as COVID-19 vaccination registration, registration changes, construction work applications, e-driving licenses, financial assistance, opening bank accounts, immigrant debt settlement and mortgage loans. In addition, in August 2021, Ukraine became the first country in the world to ensure full equivalence between e-passports and paper passports. In July 2021, Ukraine began beta-testing vaccination certificates in the Dia app for Ukrainians who have received full vaccination, and in August 2021 it was recognized by the European Union as equivalent to European vaccination certificates. In November 2021, the beta-testing of the PCR-tested COVID certificate also began. (OECD, 2022, p. 7)

According to COVID-19 Emergency Response Plan, some indirect effects related to COVID-19 were highlighted (Ukraine, 2020, p. 8).

- Ukraine's demographics place it at high risk of transmission and complications: the large proportion of Ukraine's elderly population (23% of the population) makes it highly susceptible to COVID-19. Virtually all elderly people in Ukraine have at least one chronic illness, which can lead to high mortality among the elderly population.
- Violation of children's right to education: The Ukrainian government has decided to close all educational institutions in the country while the situation worsens. This has led to disruptions in education, gaps in childcare and financial hardship for working parents. It has affected final exams, school and college enrolment.
- Creating an additional burden on the mental health of populations already traumatized by armed conflict. Fear of COVID-19 has repeatedly led to social unrest. The high level of stigma associated with COVID-19 may discourage people from seeking medical care, thereby exacerbating the spread of the virus. At the same time, access to and provision of basic social

services and SAR services, including for victims and survivors of domestic violence, older people, people with disabilities, may also be hindered and the risk of violence may increase.

- Disrupted access to markets and essential commodities. On the demand side, the epidemic has had a significant impact on the global commodity supply chain. Panic buying and hoarding. In addition, farmers are concerned about the reduced demand for livestock products and the economic impact on the agricultural sector. The crisis has had a greater impact on smallholder farmers, as well as self-employed individuals engaged in small-scale activities in local markets.

3.6.5 Covid-19 and Russian invasion 2022

Vaccination and mitigation measures such as mask-wearing, social distance and basic hygiene are necessary to contain the spread of SARS-CoV-2, but they cannot be maintained while a country is under siege. War and politics, and the social unrest they cause, are not only inevitable outbreaks of infection but also new opportunities that threaten the entire world. The humanitarian organization Médecins Sans Frontières distributes trauma kits and trains medical staff in Mariupol, Ukraine, which has been targeted by Russian attacks and provides shelter and basic medical care for people crossing into other countries, including Poland (Park, 2022).

According to Michael Osterholm, who is director of the Centre for Infectious Disease Research and Policy at the University of Minnesota, "War is the best friend of infectious diseases." (Park, 2022).

As the world focuses on the evolving conflict between Russia and Ukraine, people are forced to live in conditions that could exacerbate the already high incidence of COVID-19. Against the backdrop of the invasion and high infection rates, it should be noted that only 34% of Ukrainians are fully vaccinated against COVID, and the invasion could hamper efforts to vaccinate more people.

After the invasion, people fleeing found the roads clogged with cars and opted to use public transport. Understandably, Ukrainians are primarily concerned about escaping danger, but the sad reality is that large numbers of people crammed into train carriages and breathing the same air are ideal for the spread of airborne viruses such as COVID. Some people hide in metro stations to avoid the risk of war. Consequently, large numbers of people are near each other, many of whom have no additional protection in the form of vaccines, resulting in an increased risk of infection.

There is a probability that most of the population fleeing combat zones suffer from sleep deprivation, lack of access to conventional medicines and malnutrition, which consequently

increases the risk of serious infections due to the negative impact on the immune system. In addition to the direct spread of the virus, the longer the war continues, the more it will affect health systems and disrupt surveillance and response systems. Efforts should be made to vaccinate refugees arriving in nearby countries. But equally important are the international diplomatic efforts needed to end the war so that the health care system can recover, and treatment can resume for those in need (Khan, 2022).

4 Practical Part

In the practical part the author has gathered the data with the help of a survey, which consisted of 24 questions, out of 24 questions there were 2 questions excluded due to the reason that there were open questions that were more related to personal opinions in regards to the COVID-19 pandemic. However, the total sample has covered 820 people who participated in the survey. The responses' names are anonymous, and any participants could have stopped participating at any time, in this case, the survey would not be considered as finished. The survey was conducted online, on different websites such as Facebook and partly from the Telegram. The link was directed to https://docs.google.com/forms/d/1tL_UpmkFzEh2JGnBlsj758JI9G_hvVQ0B3ElhbhBkIk/edit?usp=sharing

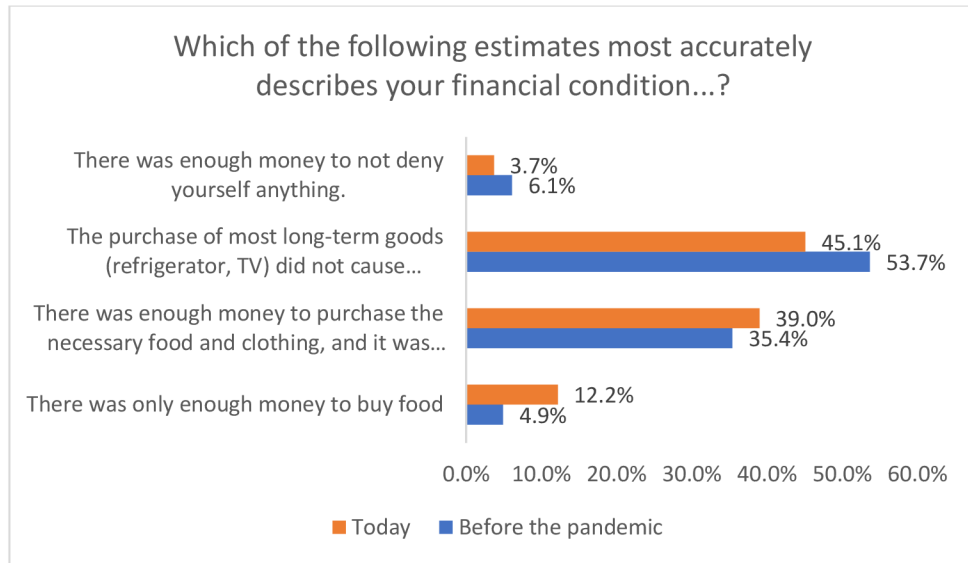
4.1 Ukraine

This paragraph of the practical part analyses the responses of respondents from all of Ukraine without categorization.

The results are presented as a percentage, which means the ratio of the number of responses to each question to the total number of respondents. Or the ratio of the number of responses to the sum of all responses to the question.

When it came to analyzing the financial situation before the pandemic and today (see Figure 1), 53.7% of Ukrainians answered that before the pandemic, they could afford to buy durable goods (such as refrigerators or televisions), but they had difficulties buying a flat or a car and had to wait. Similarly, 4.9% of people only had enough money for food, while 6.1% had enough money to live on all they wanted. The remaining 35.4% could afford to buy only necessary groceries. As of today, the above values have changed slightly. Now 12.2% of inhabitants can buy only food. Unfortunately, this number increased by about 2.5%. And the number of people who can do without was reduced by 1.6 times and is now only 3.7%. Those who are ready to buy durable goods are 45.1% of the population, while 39% of residents of Ukraine are ready to buy only necessities.

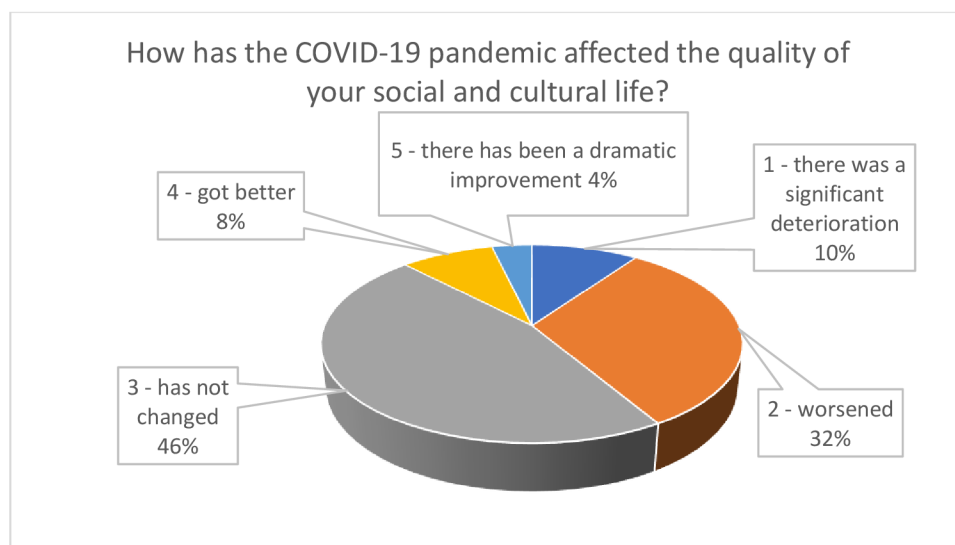
Figure 1: Monetary shortage and its usage



Source: Author, Excel.

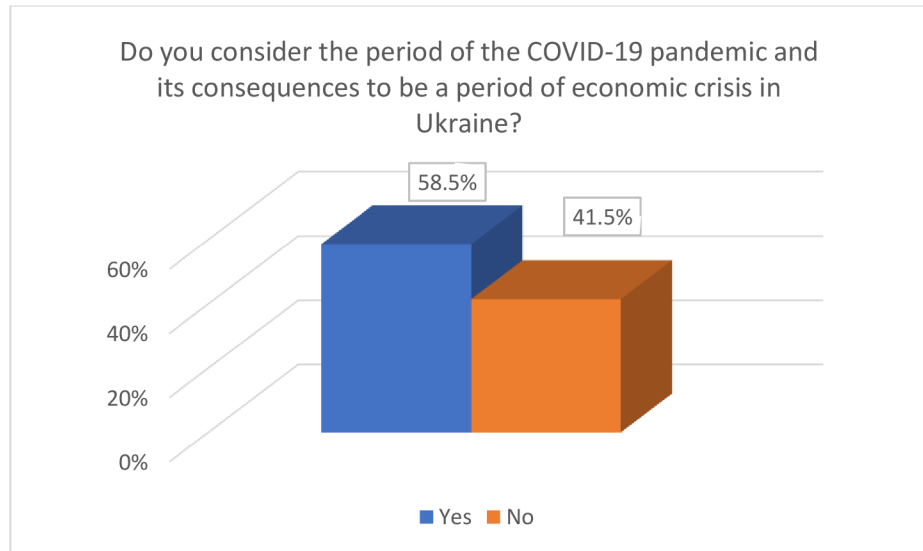
To answer the question about how the pandemic affected the quality of social and cultural life (see Figure 2), respondents were asked to rate on a five-point scale (with 1 being significantly worse and 5 being dramatically better). The results show that about half of the population, i.e., 46.3%, did not experience any changes in their cultural and social life, while 3.7% experienced cardinal changes. Unfortunately, the same cannot be said about 10% of people from all over Ukraine, who have seen a significant deterioration in the sphere of social and cultural life. By the way, 8.5% of the population noted a slight improvement and 31.7% experienced a slight deterioration.

