



## BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10,  
Sumy, 40022, Ukraine  
[www.businessperspectives.org](http://www.businessperspectives.org)

**Received on:** 30<sup>th</sup> of November, 2021  
**Accepted on:** 13<sup>th</sup> of April, 2022  
**Published on:** 22<sup>nd</sup> of April, 2022

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**Conflict of interest statement:**  
Author(s) reported no conflict of interest

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# POLICY MEASURES FOR ECONOMIC RESILIENCE OF VISEGRAD GROUP AND UKRAINE DURING THE PANDEMIC

## Abstract

The COVID-19 pandemic has posed unprecedented healthcare and economic resilience challenges for the world. This study systematizes the policy measures taken by the Visegrad Group and Ukraine to support national economies in response to the pandemic. The paper is based on a grouping method to systematize the policy measures, and a tabular method to present the results of the policy measures classification. Following systematization results, the policy measures for ensuring the economic resilience under the pandemic are classified as quarantine and compensatory measures. Additionally, quarantine measures were classified into prohibitions, restrictions, and recommendations. Compensatory measures were classified by the type of policy and grouped according to the global dimension in periodization of the COVID-19 waves. The analysis of quarantine measures in Ukraine and Visegrad Group also shows that prohibitions had been used most frequently and for the longest time in Ukraine, particularly they included school closures, public transport closing, and restrictions on internal movement. Meanwhile, fiscal, macroprudential, and microprudential measures prevailed among the compensatory measures. Simultaneously, 38% of all fiscal measures were direct grants to households and enterprises. The largest number of various measures (78) were implemented in Poland, linking quarantine and compensatory measures. The least compensatory measures were implemented in Ukraine (19) and Slovakia (15). Overall, policy measures helped to avoid a worse scenario of pandemic impact but did not help to overcome the effects of the pandemic fully.

**Keywords** resilience, national economy, policy measures, COVID-19 crisis

**JEL Classification** E02, E60, H50

## INTRODUCTION

In the global space, countries are dependent and interdependent. Each country is not isolated from the others. Countries are confronted with new global challenges each time, and previous policy decisions are mostly irrelevant. For example, in January 2020, the WHO declared the coronavirus a global health emergency. By February 2020, COVID-19 began to spread globally in earnest, and on March 12 the WHO said the COVID-19 outbreak was a pandemic (WHO, 2020). According to IMF (2021) analysis, national governments have taken unprecedented steps to protect the livelihoods and health of their citizens by effectively disrupting economic activity in their countries. These measures included the closure of the state border, restriction of internal and external air and rail traffic, restriction of movement of citizens within the country, closure of public institutions and educational establishments at all levels, and the shutdown of enterprises. Only critical infrastructure, pharmacies, grocery shops, and banks continued to operate. Obviously, the current crisis began as a crisis of healthcare sphere tools and mechanisms. Further, it was quickly

transforming into a multifaceted problem that has not only a financial but also a political-economic and cultural-civilizational dimension.

In order to address the impact of the pandemic, the Visegrad Group (Visegrad Four countries, V4) has launched joint projects with Ukraine under the “V4 East Solidarity Programme for the Eastern Partnership Countries,” which aims to strengthen the capacity of health facilities to cope with the effects of the pandemic. The International Visegrad Fund, which is already supporting a number of initiatives in Ukraine, manages the projects in the framework of this program. The total value of the anti-coronavirus projects under the emergency aid program is EUR 125,000. The support aims to improve the capacity and resilience of health facilities to respond to the coronavirus pandemic. Actually, there was a need to study the policy measures for economic resilience by using which governments of the Visegrad Four countries and Ukraine responded to the COVID-19 crisis.

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## 1. LITERATURE REVIEW

In recent years, the resilience of the national economies was quite often studied in the scientific literature, which got significant impetus after the 2008–2009 Financial Crises (Simmie & Martin, 2010; Shymon et al., 2020; Asongu et al., 2021). In this study, economic resilience means the ability of the national economy to reduce vulnerability to shock influences, counteract them, and quickly recover from their impact.

Modern researchers consider the decline in the level of economic resilience or the impact on ensuring the economy’s strength indirectly through signs of crisis in the economy and the need to implement anti-crisis policy measures. For instance, Boiarynova et al. (2020) analyzed the forecasts and scenarios for the economic development of Ukraine and the neighboring countries as a result of the coronavirus pandemic. As a result, it was concluded that development scenarios depend on the effectiveness of measures to mitigate the impact of the COVID-19 pandemic.

