



## The COVID-19 Pandemic and Its Implications for Government Deficits and Public Debt – International Perspective

### Pandémia COVID-19 a jej dôsledky pre deficit štátneho rozpočtu a verejný dlh - medzinárodná perspektíva

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#### Abstract:

*The COVID-19 pandemic is a global threat. The effects of the coronavirus pandemic are multidimensional and multifaceted. The pandemic has already changed individual lives, functioning of businesses, operation of national economies, organization of international relations. The paper examines fiscal support measures adopted as a response for the COVID-19 pandemic and their impact for government deficits and public debt in selected economies. The research was conducted with the use of statistical data provided by International Monetary Fund.*

**Keywords:** COVID-19 pandemic, public debt, fiscal support.

#### Abstrakt:

*Pandémia COVID-19 je globálnou hrozbou. Účinky pandémie koronavírusu sú viacrozmerné a mnohostranné. Pandémia zmenila jednotlivé životy, fungovanie podnikov, fungovanie národných ekonomík, organizáciu medzinárodných vzťahov. Príspevok predstavuje výsledky analýzy fiškálnej podpory prijaté ako reakcia na pandémiu COVID-19 a ich vplyv na vládne deficity a verejný dlh vo vybraných ekonomikách. štúdie boli vykonané s využitím štatistických údajov poskytnutých Medzinárodným menovým fondom.*

**Kľúčové slová:** Pandémia COVID-19, deficit štátneho rozpočtu, verejný dlh, fiškálna podpora.



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## **Introduction**

The COVID-19 pandemic constitutes an unprecedented threat for the global economy. The SARS-CoV-2 coronavirus, which initially affected the inhabitants of the city of Wuhan in the Chinese province of Hubei, triggered the COVID-19 pandemic within a few months; the pandemic became a global threat with multidimensional and multifaceted health, social, psychological, economic, financial and environmental effects. Moreover, the pandemic created significant effects in the field of technology transfer, information flow, as well as forms of communication [26]. The coronavirus pandemic changed the lives of individuals, local and regional communities, as well as the functioning of national economies, regional integration groupings, and finally the entire global economy. The COVID-19 pandemic has been going on since March 2020. Spring 2021 brought yet another wave of the pandemic. Till May 10, 2021 over 159 million cases and 3.3 million deaths were reported in 220 countries and territories around the world [31]. The COVID-19 pandemic has increased the uncertainty, volatility, and turbulence of the global environment. It is difficult to predict a definitive end of the COVID-19 pandemic. On the one hand, a several vaccines have already been approved and introduced; on the other, however, the emergence of numerous new SARS-CoV-2 mutations increases the danger that one of them will “escape” vaccine protection. Moreover, long time is needed to vaccinate enough people to be able to achieve global herd immunity. It seems extremely difficult, partly due to the significantly lower availability of vaccines for the societies of developing countries (especially low-income economies). A low level of vaccinology education and increasing anti-vaccination movements constitute further problems [1; 15]. The COVID-19 pandemic has created very big challenges for economic policy. The main aim of the paper is to study and identify the implications of the coronavirus pandemic for government deficits and public debt in selected economies. Moreover, fiscal measures adopted by selected states in the first year of the pandemic were described.

## **1. The global economy at the time of the COVID-19 pandemic – selected issues**

Numerous deep and complex interdependencies and connections of the contemporary world economy in many areas and aspects (trade, services, industry, capital and finance, technology and information, geopolitics, social connections), reinforce all risks and threats and cause their cascading effects. The existence of so many, so intensive and significant relations in the global economy means that a threat in one area and on one level can spread very quickly to other fields and become a global threat. The SARS-CoV-2 coronavirus, which initially affected the Chinese province of Hubei, changed into a pandemic within a few months. The pandemic is therefore such a global threat posing numerous implications for individuals, businesses, national economies, and for the so-far global order. In March 2020, the global economy halted sharply. The shock caused by the COVID-19 pandemic was much more multidimensional, more severe and more dynamic than previous global crises (such as the great crisis of the 1930s or the global financial crisis in 2008). Moreover, the coronavirus pandemic created both a demand shock and a supply shock. The World output was reduced by 3.3% in 2020, with the strongest reduction observed