Figure 2: Covid effect on the quality of social and cultural life



Source: Author, Excel.

Figure 3: Economic crisis in Ukraine, based on responses

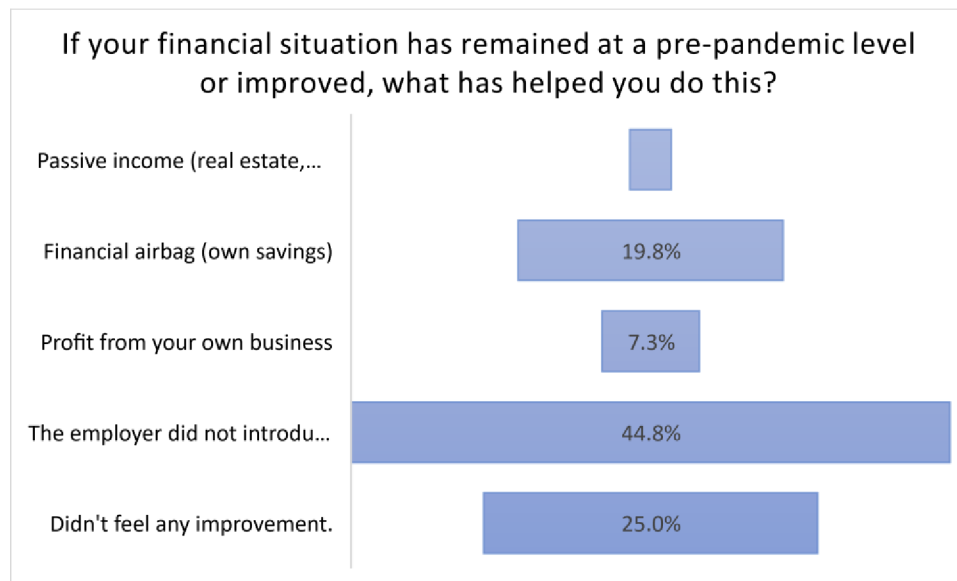


Source: Author, Excel.

Answering the question "Do you consider the period of COVID-19 with its consequences an economic crisis in Ukraine?" the respondents' opinions were divided by 17% (see Figure 3). The "period of crisis" was voted for by 58.5% of residents, compared to 41.5% who did not consider the time of the pandemic coronavirus as an economic crisis.

Such a small difference could be the result of the fact that 44.8% of people (see Figure 4), whose financial situation remained at the pre-pandemic level, said that their employers did not impose staff cuts or salary reductions and, instead, made all payments periodically and in full. Also, 19.8% were saved by having their financial safety cushion with 3.1% having a passive income from property or investments. And 25%, did not feel any change in the financial aspect of their lives.

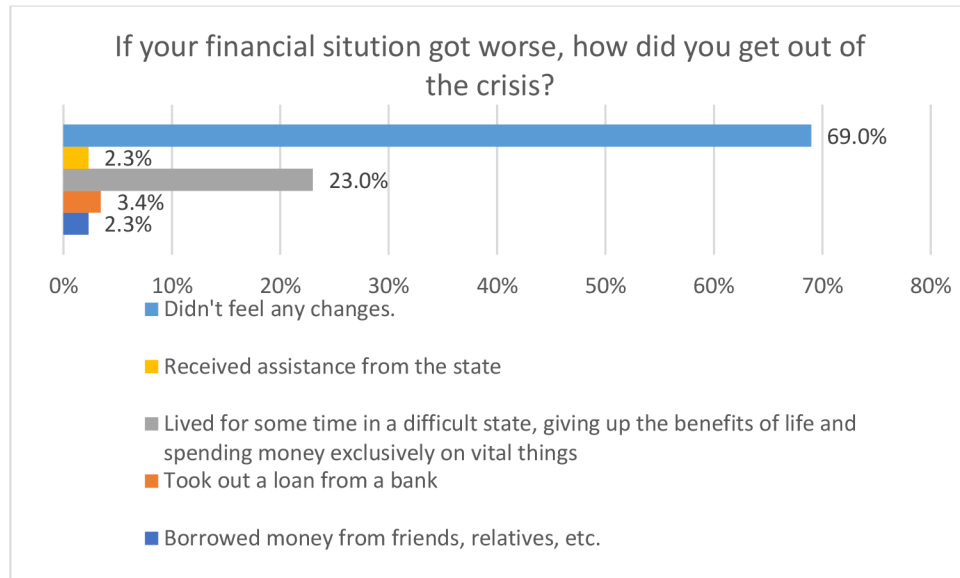
Figure 4: Financial situation development.



Source: Author, Excel.

Unfortunately, people whose financial situation was worsened by the pandemic had to live for a certain period in a difficult situation, buying only necessities. This number includes 23% of people (see Figure 5). While 2.3% each received help from the government or borrowed money from friends. By 1.1% more, 3.4% had to ask for a loan from a bank or open a credit line. It should not be a surprise that 69% of respondents did not feel any deterioration.

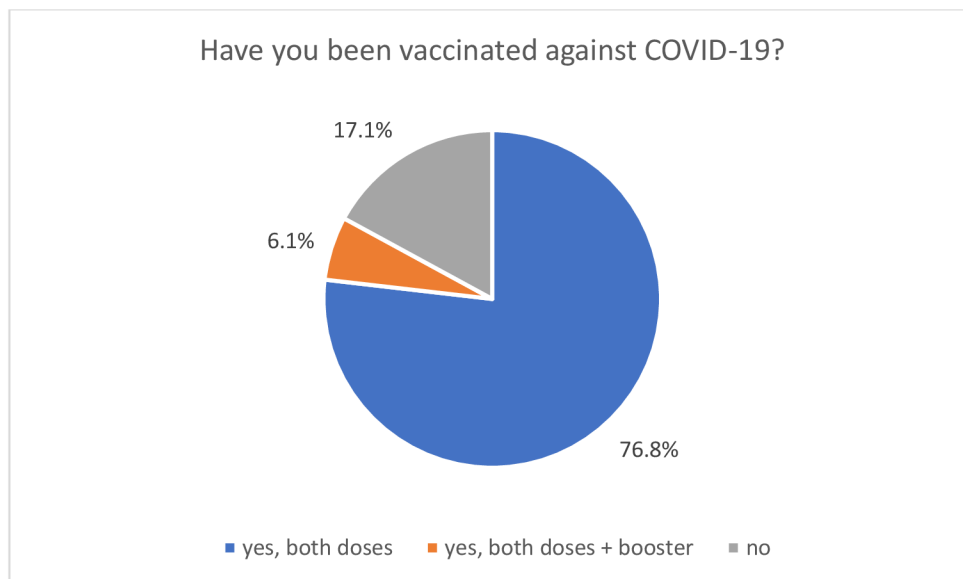
Figure 5: Overcome of crisis



Source: Author, Excel.

An interesting observation was that 76.8% of respondents had completed the full basic vaccination course, i.e., received 2 doses (see Figure 6). While 4.5 times fewer refused to receive the vaccine, that is 17.1% of the total. And 6.1% returned for a booster dose.

Figure 6: Vaccination, Q-14.

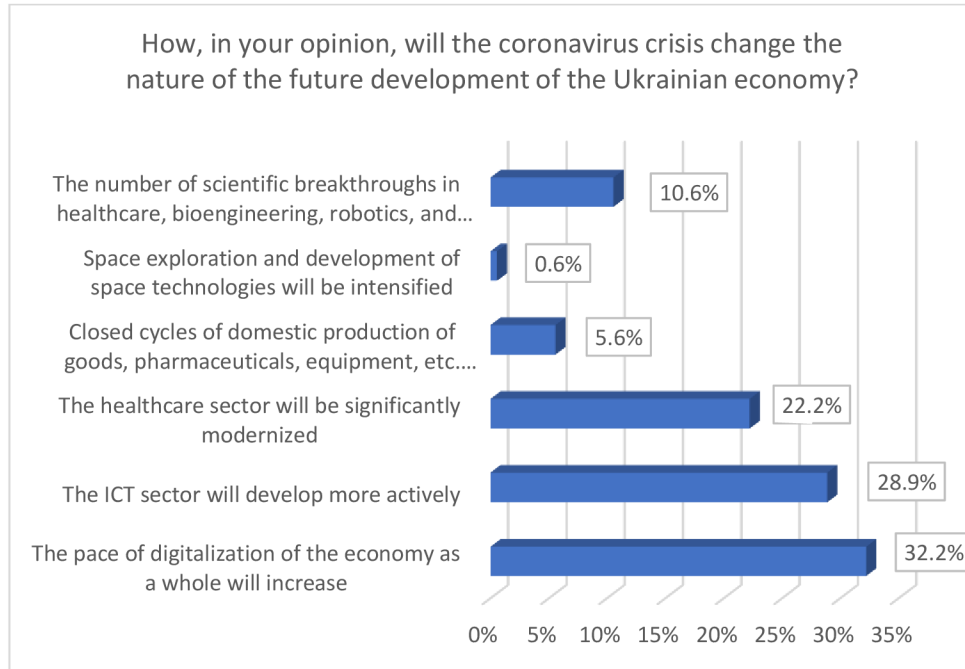


Source: Author, Excel.