At the same time, Cherlenjak and Kurei (2020) concluded that the crisis of 2020 is a multifaceted civilizational and economic crisis. Accordingly, this crisis has necessitated coordinating anti-crisis measures at the sovereign, state, regulatory, enterprise, household, and individual levels. Finally, Zalizko et al. (2020) noted that economic policy significantly shapes the resilience of societies to emergencies and what lies behind them.

In modern research, the state policy response to the pandemic is mainly considered a certain

type of policy for strengthening economic resilience. Thus, some researchers focus on fiscal policy. They emphasize that compensatory tax measures should be targeted at those areas of the economy that are most vulnerable. These are primarily small and medium-sized enterprises, as they are less able to withstand liquidity and solvency risks than other economic actors (Karpova et al., 2020; OECD, 2020; Lacey et al., 2021).

On the contrary, monetary policy is also considered. It is highlighted that a discount rate is a key tool for regulating liquidity. It is emphasized that by lowering the discount rate, central banks support the lending of banking institutions and provide the economy with the necessary resources in the pandemic (Harjes et al., 2020; Bernanke, 2020; Barr et al., 2020).

In the studies devoted to analyzing financial policy measures during the pandemic, a particular emphasis is placed on regulating the terms of credit agreements, a special grace period for loans for individuals and businesses (credit holidays). These studies mainly describe measures that help alleviate the debt burden in the pandemic (European Commission & European Investment Bank, 2020).

Among the social policy measures in a pandemic, the main focus is on the analysis of social support programs for vulnerable groups and the spectrum of activities of these programs (Hamidou & Rehab; Baptista et al., 2021). There is a need for an early warning system for the threat of poverty, which should allow for early initiation and expansion of support measures.

Naturally, an analysis of different countries' healthcare systems is presented in current studies (EC, 2020; OECD/European Union, 2020). A significant vulnerability of the healthcare systems to the pandemic is emphasized, as well as a need to increase funding for healthcare and compulsory health insurance.

Meanwhile, Caldera-Sánchez et al. (2017) noted that the support measures for pro-growth product and labor market regulation have less impact on the exposure to a crisis than financial market policy. They also examined the effectiveness of macroeconomic, fiscal, and monetary policies in absorbing shocks and rebuilding the economy, depending on the nature of the shock and how symmetrical such a policy is in response to the crisis.

Sondermann (2016) concluded that well-functioning economic structures, strong and flexible institutions, and good framework conditions (e.g., the judicial system, the regulatory environment, administrative burdens) increase economic resilience. Based on these insights, he described a policy monitoring process that checks economic resilience progress.

Thus, most studies focus on learning the problem of enhancing the economic resilience on the level of a particular state by focusing on a specific type of policy measures. There are scarce studies considering the policy measures taken by governments for ensuring the economic resilience during the pandemic based on intercountry practices.

## 2. AIMS

The purpose of this study is to systematize the policy measures for ensuring economic resilience implemented in Ukraine and the Visegrad Group countries during the pandemic.

## 3. METHODS

The research methodology is based on system analysis, which is used to determine the measures and tools taken by governments to support national economies in response to the COVID-19. A grouping method is used to classify policy meas-

ures taken in response to the pandemic on such classification features as the purpose of impact, types of influence, types of policy, and global dimension in the periodization of the COVID-19 waves. A comparative analysis is used to identify similarities and differences between quarantine measures and measures for ensuring the resilience of national economies. Finally, a tabular method is used to present the results of the systematization of policy measures that governments have taken to ensure economic resilience during the pandemic.

## 4. RESULTS AND DISCUSSION

### 4.1. Analysis of governmental decisions on pandemic response

The implementation of quarantine and economic measures to restrain the spread of COVID-19 intensive began simultaneously in March 2020. Quarantine measures are aimed at restraining the spread of the virus in society. These include prohibitions (the strongest impact on society and the economy, up to the complete cessation of economic life), restrictions (provide for the introduction of special rules and regulations), and recommendations (for adaptation of economic activity to the pandemic reality). Mainly quarantine measures were introduced in such spheres of public life as education, internal public transport and international passenger transport, services industries, and individual measures to protect the population.

The results of the analysis of governmental policies in response to the spread of COVID-19 are presented in Table 1. It shows the similarity in implementing significant interim measures for people protection and support of the national healthcare systems. Meanwhile, the severity of quarantine interventions is rated in proportion to national counter-pandemic resilience. However, the use of quarantine measures in some cases was unstable. Thus, the application of one type of measure was interrupted for a week or two by another measure (weaker in terms of impact on economic life) with a subsequent return to the application of the previous more substantial measure. This may indicate the weakness of the system of state forecasting, monitoring, and evaluation of public policy.