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in the developed economies (by 4.7%). Huge reduction of GDP was noted in Spain (by 11%), the United Kingdom (by 9.9%), Italy (by 8.9%), France (by 8.2%), Mexico (by 8.2%), India (by 8.0%), the Republic of South Africa (by 7.0%). The situation of China was completely different – the Chinese economy noted a 2.3% growth of GDP in 2020 [12]. The pandemic situation in the global economy in 2020 was reflected in the dynamics of international trade. World trade turnover (taking into consideration both merchandise trade and services trade together) decreased by 8.5% in 2020. In the case of the developed economies, the volume of imports was reduced by 9.1%, while the volume of exports noted a 9.5% reduction. When it comes to emerging economies and developing countries, a decline in imports volume amounted to 8.6% and a reduction in exports volume equalled 5.7% [12]. Again, one should note that China noted huge exports boom in 2020, which resulted in a record trade surplus [16]. The pandemic had negative effects on the labour market in all groups of countries and in most national economies. Unemployment rate in the United States increased from 3.7% in 2019 to 8.1% in 2020. At the same time unemployment rate in Canada rose from 5.7% to 9.6%. When it comes to Spain, unemployment rate increased to 15.5%, in Brazil it rose to 13.2%, while in South Africa it equalled 29.2% in 2020 [12].

Lockdown caused radical changes in education, work, leisure activities, transport and communication. Many authors signalled the potential consequences of the pandemic and pandemic restrictions. Reeves, Carlsson-Szlezak, Whitaker and Abraham [20] pointed to numerous and diverse consequences of spending more time at home, in that working in/from home (remote work), eating meals at home, organizing free time (entertainment) at home, reduction of business trips and holiday travel, digital coordination and communication from home for various spheres of socio-economic life and various industries. Some of the changes forced by the pandemic situation will probably be temporary in their character. Some of them, however, may be long-term and can be used to create a specific new post-pandemic order, a post-pandemic “new normality”. In this regard, one should agree with the thesis presented by Schwab and Mallerett [22], according to which COVID-19 will result in a great reset in/of the global order.

## **2. Fiscal measures undertaken as a response for the COVID-19 pandemic and their impact for government deficits and public debt – evidence from selected economies**

The COVID-19 pandemic has created huge challenges for economic policy. During the first period of the coronavirus pandemic, the most important objective was to mitigate the health crisis, reduce the number of SARS-CoV-2 infections, reduce mortality, maintain efficiency of healthcare system. This goal of economic policy was pursued in all states. These issues were raised at the supranational level, e.g. by the World Health Organization [29; 30], as well as the European Union [7; 8; 13]. Solving the health crisis was (and still is) considered a top priority. Its solution was (and still is) necessary to create proper environment and true opportunity to rebuild economies and restore the normal functioning of societies. Both in the first period of the pandemic, i.e. in spring 2020, and during the subsequent waves of the pandemic, i.e. in fall and winter 2020 and during spring 2021, many countries decided to use a radical

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instrument in the form of lockdown. Lockdown meant a restriction of the possibility of movement (sometimes even a ban on leaving the place of residence, except for going to work or doing basic shopping). Lockdown also meant a ban on operating for many high-contact sectors/industries, such as public transport (railways, aviation), restaurants, cafes, bars, clubs, cinemas, theatres, gyms and fitness clubs, sports events, tourism and travel [2]. On the one hand, the application of lockdown allowed the institutions of the health sector to “buy time”, but on the other hand, it resulted in a significant reduction in economic activity, which was reflected in the decline in GDP, deterioration of the situation on the market of labour, reduction of international trade in goods and services (although some elements of international trade did note a considerable increase, e.g. personal protective equipment industry). Table 1. presents examples of fiscal support measures adopted by selected states (from March 2020 to March 2021).