According to the answers to the question about the future development of the Ukrainian economy (see Figure 7), three directions can be emphasized with certainty, as in total they represent 83.3% of all answers. Consequently, the first place is taken by an increase in the rate of digitalization of

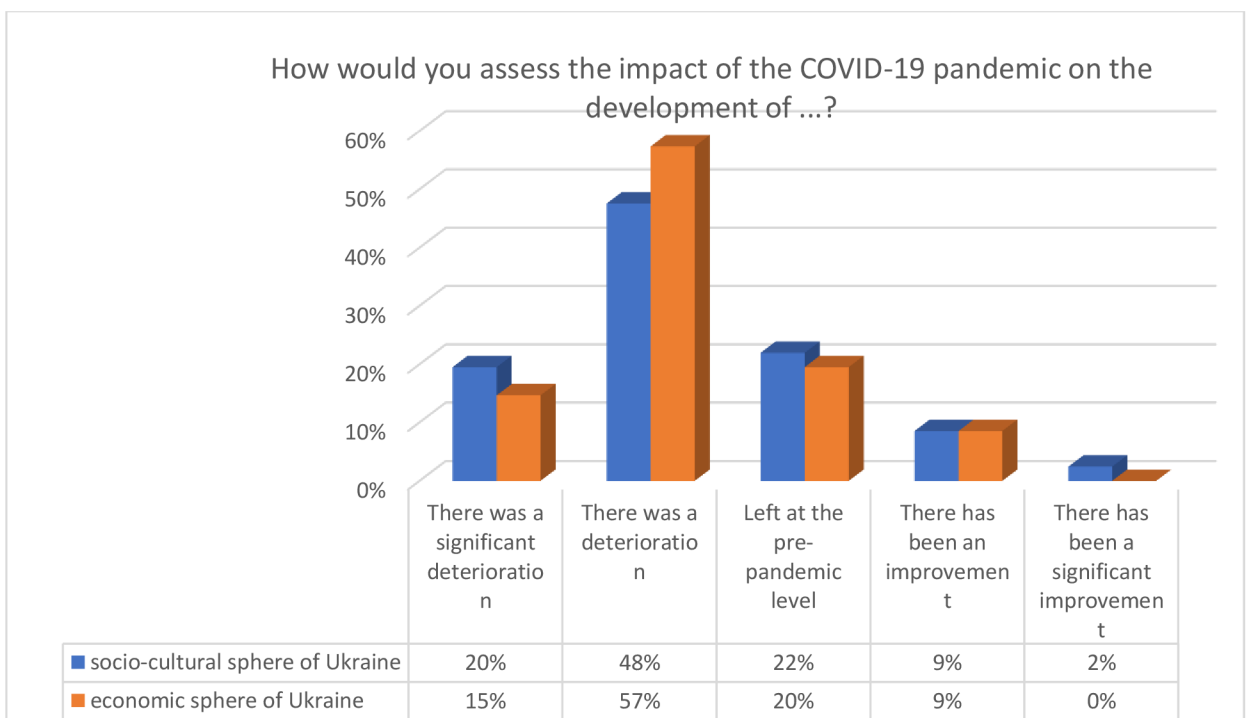
the economy (32.2%), followed by the development of the IT sector (28.9%) and a significant modernization of the medical system coming in third with a score of 22.2%.

Figure 7: Nature development in Ukraine while ongoing pandemic, Q-19.



Source: Author, Excel.

Figure 8: Assessment of Covid-19 impact on the development of social-cultural and economic sphere, Q-22.



Source: Author, Excel.

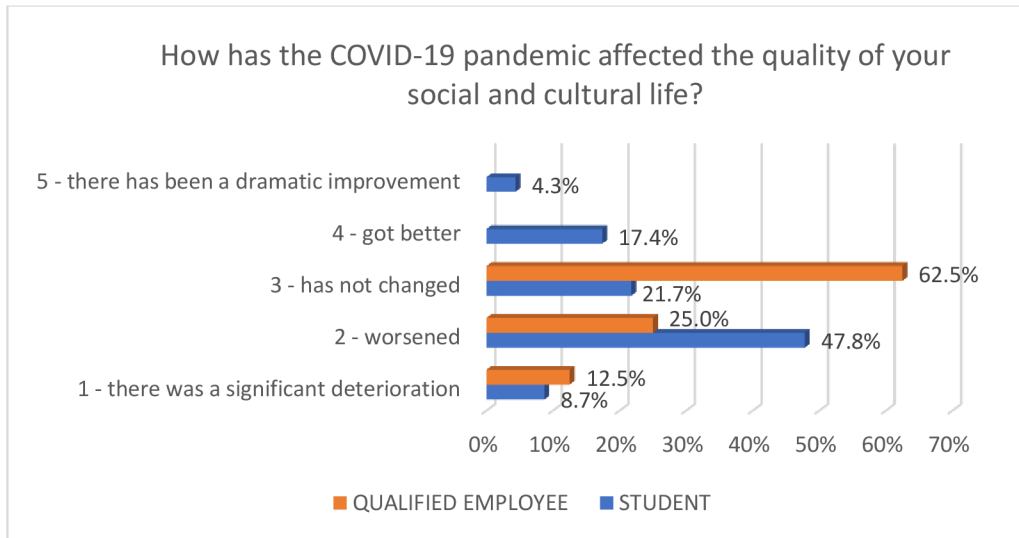
Respondents' assessment of the impact of the COVID-19 pandemic on the development of the socio-cultural and economic sectors in Ukraine was almost proportionally divided (see Figure 8). Well, according to 48% of the population there has been a deterioration in the social and cultural area, while in the economic sector this figure reaches 57%. Only 9% of respondents think that there has been an improvement in these areas. By a margin of 2%, the level of social and cultural development (22%) and economic development (20%) remained the same as before the pandemic. Sadly, 20% and 15% of the respondents believed that the level of culture and economy had declined.

4.2 Students and qualified employees

In this section of the practical part, two groups of respondents were identified - student and qualified. Based on their responses, a comparative profile was drawn up.

In one of the questions that were interested in observations, respondents were asked to rate on a five-point scale (where 1- significantly worsened and 5 dramatically improved) how much the coronavirus pandemic had affected the quality of their socio-cultural life (see Figure 9). From the results, it can be concluded that almost half of the students (47.8%) experienced a deterioration while the majority of adults (62.5%), qualified employees, did not change anything. At the same time, 8.7% noted a significant deterioration, while this value is almost 1.5 times higher for qualified employees, reaching 12.5%. Also, 17.4% noted a slight improvement in the after-effects of the pandemic on the cultural and social sphere. And 4.3% even suggested a dramatic improvement, which could not be said about the group of qualified employees.

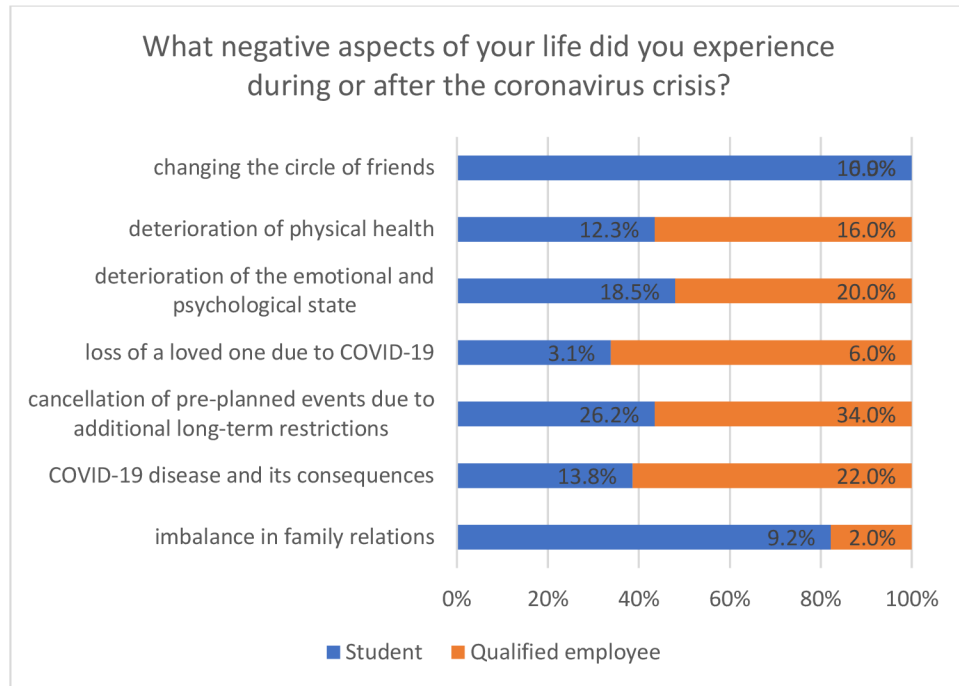
Figure 9: Occupational assessment of pandemic effect, Q-6.



Source: Author, Excel.

One more question aimed at identifying the negative effects that the coronavirus pandemic has had on people's lives (see Figure 10). For both groups, cancellation of prior plans was the most prevalent consequence. Among students, it was 26.2% and among workers, it was as high as 34%. The second most common consequence among students (18.5%) was the deterioration of morale, while in adults (22%) it was the illness of COVID-19 and its consequences. An interesting point can be seen in the following - among skilled workers, there was no change in the circle of friends and acquaintances, whereas many as 16.9% of students had this point. The situation is similar in the item about imbalances in family relationships, where among adults it is only 2%, while among students it is almost 5 times higher - 9.2%.

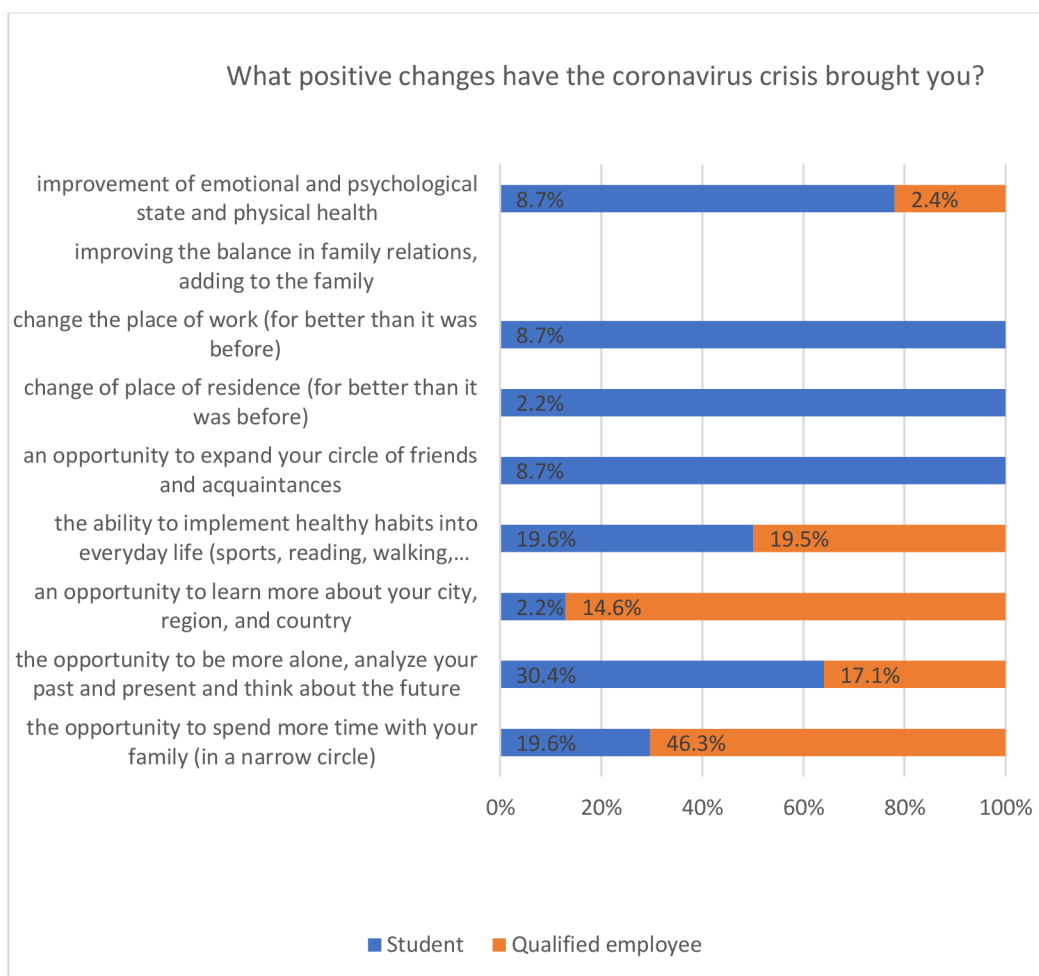
Figure 10: Negative aspects of Covid experienced, Q-11.