**Table 1.** Timeline dashboard of quarantine measures for Ukraine and Visegrad Group countries, March 2020–November 2021

Source: Our World in Data (n.d.).

Measure	Country	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	
School closures	UA	–	12								19	8	25		5	8	1			17		10	
	PL	–	12	25			1		19	7		18		1	19	15							
	CZ	–	11	21	23				26	18	22				12		7	24	18				
	HU	–	16		1			1		11				8	19		29						
	SK	–	13		1			1		12			11		12				16				
Workplace closures	UA	–	18		24		3							20		8	1						
	PL	–	14					18	–	25				27		5	27						
	CZ	–	14	20	26				22		4	1					29						
	HU	–	15		21					3				8	8	18	29	–	–	–	–	–	–
	SK	–	13		6			5	–	22	16					24							
Cancellation of public events	UA	–	12		23	–	1					8	25	27		13	1	17					
	PL	–	11		1		10	–	–	11						28							
	CZ	–	11	25								21					14		15	1			
	HU	–	11		20					11						19		1	–	22			1
	SK	–	10		1	–	–	–	4	1									16				13
Stay-at-home	UA	–	16														28	–	–	–	–	–	–
	PL	–	31	22	1	–	–	–	–	25													
	CZ	–	16	21	1	–	–	–	–	23	4	25		17	10	12	–	–	–	–	–	–	–
	HU	–	12	27	19			13	–	–	5								1	–	–	–	–
	SK	–	12	8	14	15	–	–	–	22							15	–	–	–	–	–	–
Face covering	UA	–	–	5							22				13	25	1	17					11
	PL	–	–	16	1		6					14											1
	CZ	–	20		25			10		18				20		13		23	16				
	HU	–	–	27										10		19							
	SK	–	–	29					15						20			9		21			
Public transport closing	UA	–	18		23		3				19				6	9	25	–	–	–	–	18	11
	PL	–	–	11			10	–	–	26							27	–	–	–	–	–	–
	CZ	–	–	–	1	10	–	–	–	–	–	–	1		20	–	–	–	–	–	–	–	–
	HU	–	16				11	–	–	5					8	–	–	–	–	–	–	–	–
	SK	–	15		4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Internal movement	UA	–	12								19	–	–	26	14	8	–	17					
	PL	–	12	1		1	–	–	–	24								29	–	–	–	–	–
	CZ	–	16	1	–	–	1			23					13	–	–	–	–	–	–	–	–
	HU	–	11	28	4			13	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	SK	–	16	9	16			17	12	8	22	12	8			13	–	–	–	–	–	–	–
International travel controls	UA	–	16		15				28	29					26		1	1	19				10
	PL	–	10	15		15								6									
	CZ	–	1	17	14		1													16		5	23
	HU	–	9	15	6			1								18	29		21	9	13		
	SK	–	10	14		6	20																

**Note:** UA – Ukraine, PL – Poland, CZ – Czech Republic, HU – Hungary, SK – Slovakia. Information of the month in which measures were implemented is included at the tabletop line. The duration of a certain policy measure is described additionally by colors at the line for each studied country: red color – Prohibitions – Required; orange color – Restrictions – Required in all; yellow color – Restrictions – Required for some; blue color – Recommendations – Recommended. The numbers in the table means the dates of the beginning of the certain measure implementation.

Such cases are typical for Ukraine (e.g., school closures, restrictions on internal movement, face coverings) and Slovakia (e.g., international travel controls). In particular, only in Ukraine, there was such a measure as a quarantine “weekend” in November 2020, which lasted from 00:00 on Saturday to 00:00 on Monday. As Ukrainian practice has shown, such a measure is effective if there is no sharp increase in the incidence of COVID-19; otherwise, there are no effective results of its implementation.

An intercountry analysis of quarantine measures in response to the COVID-19 crisis also shows that bans have been used most frequently and for the longest time in Ukraine, particularly in education, public transport closing, and restrictions on internal movement (Table 2).

Ukraine is the only country among the studied countries where there were prohibitions on public transport for 321 days out of 640 days (from March 2020 to November 2021). In contrast to the

Visegrad Four countries, prohibitions on public events and gatherings lasted the least in Ukraine – 211 days while in Slovakia – 420 days, Poland – 311 days.

It is worth noting the link between the severity of quarantine measures and GDP per capita, as these measures can significantly deteriorate the country’s economic development, at least in the short term. The Government Stringency Index defines the severity of quarantine measures for COVID-19 (GSI). If the GSI on a scale from 0 to 100 (100 being the highest) is at least 60, severe quarantine measures are required. As for the GSI average from April 2020 to November 2021, Ukraine has a value of 61.59, indicating the highest level of severity of quarantine measures on pandemic response. In comparison, Poland has 57.91, Hungary – 54.02, Slovakia – 53.51, and Czech Republic– 52.56 (Figure 1).