Source: Author, Excel.

In contrast to the previous question, the next question aimed at revealing the positive changes that happened in the lives of Ukrainian students and skilled workers because of the global pandemic (see Figure 11). Not surprising was the fact that almost half of the employed, more precisely 46.3%, had the opportunity to spend more time with their families, while 30.4% of students had the most positive change, spending more time alone and thinking about their past and their plans for the future. It can be said to be the same for both groups, with only a 0.1% difference (students 19.6% and 19.5%), and the second most popular change was the chance to introduce healthy habits into their routine. In contrast, the least common opportunity among students was to explore their place or region of residence, with only 2.2% of all students continuing to go on excursions. And among adults (2.4%), the uncommon option was to improve their mental and physical health.

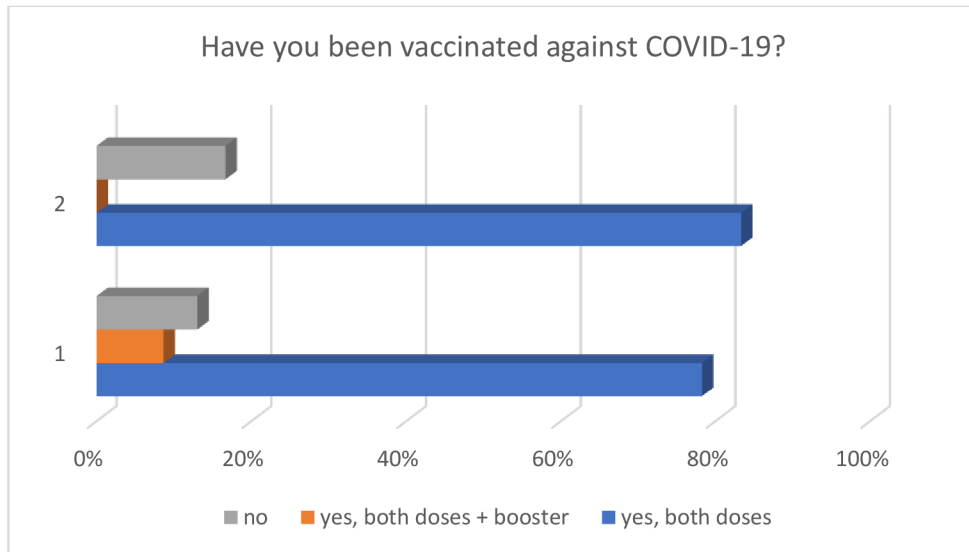
Figure 11: Positive aspects of Covid experienced, Q-12.



Source: Author, Excel.

According to some amendments to the state budget, every fully vaccinated Ukrainian was promised financial support of 1000 UAH. The two-dose vaccination rate among students (Group 1) is quite high - 78.3%, and among highly skilled workers (Group 2) it is even 5% higher - 83.3% (see Figure 12). By the way, the level of non-vaccinated workers remains relatively high. 16.7% of all workers are educated and 13% are students.

Figure 12: Vaccination rate, Q-14.

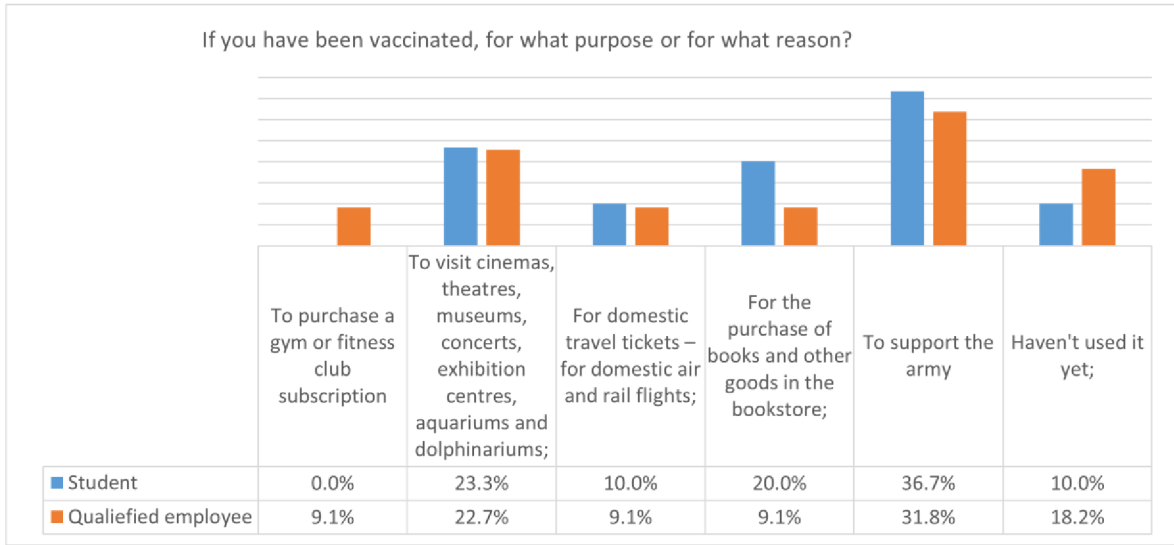


Source: Author, Excel.

Among many options of how to spend their financial reward, almost half of students (47.8%) allocated all or part of their financial aid to the army (see Figure 13). Another major part, namely 30.4% decided to buy a ticket to a cinema, theatre, museum, or exhibition. Among adults, the figure is ~10% lower and makes up 20.8%. On the other hand, 29.2% responded to support the army, which is 1.6 times less than among students. I find it interesting that there are almost three times as many students as qualified employees who purchase books. Consequently, the rate among students is 26.1%, while the rate among employees is 8.3%.

It is worth remembering that another 13% of students and 16.7% of employees with completed higher education did not take advantage of the bonus from the state.

Figure 13: Reasons for vaccination, Q-13.



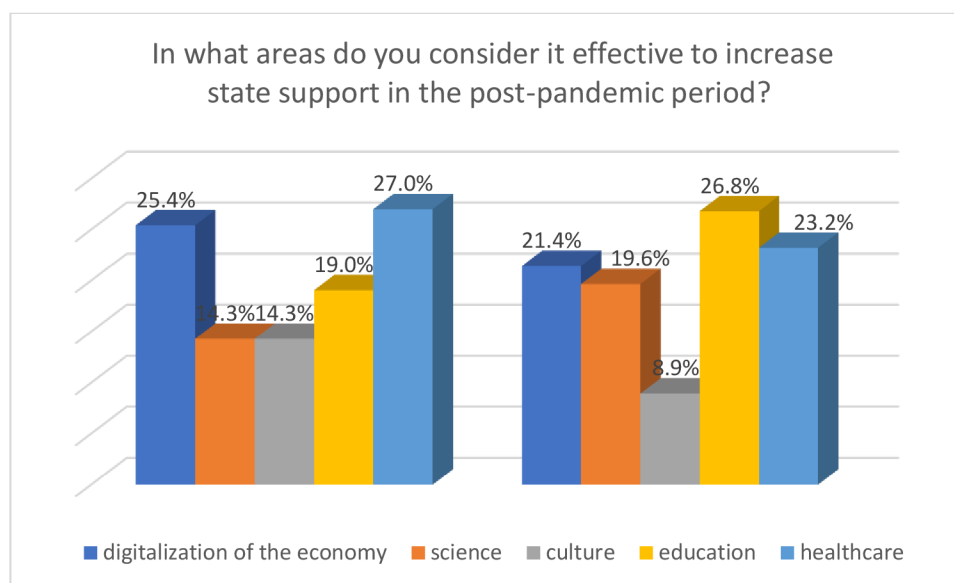
Source: Author, Excel.

Figure - 14, relates the respondents' opinions about the fields in which it would be effective to increase state support in the post-pandemic period in Ukraine. The results of the survey among the group of students and the group of qualified workers differ slightly. Thus, students voted most in favour of development in the medical system - as much as 27%, and employees only 23.2%. For the latter, education proved to be the most desirable area for public investments - 26.8%, while for students this sector takes third place with a rate of 19%.

The second not insignificant sector for students was the digital economy with a score of 25.4% of student respondents. Qualified employees, on the other hand, paid less attention to this sector with a difference of 4% at 21.4%. Between the group of students, the culture and science sectors were equally distributed with a score of 14.3% each.

Whereas the difference between the sectors mentioned above is more than double for the group of qualified employees. Thus, 19.6% of employees indicated a preference for investments in economic development and 8.9% for cultural development.

Figure 14: Spheres to improve by the state, according to the participant's opinion, Q-18.

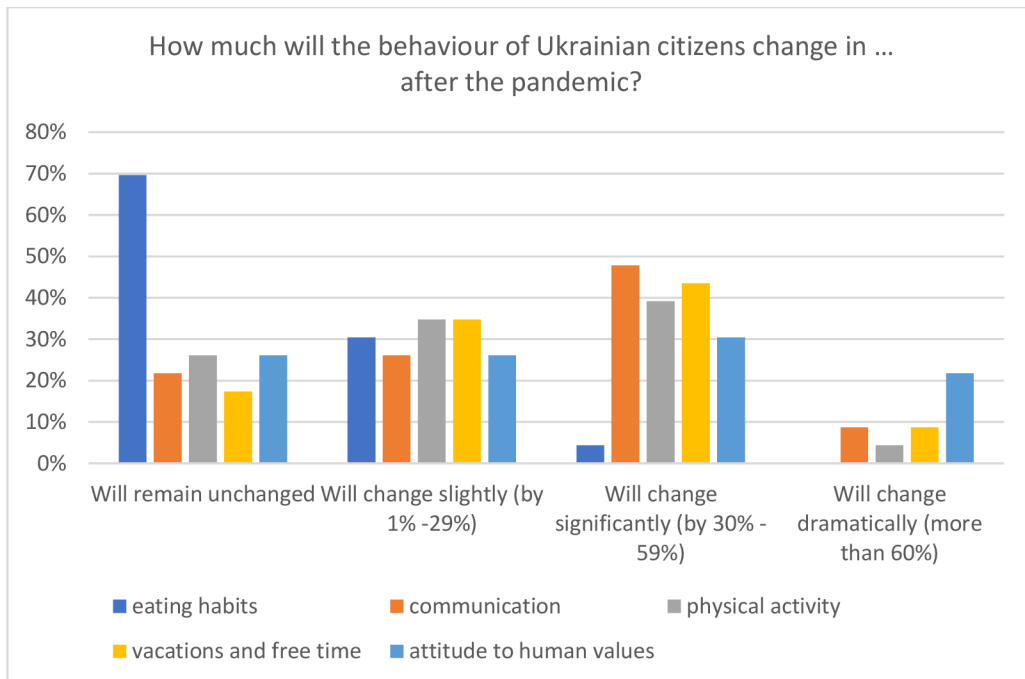
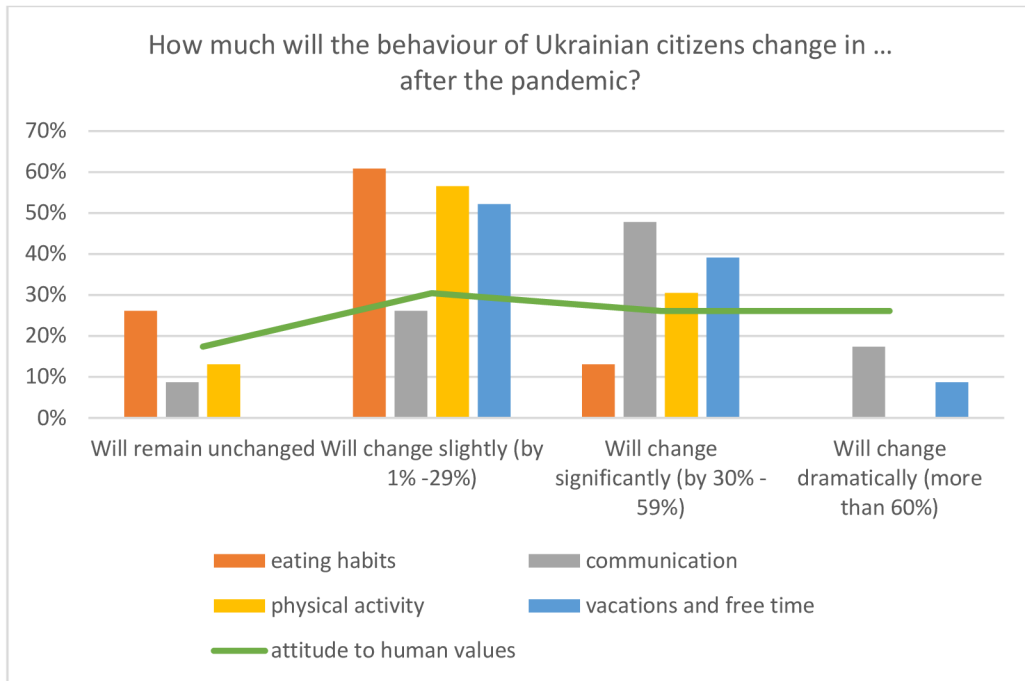


Source: Author, Excel.

Question – 21 was asked to learn the opinion of respondents and to find out how much the behaviour of Ukrainian citizens will change in such common things as food, communication, physical activity, leisure time and the value of human factors (see Figure – 15).

It can be seen with the naked eye that students, with a majority of 61%, decided that the issue of dieting will change slightly. While the majority of adults, at 70%, agreed that the issue of nutrition of Ukrainian citizens will remain unchanged. In the sphere of communication both groups came to the same results - 48% each, therefore communication habits will change significantly (by 30-59%). Opinions between the two groups of respondents differed by almost 1.5 times in terms of physical activity. Among students, 57% said that physical activity will change slightly, while 39% of qualified workers believe that the attitude towards physical health will change radically. In terms of leisure time, a similar divergence can be observed, with 43% of qualified workers believing that the leisure habits of most Ukrainians will change drastically, and 52% of students believing that there will be only minor changes. The latter group of respondents feel that there will be only a slight change in their attitude towards human values (30% voted in favour). In contrast, 30% of qualified workers believe that there will be significant changes in this area. There are however two different figures that demonstrate the participant's responses.

Figure 15: Forecast of behavioural change, by participants, Q-21, Q-21 (Part-2).



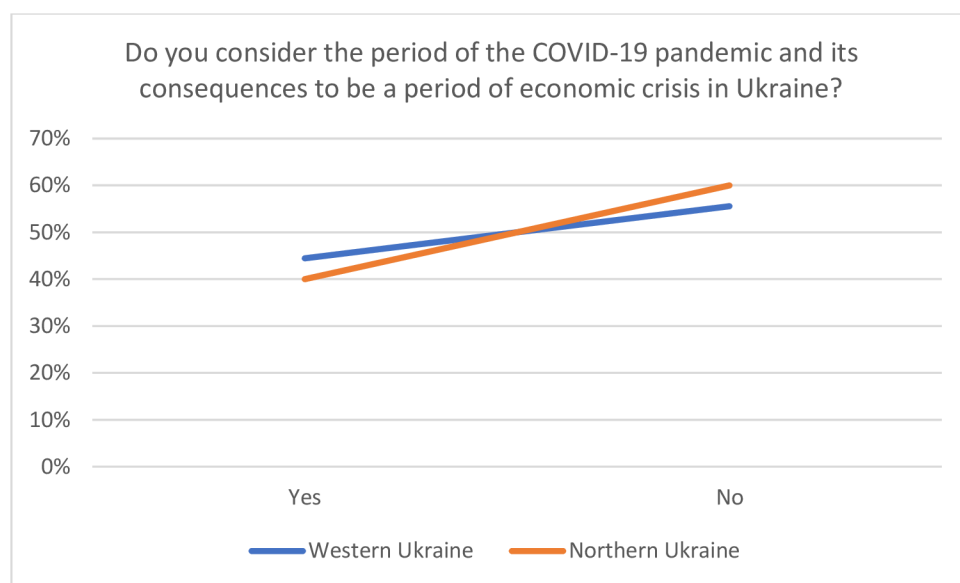
Source: Author, Excel.

4.3 Western Ukraine & Northern Ukraine

In this section of the practical part, two parts of Ukraine (Northern Ukraine and Western Ukraine) were identified from which the respondents' answers were sorted from the total number. Based on their answers, a comparative characteristic of the regions was compiled.

Question – 20, reveals and highlights the regions of Ukraine where most respondents do not consider the period of the coronavirus pandemic to be an economic crisis in Ukraine (see Figure 16). This follows from the fact that 60% of the population from the Northern part and 55.6% from the Northern part answered "no".

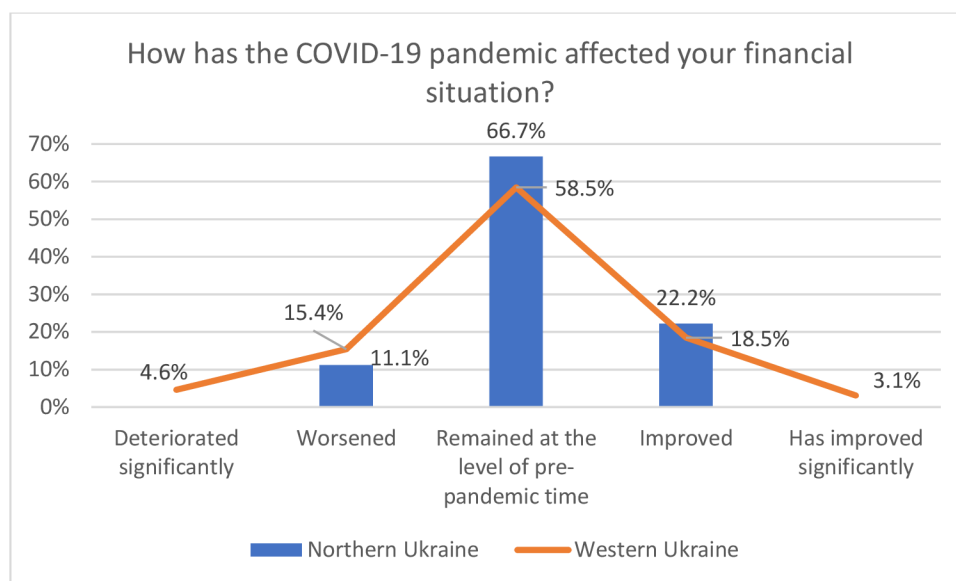
Figure 16: Opinions of economic crisis, Q-20.



Source: Author, Excel.

Question – 7, demonstrates the periods of acute phases of COVID-19 did not significantly affect the financial situation of the population in these regions (see Figure 17). Thus, 66.7% of respondents from Western Ukraine remain in the same financial situation as before the pandemic, and the respondents from Northern Ukraine have 8.2% less and 58.5%. The situation considerably worsened for 4.6% of residents of the northern region and insignificantly worsened for 11.1% of residents of the western regions. Fortunately, 22.2% of the residents of Western Ukraine and 18.5% of the residents of Northern Ukraine have improved their financial situation.

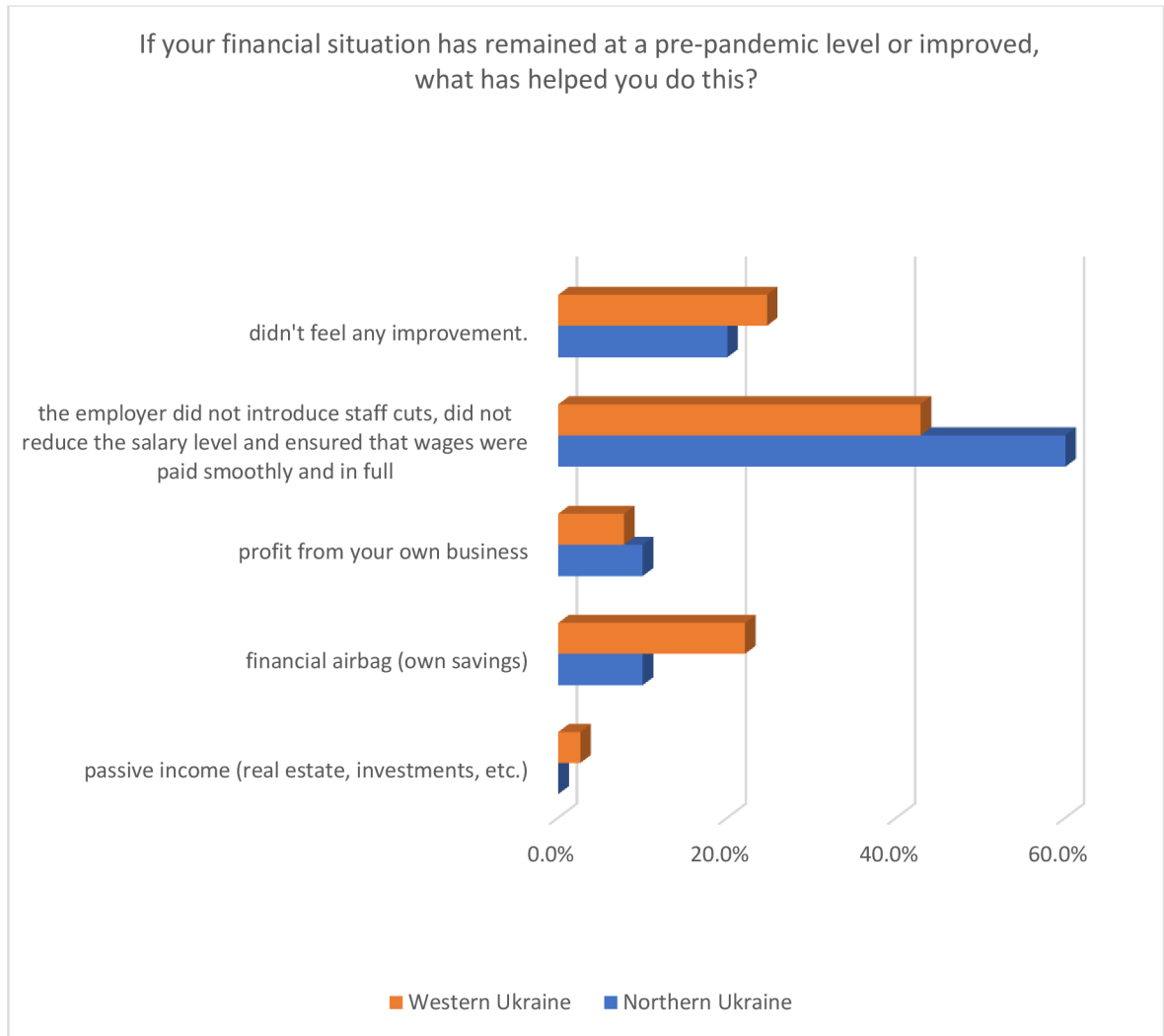
Figure 17: Financial effect of Covid-19 on households, Q-7.