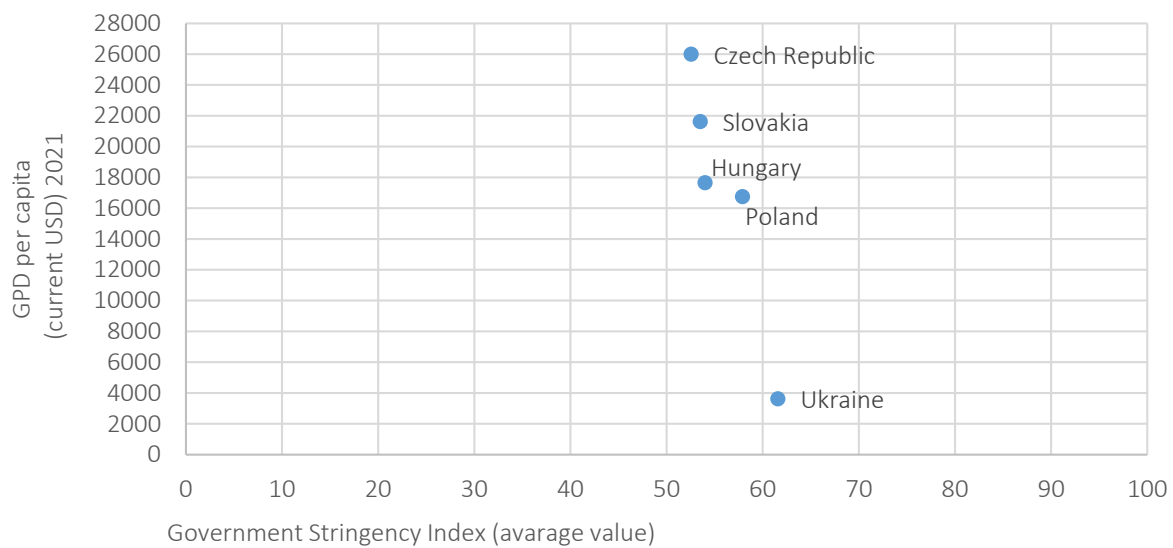
In this study, GDP per capita indicates how a country can implement an effective system of fi-

**Table 2.** Quarantine measures duration in Ukraine and Visegrad Group countries, days (March 2020–November 2021)

Source: Our World in Data (n.d.).

SCHOOL CLOSURES						WORKPLACE CLOSURES					
	UA	PL	CZ	HU	SK		UA	PL	CZ	HU	SK
Required (all levels)	461	195	175	119	171	Required for all but key workers	49	39	37	31	31
Required (only at some levels)	168	186	178	279	309	Required for some	351	394	258	262	243
Recommended	0	248	277	71	148	Recommended	223	157	332	175	307
Total	629	629	630	469	628	Total	623	590	627	468	581
CANCELLATION OF PUBLIC EVENTS AND GATHERINGS						STAY-AT-HOME					
	UA	PL	CZ	HU	SK		UA	PL	CZ	HU	SK
Required	211	311	219	290	420	Required (few exceptions)	0	0	0	0	0
Recommended	372	226	394	258	116	Required (except essentials)	0	22	165	291	215
Total	583	537	613	548	536	Recommended	469	442	83	132	89
–						Total	469	464	248	423	304
FACE COVERINGS						PUBLIC TRANSPORT CLOSING					
	UA	PL	CZ	HU	SK		UA	PL	CZ	HU	SK
Required outside-the-home at all times	16	0	122	0	187	Required (or prohibit most using it)	321	0	0	0	0
Required in all public spaces	450	237	198	70	320	Recommended (or reduce volume)	186	334	87	302	81
Required in some public spaces	139	357	286	513	74	Total	507	334	87	302	81
Recommended	0	0	0	0	0	–					
Total	605	594	606	583	581						
INTERNAL MOVEMENT						INTERNATIONAL TRAVEL CONTROLS					
	UA	PL	CZ	HU	SK		UA	PL	CZ	HU	SK
Restrict movement	473	61	188	37	182	Total border closure	123	92	28	310	83
Recommend movement restriction	47	298	114	149	165	Ban on high-risk regions	31	264	444	178	15
Total	520	359	302	186	347	Quarantine from high-risk regions	216	270	129	47	532
–						Screening	255	5	39	97	0
						Total	625	631	640	632	630

Note: UA – Ukraine, PL – Poland, CZ – Czech Republic, HU – Hungary, SK – Slovakia.



**Figure 1.** GDP and GSI of Ukraine, Poland, Czech Republic, Hungary, and Slovakia

nancial support for the economy and population under quarantine measures (Sonko et al., 2018). Quarantine measures have been adopted in all studied countries, but their level of economic development varies. This means that Ukraine has less robust economic opportunities to quickly and efficiently recover from the losses associated with the quarantine measures taken by the government, and the country will need more time to restore its economic development than the Visegrad Four countries.

#### 4.2. Benchmarking governmental decisions to support the national economy during the pandemic

The implementation of quarantine measures was accompanied by the introduction of compensatory measures for economic support of business and the population, and, in general, to ensure the economic resilience of a country. The study grouped such measures according to the analysis of the practice of the economic resilience maintained in Ukraine and the Visegrad Four countries (Table 3).

According to ESRB and IMF data, the types of economic policy and types of economic measures for response to the COVID-19 crisis implemented in Ukraine and the Visegrad Four countries are classified (Table 4). The highest intensity of new compensatory measures falls on the first wave of COVID-19 (March-May 2020). It can be affirmed

about the timeliness response to the crisis of COVID-19. At the same time, the predominance of quarantine measures of a recommendatory nature in the period after the first and second waves is weakly correlated with the continued implementation of new compensatory measures of fiscal and monetary nature. This is due to the different purposes of their implementation.

The largest number of compensatory measures was implemented within the framework of fiscal policy. That was common for all studied countries. In particular, from March 2020 to November 2021, the total number of new measures of a fiscal nature was implemented in the Czech Republic – 35; in Poland – 28; in Slovakia – 16; in Ukraine – 15; and in Hungary – 13. At the same time, Poland preferred microprudential policy – 32 measures and fiscal policy – 28 measures. That is more than 82% (or 60 out of 73) of all compensatory measures in response to the COVID-19 crisis implemented in Poland. The second country in the number of compensatory measures implemented was Hungary, with 55 measures. Among them, 22 measures were microprudential, 13 – fiscal, and 12 – macroprudential. In the Czech Republic, 35 of the 49 compensatory measures were implemented through fiscal policy instruments. At the same time, the least measures were implemented in Ukraine – 27, of which 15 – fiscal policy measures, and in Slovakia – 19, of which 16 – fiscal policy measures. In general, the measures selected by

**Table 3.** Compensatory measures in response to COVID-19 crisis with economic resilience relevance

Source: ESRB (2021), IMF (2021).

Type of policy	Main objectives	Type of measures
A. Fiscal policy	To sustain the financial capacity of firms, households; create new jobs and restart business; support consumption and service provision during the pandemic; temporary protect the debtors against their creditors; enhance the resilience of the economy	A1. Public moratoria A2. Public guarantees A3. Direct grants A4. Public loans A5. Tax reliefs A6. Tax deferrals A7. Moratoria on other claims A8. Other measures (e.g., tax changes, supplement to increase in a child benefit) A9. Public support for trade credit insurance A10. Equity participation A11. Private moratoria
B. Macroprudential policy	To mitigate systemic risks for the financial system and negative effects of the pandemic; increase the financial system's resilience to shocks of current pandemic nature	B1. Borrower-based measure B2. Countercyclical capital buffer (CCyB) B3. Systemically important institutions capital buffer (O-SII) B4. Systemic risk buffer (SyRB) B5. Capital conservation buffer (CCoB) B6. Other measures (e.g., temporary comprehensive control framework; modification of the FFAR, the FECR, the IFR regulation; amendment of the Mortgage Funding Adequacy Ratio requirement; modification of the calculation of the Foreign Exchange Adequacy Ratio; changing the maximum value of the Foreign Exchange Coverage Ratio)
C. Microprudential policy	To mitigate risks for the individual financial institutions; interim lower the administrative burden on banks and credit unions; keep the stability of capital and liquidity of the financial institutions; support firms in financial difficulties; strengthen protection of customers	C1. Dividend distribution policy C2. Special provisioning policy C3. Buffer usability C4. Reporting requirements C5. Supervisory expectations C6. Borrower-based measure C7. Lending standards C8. Other measures (e.g., strengthen the capital base, ensure liquidity to small, micro, and medium-sized enterprises)
D. Monetary policy	To resolve potential liquidity problems in the financial sector; to support the liquidity of the corporate bond market; ensure access to funding for small, micro and medium-sized enterprises	D1. Market liquidity D2. Interest rate change D3. Credit facilities D4. Asset purchase program D5. Swap lines D6. Other measures (e.g., not setting a target amount of banking sector liquidity; modification the parameters of the Bond Funding; collateral loans to large companies; the exemption from reserve requirements by suspending the sanctions on reserve deficiency)
E. Other compensatory measures (incl. measures of fiscal nature without financial stability relevance)	To protect jobs and increase competitiveness; support health system (e.g., additional funds for hospital equipment and supplies); support service industry; preserve the buying capacity of the retired; support parents due to school closures; inform the consumers about the changes in the banking sector	E1. Direct grants E2. Public moratoria E3. Tax reliefs E4. Private moratoria E5. Other measures of fiscal nature (e.g., payment deadline extended for tax advances and flat tax; exclusion from taxable revenues) E6. Redemption gate E7. Trading curbs E8. Exemption from penalties/fines E9. Tourism sector measure E10. Other labor market measures