Source: Author, Excel.

When comparing the main reasons that have not led to financial difficulties, one can see that for 60% of respondents from Western Ukraine employers have not reduced the number of employees and have not changed the wages, while in the North, this number is significantly lower - 42.9%, but remains the leader among other reasons (see Figure – 18). Also, 22.1% of respondents in the North have kept their financial security thanks to their financial cushion. In the West this number is half as high, dropping to 10%. When it comes to passive income from business, real estate or investments, then the figures in the two regions are almost the same, 10% in each.

Figure 18: Reasons for financial improvement, Q-9.

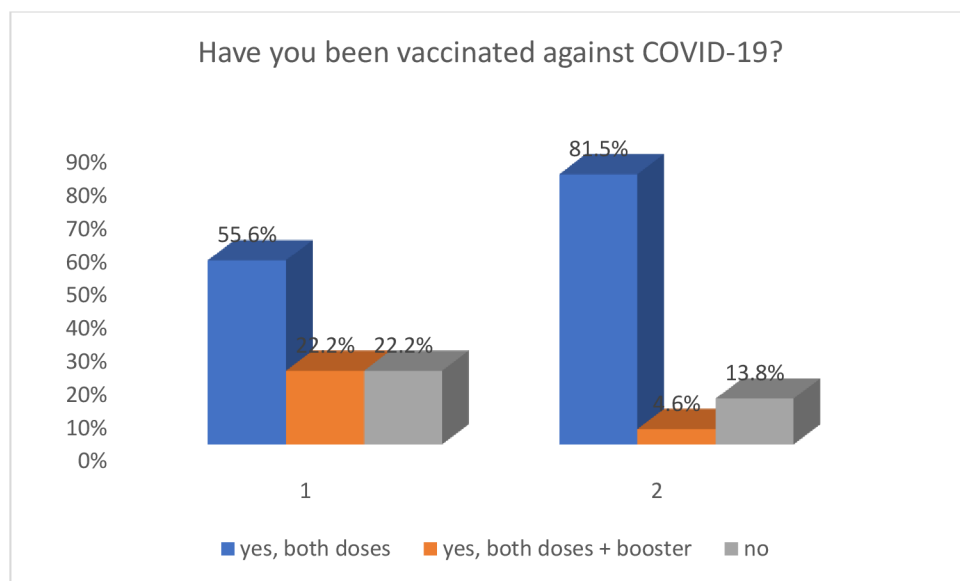


Source: Author, Excel.

The situation with vaccination in the two regions is somewhat different, in the northern part of Ukraine 81.5% received two doses of vaccine as standard compared to 13.8% who are not yet vaccinated (see Figure – 19). The remaining 4.6% received a booster dose, while in the west the figure is five times higher, with 22.2%. But at the same time, the universal standard vaccination rate is 55.6% of the western population.

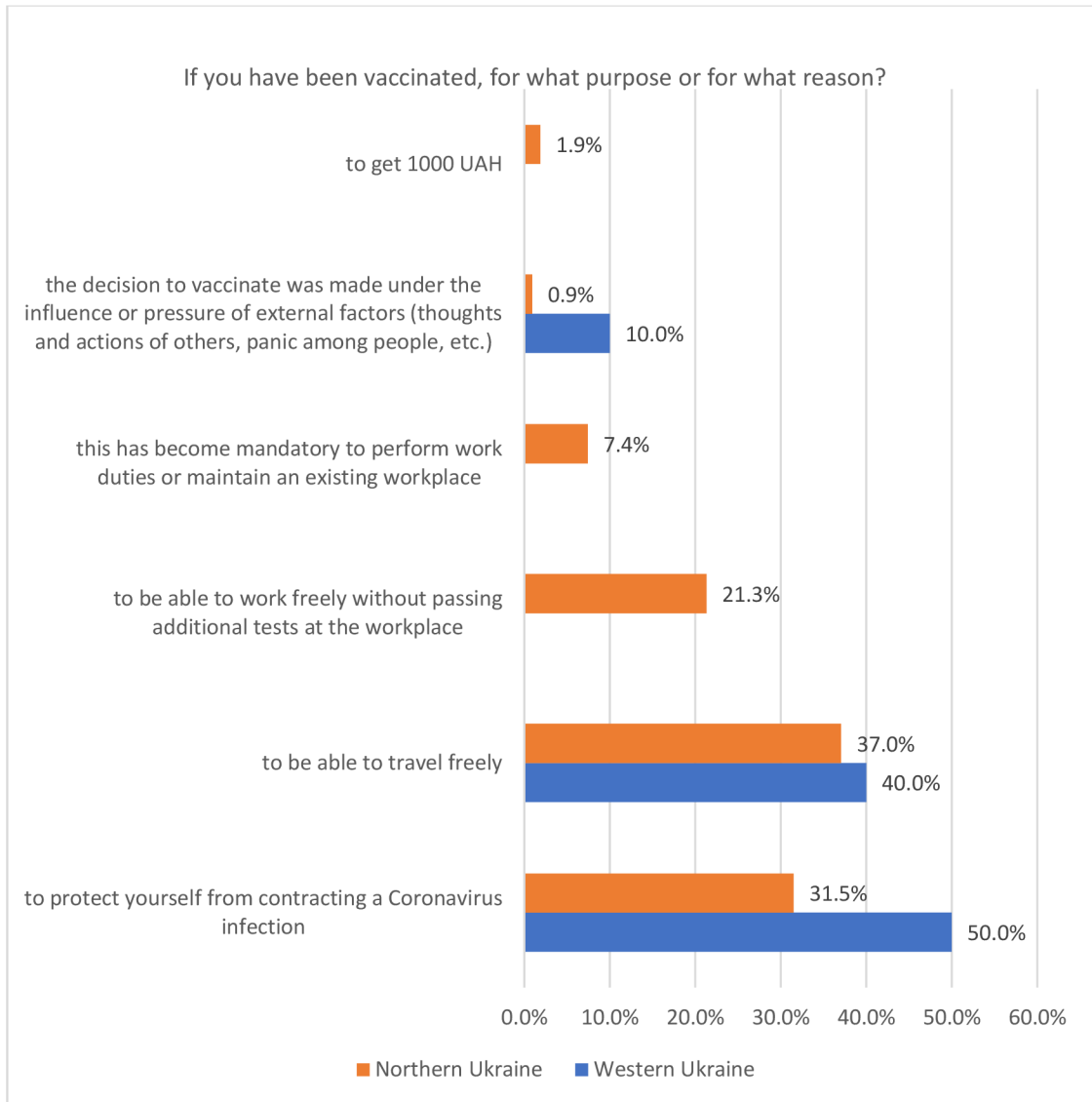
Question - 15 demonstrated that the most common reason for vaccination in the northern areas of Ukraine is the ability to travel freely and the percentage is 37% (see Figure – 20). This is 3% less than in the west, where the percentage is 40%. This is because in this area the main reason is that 50% of the population wants to protect themselves from the disease. In the north, a fifth of the population got the vaccine to work free without having to undergo further testing. For only 7.4% it became compulsory to be vaccinated to keep their jobs and to continue fulfilling their obligations.

Figure 19: Vaccination choice, Q-14.



Source: Author, Excel.

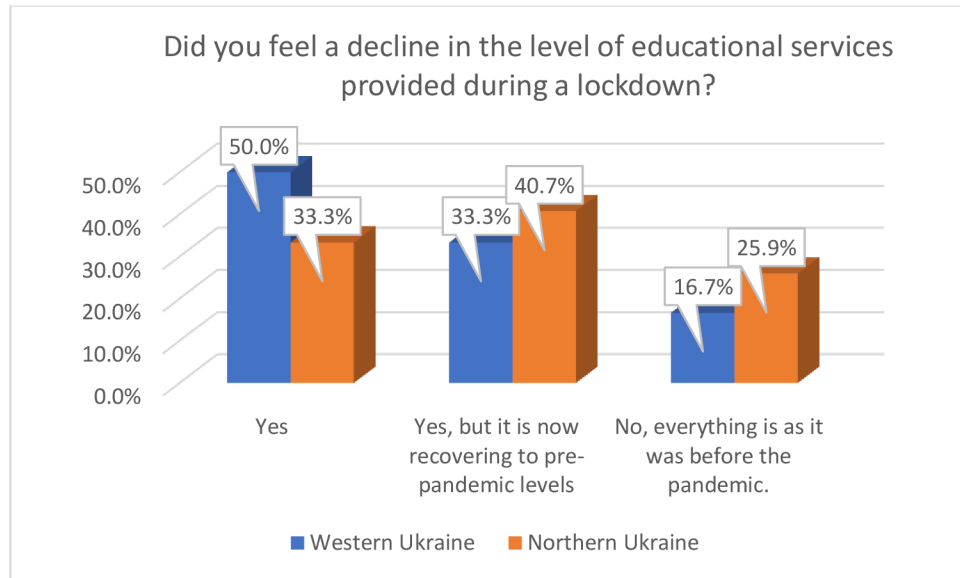
Figure 20: Purpose of vaccination, Q-15.



Source: Author, Excel.

Question – 17, concerning education, where getting an education for students is an important part of their lives. Therefore, looking at the impact of the pandemic on the education system of Ukraine, 50% of students in the western region and 33.3% of students in the northern region felt a reduction in the level of education provided (see Figure – 21). The process of restoration of the quality of education was noted by 40.7% of students in the northern region, which is higher by 10.4% for students in the western region, where the process of restoration of the pre-pandemic level of education is 33.3%. It is also worth noting that 16.7% of western students did not experience a decline in educational services during the pandemic. Unfortunately, this figure is 9.2% lower than for Northern students, whose figure is 25.9%.