studied countries have the most significant economic effect on households, firms, and financial institutions because they refer to the abolition of tax payments, abolition, or the reduction of social security contributions.

A feature of the response in all studied countries to the COVID-19 crisis is the predominant use of

direct grants – 38% of all fiscal policy measures. However, the effectiveness of this measure varied across the studied countries and has to be estimated additionally. For instance, according to UNDP (2020), in Ukraine, micro-, small-, and medium enterprises deemed the state support ‘too complicated’, ‘a waste of time’, and/or perceived asking for government support as ‘begging’. Thus, such

support was not well promoted. Additionally, most entrepreneurs were skeptical and/or unable to apply for financial support because their business was operating in the informal sector, with payments made partly or fully under the table. Meanwhile, Ukrainian and Polish governments have also imposed other tax tools (e.g., write-off of tax debt) that put responsible taxpayers in unequal conditions with those who have violated the tax law and have a tax burden.

Table 3 does not present the period between the 3<sup>rd</sup> and 4<sup>th</sup> COVID-19 waves due to the reason that there were no new measures implemented in June 2021. This study is based on the global dimension in the periodization of the COVID-19 waves. This study covers a period from March 2020 to November 2021. The 4<sup>th</sup> COVID-19 wave started in June 2021 and has not finished until December 2021. The number in (...) means the total quantity of implemented measures of the same nature.

Ukrainian and Polish governments supported the economy by stimulating investment flows. In Poland, the financial support for investment projects was implemented (up to USD 3 billion was allocated to the State Fund of Local Investments). In addition, the Polish government provided state investments in road and railway infrastructure and financial support for the operating situation of companies operating airports (up to USD 250 mln was allocated). The total amount of financial support for infrastructure was USD 9.75 billion (1.7% of GDP). In Ukraine, the COVID-19 State Fund was partially used to finance the “Big Construction” state program (USD 4,4 billion), including USD 1,3 billion from the COVID-19 Fund. According to Ukraine Economic Outlook (2020), the fall in the economy in the 4Q of 2020 without “Big Construction” would have reached 11%; infrastructure projects saved from 2.5% of GDP in the 2Q to 5.1% and 7.3% in the 3Q and 4Q, respectively. It should be emphasized that only in Hungary additional investments in R&D and production of products were related to the coronavirus outbreak (approximately 143 mln euros).

Generally, monetary policy has a significant impact on the behavior of economic entities, determining the specifics of their activities and taking into account macroeconomic cyclical-

ty. Nonetheless, the measures of monetary policy were not considered in Slovakia. At the same time, central banks of other studied countries had been improving monetary policy and ensuring the financial system’s liquidity, including lowering the discount rate to support the credit activity of banking institutions and provide the economy with the necessary financial resources. Due to these efforts, the financial markets had remained functional, and investor sentiment had shown signs of improvement.

Besides that, the Visegrad Four countries have implemented special measures to support the service sector, which, as well-known, has suffered the most from quarantine measures. It is noteworthy that in Poland, the most compensatory measures were implemented to support the most significant number of service sectors compared with other studied countries. They covered tourism, film industry, bus transportation, service industries (including gastronomy, fitness, fairs, stage, film, entertainment and recreation, photography, and physiotherapy), and the aviation sector. On the contrary, in the Czech Republic, Hungary, Slovakia, and Ukraine, these industries were supported in two times fewer than in Poland. For instance, the Ukrainian government supported film industries, tourism, and the culture sector, which is not comparable with the number of service sectors suffering from quarantine measures and the pandemic.