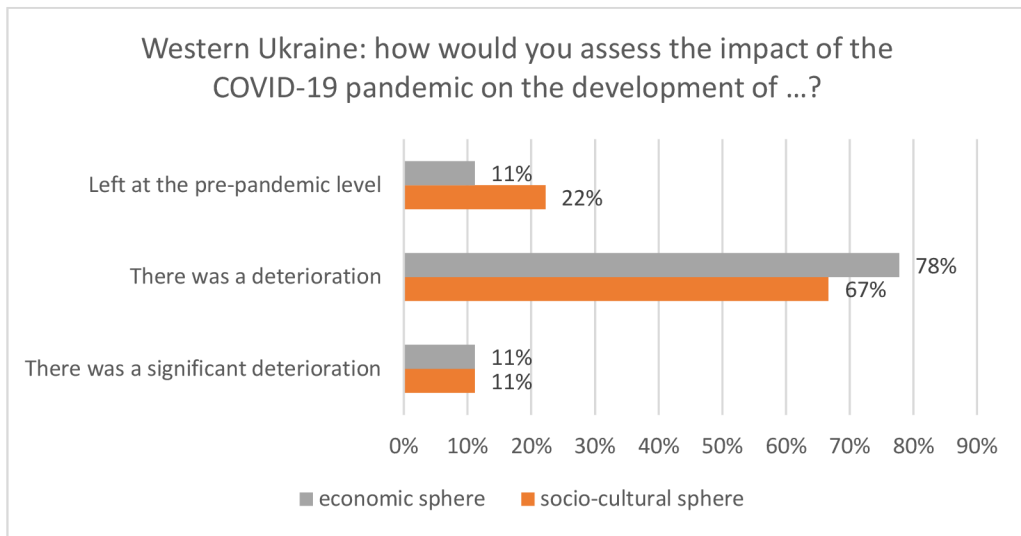
Figure 21: Decline in education, Q-17.



Source: Author, Excel.

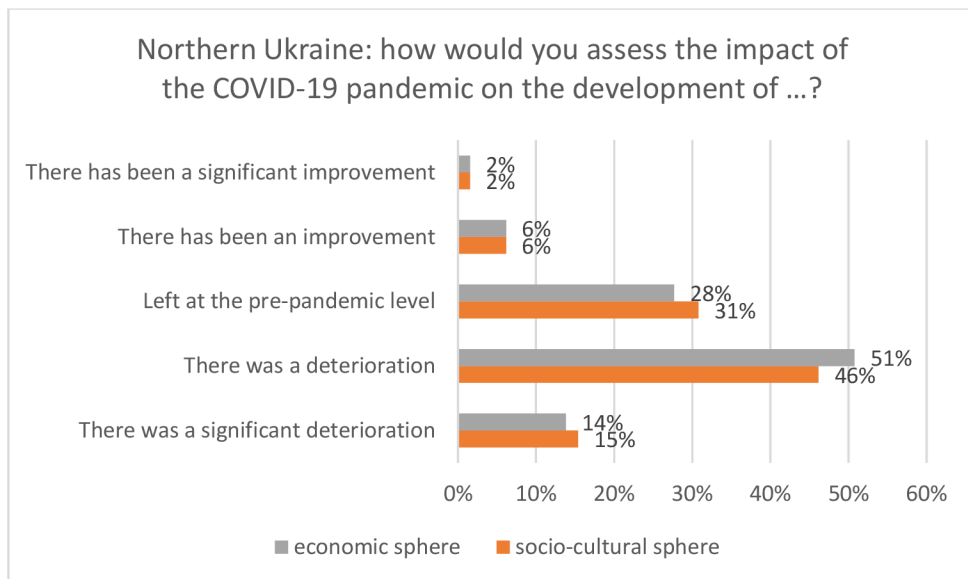
Respondents from the Northern (46%) and Western (67%) regions of Ukraine agreed that the development of the socio-cultural sphere in their regions had deteriorated (see Figure – 22 and Figure - 23). At the same time, 15% of respondents in the northern region noted a significant deterioration, and 11% of respondents in the western region noted a significant deterioration. A remarkable fact is that twice as many respondents, both in the North (22%) and in the West (31%), agree that the level of development of cultural and social life has not changed under the influence of the global pandemic. Residents of the western region saw no improvement in development in these areas. This is in contrast to the northern region, where 6% of the population saw progress in development and 2% of all residents saw a dramatic change for the better.

Figure 22: Assessment of the impact, Western Ukraine, Q-21.



Source: Author, Excel.

Figure 23: Assessment of the impact, Northern Ukraine, Q-21 (Part-2).



Source: Author, Excel.

5 Results and Discussions

During the global coronavirus pandemic, the Government of Ukraine imposed several restrictions aimed at reducing the number of citizens falling ill and the spread of the virus.

As preventive measures, restrictions were introduced such as:

1. Transfer of education, public sector enterprises, and private businesses to a remote form of work
2. Closure of public catering establishments, service enterprises, fitness, and sports halls
3. Restrictions on passenger transport, both urban and inter-city.

In turn, these measures have significantly affected all spheres of life of Ukrainian citizens.

The survey was conducted among respondents of different age categories, fields of activity, regions of residence.

Analysing the results of the sociological survey revealed the impact of the coronavirus crisis on the following spheres of life:

The financial situation of Ukrainian residents has significantly worsened during the pandemic. This is evidenced by the answers of respondents in questions 4,5,7,8. Nowadays 10% live in a difficult situation, 12% can only purchase food and 39% buy things out of necessity.

According to statistical and tax data, the financial situation of workers in small and medium-sized businesses, as well as workers in the cultural, sports and entertainment sectors has been significantly affected. Due to restrictions imposed during the pandemic.

In reply to question No. 20 "Do you consider the Covid-19 period and its consequences an economic crisis in Ukraine?" 58.8% of respondents said "Yes" (respondents who were affected by restrictions) and 41.2 % answered "No" (respondents whose employers did not cut or reduce their wages). Among those who do not consider the period of pandemic an economic crisis, in addition to their job, they had a financial safety cushion that helped them to survive the difficult period. (Question 9).

The socio-cultural sphere of life of citizens has also deteriorated by 50% on average (62.5% of the adult population and 47.8% of students). Regionally, the western region was 21% more affected than the northern one. This may be because the northern part of Ukraine includes the region of the capital, where the country`s elite is concentrated, and which is considered the most developed in

Ukraine. Consequently, even during the most severe lockdowns, people and local authorities tried to support the region's development in different innovative ways. Both regions have also been generally affected by the closure of museums, theatres, access to architectural and historical monuments, restrictions on transport within and outside the country. (Questions 6, 22).

During the Covid pandemic, there was also a sharp decline in the education of children and students (50% of respondents). This was because schools, secondary and tertiary institutions had switched to online learning. At the beginning of the pandemic, many institutions had not developed online learning programmes and the teaching staff and students themselves were not prepared for such work. Skilled workers and the population wishing to learn and improve their skills were also faced with restrictions on access to education.

At the moment, it can be noted that 33.3% of students in the western region and 40.7% in the northern region have a recovery in the field of education to the pre-pandemic level. Various online courses, educational and professional programs and training have become available (Question 17).

Medical sphere:

The population of Ukraine has a responsible attitude towards vaccination. According to the survey, 83.3% of skilled workers and 78.3% of students have completed a full course of vaccination (Question 13). According to respondents, this is primarily due to the protection of their physical health, as well as the opportunity to move freely and work. The Ministry of Health also reports a shortage of beds in Covid wards, as well as a shortage of medical equipment and a wide range of medicines for medical care. Therefore, 30% of the respondents believe that state investments should be directed toward the development of this area (Question 18).

In addition, the analysis of responses identified the main problems of the respondents caused by the Covid-19 pandemic. They are as follows:

1. IT software for the transition to online distance learning and online workflow (Question 19).
2. Deterioration in live communication and cultural time (restrictions imposed). It is extremely acute for the group of students - 47,8% (Question 6). Also, 16.9% of students have changed relationships with friends (Question 11). This is related to their active, student lifestyle (live communication in educational institutions, attendance of cultural events, joint entertainment).
3. 18.5% of students also had a deterioration in morale and an imbalance in family relationships. This could be due to an incomplete psyche and low-stress tolerance. (Question 11)

4. In 22% of the adult population, the state of health has deteriorated due to Covid disease. And the deterioration of psychological state could be due to illness of loved ones and loss of relatives (Question 11).

5. Deterioration of the financial condition of the population due to loss of business, job or temporary incapacity for work during the lockdown period.

The main positive changes in the life of Ukrainian citizens were such as 46.3% of employed people had an opportunity to spend more time with their families. This could happen thanks to distance working, paid vacation, or job loss. While 30.4% of students had an opportunity to spend some time alone to think about their lives and make plans for the future. 20% of respondents in each group have also introduced useful habits into their daily lives (Question 12). Simply because of strict governmental and regional policy restrictions, they had more free time to improve their mental health and figure. Also, due to constant study and work at home and limited opportunities to travel long distances, they had to go out more often.

In which areas of Ukraine's development, would it be effective to increase state support?

On average 25% of respondents gave their votes to support development in the medical sphere whereas 23% want to increase state funding for education. Furthermore, 14.3% of students and 9% of qualified employees gave their votes in favour of investing in culture. It can be assumed that students are willing and eager to modernise culture from its classical form to a more innovative one. (Question 18)

Respondents' opinions about the development of the following spheres of life were divided as follows. 32.2% were in favour of increasing the rate of development of the digital economy, 28.9% favoured the development of information technology and 22.2% voted for modernizing the healthcare system. Indeed, during the pandemic, the assumed majority of the population concluded that the key to the country's successful progress depends on the level of health and of the nation. And consequently, everyone in the country is moving to a higher level of morale and a positive attitude toward life's difficulties, which together increase the chances of avoiding future crises for the whole country. (Question 19)

6 Conclusion

Within this bachelor thesis, the author has focused on the current problem of COVID-19. Globally, it had a negative impact on different supply chains, economies of different states, people's health, small and medium businesses, etc. Most importantly the social effect, where people suffer the most. The author has covered the theory of crisis and its circumstances as well as psychological factors that are influential in case of emergency. People tend to be very panic. However, at the beginning of the thesis, the author has stated the main hypothesis of whether COVID-19 has weakened the economy of Ukraine. In order to find out, the author deeply described the consistency of the Ukrainian economy. Even though the Ukrainian economy has a strong background in the agricultural sector, it still lacks the innovative development in most areas.

The author has described the economic potential within the theoretical part and also begun to explore the reasons of why the GDP of Ukraine has declined since 2014. Nevermore, the author touches on the current situation of COVID-19, and how it has been progressing. When COVID-19 was announced, the government has implied different rules and regulations according to which the small firms and businesses have suffered the most, which is stated by (Tabachuk, 2021). Hence, businesses started to shut down, which had a negative effect on the employment rate, consequently, people felt devastated by the ongoing lockdown. Every economic sector has experienced a heavy burden of the lockdown such as the leisure industry (restaurants, hotels, gyms, coffee shops, shopping malls, etc.) And that was the main purpose of the author was to identify how exactly people went over it and what experience people had.