Moreover, the link between quarantine and compensatory measures has to be emphasized. As shown in Table 2, the total number of days when school closures were required was 195 in Poland. However, this country implemented such compensatory measures as support for parents who could not return to work due to the closure of nursery schools and additional childcare leave as a consequence of the COVID-19 school shutdown. In contrast to the Polish case, the total number of days of compulsory school closure in Slovakia was 171, in Ukraine – 461. In Slovakia, the only measure was a one-time allowance of 333 euros per child to families needing financial assistance. In Ukraine, a one-time allowance of 65-80 per child was paid for some parents, depending on the child’s age. In the Czech Republic, the payment of childcare allowance has been expanded. No rele-



**Table 4.** Compensatory measures for Ukraine and Visegrad Group countries classified according to the type of policy and systematized by the periodization of the COVID-19 waves

Source: ESRB (2021), IMF (2021).

Type of policy	Country	March 20 – May 20 (1st wave)	June 20 – Aug 20	Sept 20 – Dec 20 (2nd wave)	Jan 21– Feb 21	March 21 – May 21 (3rd wave)	July 21 – Nov 21 (4th wave)***
A. Fiscal policy	UA	A5 (5). Tax reliefs, A6 (2). Tax deferrals, A7. Moratoria on other claims, A8. Other measures	–	A5. Tax reliefs, A6. Tax deferrals	A8. Other measures	A8. Other measures	A5. Tax reliefs, A7. Moratoria on other claims
	PL	A2 (3). Public guarantees, A3. Direct grants, A4 (3). Public loans, A5 (5) Tax reliefs, A6 (3). Tax deferral, A8 (2). Other measures, A11. Private moratoria	A1. Public moratoria, A5. Tax reliefs, A8. Other measures	A3. Direct grants, A6. Tax deferrals	A3. Direct grants, A5. Tax reliefs, A11. Private moratoria	A2. Public guarantees	A3. Direct grants
	CZ	A1. Public moratoria, A2 (4). Public guarantees, A3 (2). Direct grants, A5. Tax reliefs, A6. Tax deferrals, A8. Other measures	A3 (5). Direct grants, A5 (2). Tax reliefs	A3 (11). Direct grants, A7. Moratoria on other claims, A5. Tax reliefs	A3 (2). Direct grants, A8. Other measures	A3 (6). Direct grants	A3. Direct grants, A8. Other measures
	HU	A2. Public guarantees, A3 (2) Direct grants, A4. Public loans, A5 (2). Tax reliefs, A6. Tax deferrals, A8. Other measures, A9. Public support for trade credit insurance	A3. Direct grants, A5. Tax reliefs, A8. Other measures	A9. Public support for trade credit insurance	–	–	–
	SK	A1. Public moratoria, A2 (3). Public guarantees, A3 (3). Direct grants, A6 (2). Tax deferrals	A2 (2). Public guarantees	A3 (2). Direct grants, A10. Equity participation	A3. Direct grants	–	A3. Direct grants
B. Macroprudential measures	UA	B2. CCyB, B6. Other measures	–	–	–	–	–
	PL	B4. SyRB	B6. Other measures	–	–	–	–
	CZ	B1. Borrower-based measure, B2. CCyB	B1. Borrower-based measure, B2. CCyB	–	–	–	–
	HU	B4. SyRB, B5. CCoB, B6 (2). Other measures	B3. O-SII	B6. Other measures	–	–	–
	SK	B2. CCyB, B5. CCoB	B2. CCyB	–	–	–	–

**Table 4 (cont.).** Compensatory measures for Ukraine and Visegrad Group countries classified according to the type of policy and systematized by the periodization of the COVID-19 waves

Type of policy	Country	March 20 – May 20 (1st wave)	June 20 – Aug 20	Sept 20 – Dec 20 (2nd wave)	Jan 21– Feb 21	March 21 – May 21 (3rd wave)	July 21 – Nov 21 (4th wave)***
C. Microprudential measures	UA	C2. Dividend distribution policy, C3. Buffer usability, C4. Reporting requirements, C7 (2). Lending standards, C8. Other measures	–	–	–	–	–
	PL	C2. Special provisioning policy, C4 (7). Reporting requirements, C5. Supervisory expectations, C6 (2). Borrower-based measure, C8 (17). Other measures	C3. Buffer usability, C7 (2). Lending standards	–	C8. Other measures	–	–
	CZ	C1 (2). Dividend distribution policy, C2. Special provisioning policy	–	C1. Dividend distribution policy	–	–	–
	HU	C1 (2). Dividend distribution policy, C3. Buffer usability, C8 (5). Other measures	–	C1 (2). Dividend distribution policy	C1. Dividend distribution policy	–	C1. Dividend distribution policy
	SK	–	–	–	–	–	–
D. Monetary policy measures	UA	D1. Market liquidity, D2. Interest rate change, D3 (2). Credit facilities	–	–	–	–	–
	PL	D3. Credit facilities, D4. Asset purchase program, D6. Other measures	–	–	–	–	–
	CZ	D1 (3). Market liquidity, D2 (3). Interest rate change	–	–	–	–	–
	HU	D3 (3). Credit facilities, D4 (2). Asset purchase program, D5. Swap lines, D6 (9). Other measures	D2 (2). Interest rate change	D3. Credit facilities, D4. Asset purchase program, D5. Swap lines	–	D3. Credit facilities	D4. Asset purchase program
	SK	–	–	–	–	–	–
E. Other compensatory measures without financial stability relevance	UA	–	–	–	–	–	–
	PL	E3. Tax reliefs, E9. Tourism sector measure, E10. Other labor market measure	E6. Redemption gate, E7. Trading curbs, E10. Other labor market measure	E4. Private moratoria	E2. Public moratoria	–	–
	CZ	–	–	–	–	–	–
	HU	E8. Exemption from penalties/ fines	E1. Direct grants	–	–	–	–
	SK	–	–	–	–	–	–

Note: UA – Ukraine, PL – Poland, CZ – Czech Republic, HU – Hungary, SK – Slovakia. Numbers in brackets (...) presents the quantity of the identical measures.

vant measures to support parents affected by the required closure of nursery schools and schools have been introduced in Hungary.

In Ukraine, there was also a prohibition on penalties for late or incomplete payment of housing and communal services (Verkhovna Rada of Ukraine, 2020). These measures and quarantine have led to a significant reduction in the level of payment for electricity by consumers to electricity suppliers and suppliers of non-municipal services. The level of settlements between electricity suppliers and suppliers of non-diversified services decreased, as did the level of settlements between electricity distribution system operators and electricity producers and the level of settlements between distribution system operators and transmission system operator Ukrenergo. As a result, all market participants suffered payment delays, and the billing rate increased.

In addition to the above, the pandemic has highlighted the weaknesses of the current mechanisms for financing healthcare systems and the unpreparedness of their human and institutional capacity to respond to the current crisis. In such circumstances, studied countries have increased their efforts to increase contributions to finance the healthcare sector. Thus, among other compensatory measures, there were increasing salaries and an extraordinary bonus for health workers (Ukraine, Czech Republic, and Hungary), additional funds for purchasing equipment and services to combat COVID-19 (Ukraine and Poland), financial compensation for health care employees due to the prohibition to work in more than one place in case their contacts with COVID-19 patients, and deduction from the tax base the amounts of donations for purposes related to counteracting COVID-19 (Poland).

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## CONCLUSIONS

This paper classifies the measures that have been taken by governments of the Visegrad Four countries and Ukraine to support national economies in response to the pandemic. The study results show that quarantine measures are implemented to curb the spread of COVID-19. In addition, compensatory measures are implemented to reimburse the negative effects of quarantine measures and the impact of the pandemic on firms and households, and for the national economic resilience ensuring as a whole. The quarantine measures are classified into prohibitions, restrictions, and recommendations according to the severity of impact. In the manner with the type of policy, compensatory measures were divided into fiscal, macro-prudential, micro-prudential, monetary policy measures, and other compensatory measures. Furthermore, the compensatory measures are systematized by the periodization of the waves of the COVID-19 spread.

Due to the analysis, the severe quarantine measures, namely prohibitions, were implemented the most in Ukraine (in particular, required closure of schools lasted 461 days, required closure of public transport – 321 days; required restrictions on internal movements – 473 days; required workplace closure for all but critical workers – 49 days). Meanwhile, in the Czech Republic, prohibitions were implemented the least and for the shortest time compared to Slovakia, Hungary, and Poland. At the same time, the compensatory measures were most comprehensive and implemented intensively in Poland. From March 2020 to November 2021, 73 measures were implemented. At the same time, more than 82% of all compensatory measures introduced in Poland were fiscal measures. On the contrary, the fewer compensatory measures to support economic resilience were implemented in Ukraine – 27 in total and Slovakia – 19.

Moreover, a specific feature of the response to the COVID-19 crisis in all studied countries is the predominant use of direct grants – 38% of all fiscal policy measures. Finally, the paper also determined the link between the quarantine and compensatory measures most often observed in Poland. In particular, this is the only country where the relevant support of parents accompanied the mandatory closure of nursery schools and schools.

The overall conclusion is that pandemic has shown the government's institutional capacity to ensure the resilience of the national economy to global shocks. The key factor in the milder COVID-19 crisis in 2020 than in 2008–2009 is that the studied economies have become more stable due to the governments being able to provide fiscal and financial aid packages, including direct grants. However, the effectiveness of the implemented measures for the economic resilience of Ukraine and Visegrad Four countries in response to the COVID-19 crisis requires a particular study. Therefore, it may be the subject of further research.

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