The practical part involves a survey of 24 questions, where 2 questions were opened, and participants could have left their open opinions so the author will be able to assess them. The survey was in the online form and distributed mainly thru social media. Since Ukraine is divided into 9 social economic regions, where only one of them was not covered by the survey, for the author to be clear, eventually all regions were combined into two, Western and Northern Ukraine. So the author might conclude that the respondents represent the reality of the current situation and how people behaved towards it.

There were 820 participants from 8 different regions, the author has approached the survey from two main angles, social-cultural and economic. The questions were structured in a way of multiple-choice questions, based on the number of answers, the author has divided each response by the total number to express a ratio of a total population.

Based on the answers, every age group has suffered. For example, the younger generation enjoyed their time spent at home whereas more of the older generation was not able to provide for their families from a financial point of view. However, there are cases where people didn't experience the financial burden (around 70 %) and the rest of the people had either borrowed money from banks, friends and relatives and ext. From the social perspective, the participants were prone to the negative impact as, socially, people were not able to communicate. However, there are positive impacts of the pandemic as well, as some participants have acknowledged that they started mastering new skills and explore themselves to new areas of craft.

All the planned procedures were done by the author and based on the obtained results the conclusion has been written.

7 References

- Amadeo, K., 2021. *US Economic Crisis, Its History, and Warning Signs*. [Online]
Available at: <https://www.thebalance.com/u-s-economic-crisis-3305668>
- Anon., 2017-2018. *Der Kitchin-Zyklus. Kurzfristige Konjunkturzyklen. Der Juglyar-Zyklus, Der Schmiedezyklus*. [Online]
Available at: <https://de.erch2014.com/obschestvo/78502-cikl-kitchina-kratkosrochnye-ekonomicheskie-cikly-cikl-zhyuglyara-cikl-kuzneca.html>
- Bhoury, M. & Mouha, M. S., 2015. *Characteristics of Tunisian Business Cycle and International Synchronisation*, s.l.: s.n.
- Bochi, A. & Povoroznik, V., 2014. *Shadow Economy in Ukraine: Causes and Ways to Overcome It*, s.l.: International Center for Perspective Studies (ICPS).
- Bonham, M. S., 2006. *Business Cycles in Canada*. [Online]
Available at: <https://www.thecanadianencyclopedia.ca/en/article/business-cycles>
- Britannica, T. E. o. E., 2018. *Austrian school of economics*. [Online]
Available at: <https://www.britannica.com/topic/Austrian-school-of-economics>
[Accessed 20 March 2022].
- Brouwer, M., 2016. *Governmental Forms and Economic Development*. s.l.:s.n.
- Diacon, P. E., 2015. Some Psychological Causes of the Financial Crisis. *CES Working Papers*, June, 2(2), pp. 276-287.
- Ebeling, R. M., 2008. The Current Economic Crisis and the Austrian Theory of the Business Cycle. 1 June, pp. 4-5.
- Gankin, Y. et al., 2021. Investigating the first stage of the COVID-19 pandemic in Ukraine using epidemiological and genomic data, *Infection, Genetics and Evolution*. *Infection, Genetics and Evolution*, November, Volume 95, p. 7.
- Gill, I. & Saavedra, J., 2022. *We are losing a generation: The devastating impacts of COVID-19*. [Online]
Available at: <https://blogs.worldbank.org/voices/we-are-losing-generation-devastating-impacts-covid-19>
- Grinin, L., Devezas, T. & Korotayev, A., 2014. Cyclical Dynamics in Economics and Politics in the Past and in the Future. June.
- Grinin, L. E. & Korotayev, A. V., 2014. Interaction between Kondratieff Waves and Juglar Cycles. In: E. Grinin, T. C. Devezas & A. V. Korotayev, eds. *Kondratieff Waves. Juglar – Kuznets – Kondratieff. Yearbook*. Volgograd: 'Uchitel' Publishing House, pp. 25-95.
- Gromyko, O., 2016. Content of the Concept of "Transformation" as a Basic Scientific Category. *Efficiency of Public Administration*, Issue 1/2 (46/47), pp. 125-131.

- ILO, 2020. *A policy framework for tackling the economic and social impact of the COVID-19 crisis*. [Online]
Available at: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_745337.pdf
- Institute, M., n.d. *Austrian Economics*. [Online]
Available at: <https://mises.org/austrian-economics>
- Joint WHO, 2021. *WHO-convened Global Study of Origins of SARS-CoV-2: China Part*, s.l.: s.n.
- Joint WHO-China Study, 2021. *WHO-convened Global Study of Origins of SARS-CoV-2: China Study*, s.l.: s.n.
- Jureviciene, D., Skvarciany, V. & Lagunaviciute, A., 2020. Factors Influencing Individuals' Decision-Making And Causing Financial Crisis. *Journal of Business Economics and Management*, 11 June, 21(4), pp. 1149-1164.
- Khan, A., 2022. *COVID and the Russian invasion: Ukraine's dual crisis*. [Online]
Available at: <https://www.aljazeera.com/features/2022/3/2/covid-and-the-russian-invasion-ukraines-dual-crisis>
- Kostin, K. B., 2018. Global Companies' Growth Potential Assessment via Application of Economic Cycles. *Journal of Economics Studies and Research*, 31 October, Volume 2018, p. 26.
- Kuzmenko, V., 2012. The system of economic cycles and the global economic crisis. *Theoretical and practical issues of Economics*, Volume 27, pp. 131-137.
- Kwasnicki, W., n.d. *Kitchin, Juglar and Kuznetz business cycles revisited*, Wroclaw: s.n.
- Market Business News, 2022. *Market Business News*. [Online]
Available at: <https://marketbusinessnews.com/financial-glossary/economic-crisis/>
- Melnyk, I. M., 2010. Logic and Features of Transformation of the economic system of Ukraine. *Trade, commerce, and entrepreneurship*, Issue 11.
- Minfin, n.d. *Gross Domestic Product (GDP) in Ukraine 2022*. [Online]
Available at: <https://index.minfin.com.ua/ua/economy/gdp/>
[Accessed February 2022].
- Mises Institute, n.d. *Mises Institute*. [Online]
Available at: <https://mises.org/what-austrian-economics>
[Accessed 2022].
- Nations, U., n.d. *United Nations*. [Online]
Available at: <https://www.un.org/en/coronavirus>
- Nilsson, J.-E., 2018. Keynesian Policies - A New Deal in the European Narrative: Employment, Equality and Sustainability. In: *New Keynesian policy: The revival of each policy maker's dream*. s.l.:Scopus, pp. 1-40.

- OECD, 2022. *The Covid-19 crisis in Ukraine*. [Online]
Available at: <https://www.oecd.org/eurasia/competitiveness-programme/eastern-partners/COVID-19-CRISIS-IN-UKRAINE.pdf>
- Park, A., 2022. *Why Ukraine's COVID-19 Problem Is Everyone's Problem*. [Online]
Available at: <https://time.com/6153254/ukraine-russia-war-covid-19/>
- Reuters, 2022. *Covid-19 Tracker*. [Online]
Available at: <https://graphics.reuters.com/world-coronavirus-tracker-and-maps/countries-and-territories/ukraine/>
- Rothbard, M. N., 2019. *Austrian Business Cycle Theory, Explained*, s.l.: Mises Institute,
- Schumpeter, J. A., 1931. The Theory of the Business Cycle. *The Journal of Economics*.
- Sciences, I. E. o. t. S., n.d. *Encyclopedia.com*. [Online]
Available at: <https://www.encyclopedia.com/social-sciences/applied-and-social-sciences-magazines/crisis>
[Accessed 1 March 2022].
- Smart, J., 2019. *Kuznets Cycles (Upright or Inverted U-curves)*, s.l.: Foresight University.
- Spinola, D. S., n.d. *Instability Constraints and Development Traps: An Empirical Analysis of Growth*, s.l.: s.n.
- Tabachuk, A. Y., 2021. Directions of Transformation of the Economic System of Ukraine in the Conditions of the present. *Economy and Society*, Issue 26, pp. 45-48.
- Tambunan, T., 2021. Development of Small Businesses During Economic Crises: Evidence From Indonesia. In: *Cases on Small Business Economics and Development During Economic Crises*. s.l.:s.n., pp. 1-26.
- Tofall, N. F., 2020. China, the US, and Europe: Who Will Lead after the Coronavirus Crisis?. *Austrian Institute Paper*, Issue 33, p. 9.
- Tugan-Baranovsky, M. I., 2008. *Periodic Industrial Crises*. Moscow: Directmedia Publishing.
- Turchina, S. G., Dashutina, L. O. & Nechyporenko, V. V., 2019. Development of foreign economic communities of Ukraine in the context of globalization and euro-integration processes. *Espasios*. Volume 40, pp. 2-14.
- Ukraine, 2020. *Ukraine: Emergency Response Plan For the Covid-19 Pandemic*, s.l.: s.n.
- Ukrstat, 2021. *Socio-Economic Development of Ukraine in January-February 2021*. [Online]
Available at: http://www.ukrstat.gov.ua/operativ/infografika/2021/soc_ek_r_Ukr/-soc_ek_r_Ukr_02_21.pdf
- United Nations, 2020. *United Nations*. [Online]
Available at: https://www.un.org/sites/un2.un.org/files/sg_report_socio-economic_impact_of_covid19.pdf

Weinberg, J., 2013. *The Great Recession and Its Aftermath*, s.l.: Federal Reserve Bank of Richmond.

Wharton, K., 2009. *Hope, Greed and Fear: The Psychology behind the Financial Crisis*. s.l.:s.n.

WHO, n.d. *World Health Organization*. [Online]

Available at: https://www.who.int/health-topics/coronavirus#tab=tab_1

World Health Organization, 2011. *Impact of economic crises on mental health*, s.l.: WHO Regional Office for Europe.

World Health Organization, n.d. *Timeline: WHO's COVID-19 response*, s.l.: s.n.

Zhalia, Y. A., 2021. *The Real Sector of the Ukrainian Economy in the Context of Systemic Challenges*, Kyiv: NISD.

List of abbreviations

App - application

CoV - Coronavirus

COVAX - Covid-19 Vaccines Global Access company

COVID-19 - Coronavirus disease 2019

EU - European Union

GDP - Gross Domestic Product

ICPS - International Centre for Perspective Studies

IGI-Global – a publishing company

IT - Information Technologies

OECD - Organisation for Economic Co-operation and Development

PCR - Polymerase chain reaction

RNA - Ribonucleic Acid

RT-PCR - Reverse Transcription Polymerase Chain Reaction

SAR - Search and Rescue

SARS-CoV-2 – the official name of the virus formerly called "novel coronavirus 2019".

SIR - Susceptible, Infectious, and Recovered

TOR - Terms of Reference

TV - television

UAH - Ukraine Hryvnia

Ukrstat - state statistics service of Ukraine

UN DESA - United Nations Department of Economic and Social Affairs

US - the United States

VS - versus

WHO - World Health Organisation

YoY - year on year