*Tab. 1 Examples of fiscal support from March 2020 to March 2021 (selected states) [10]*

Country	Fiscal support activities
United States of America	<ol style="list-style-type: none"> <li>1. <i>Coronavirus Preparedness and Response Supplemental Appropriations Act</i> – USD 8.3 billion + USD 192 billion</li> <li>2. <i>Coronavirus Aid, Relief and Economy Security Act</i> (“CARES Act”) – USD 2.3 trillion USD</li> <li>3. <i>Paycheck Protection Program and Health Care Enhancement Act</i> – USD 483 billion</li> <li>4. <i>Coronavirus relief and government funding bill as part of the Consolidated Appropriations Act of 2021</i>- USD 868 billion</li> <li>5. <i>The American Rescue Plan</i> – USD 1844 billion</li> </ol>
Canada	Key spending and tax measures 18.5% GDP, i.e. CAD 407.7 billion CAD, including: <ol style="list-style-type: none"> <li>1. CAD 52.7 billion to the health system, testing, medical equipment, vaccine development;</li> <li>2. CAD 270 billion – direct support for households and companies, in that wage subsidies</li> <li>3. CAD 85 billion– liquidity support through tax deferrals</li> </ol>
Germany	<ol style="list-style-type: none"> <li>1. EUR 156 billion, i.e. 4.7% GDP (March 2020)</li> <li>2. EUR 130 billion, i.e. 3.9% GDP (June 2020)</li> <li>3. EUR 60 billion, i.e. 1.7% GDP (March 2021)</li> </ol> Financial support directed to: healthcare equipment, R&D activity in the field of vaccine development, subsidies aiming at jobs preserving, childcare benefits, grants to SME owners, grants to self-employed, VAT reduction, subsidies in digitalization and sustainable growth. <ol style="list-style-type: none"> <li>4. Creating economic stabilization fund (WSF) offering guarantees up to 100% together with (KfW)</li> <li>5. Local governments support (Länder and municipalities) – both direct (amounting to EUR 141 billion) and in the form of guarantees (amounting to EUR 70 billion)</li> </ol>
France	<ol style="list-style-type: none"> <li>1. EUR 180 billion EUR (8% GDP) as <i>fiscal envelope</i> devoted to addressing the crisis</li> <li>2. EUR 327.5 billion (15% GDP) – as public guarantees</li> </ol> Assistance was directed to: <ul style="list-style-type: none"> <li>- streamline and boost health insurance for the sick or their caregivers;</li> <li>- increase spending in the field of health supplies;</li> <li>- support liquidity through postponements of social security and tax payments for companies as well as accelerated refund of tax credits (CIT, VAT);</li> <li>- support wages (especially under the short-time work scheme)</li> <li>- support financially affected microenterprises, independent workers, liberal professions, as well low-income households;</li> <li>- postpone rent and utility payments by affected microenterprises and SMEs;</li> <li>- facilitate granting exceptional bonuses exempt from social security contributions</li> <li>- extend unemployment benefits till the end of lockdown.</li> </ul>
Italy	<ol style="list-style-type: none"> <li>1. EUR 25 billion (1.6% GDP) - <i>Cura Italia</i> emergency package (March 2020)</li> <li>2. Liquidity Decree enabling granting public guarantees amounting to EUR 400 billion EUR (25% GDP) (April 2020)</li> </ol>

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	<ol style="list-style-type: none"> <li>3. EUR 55 billion (3.5% GDP) as a ‘<i>Relaunch Package</i>’ (May 2020)</li> <li>4. EUR 25 billion (1.6% GDP) (August 2020), e.g. support to families, support to workers</li> <li>5. EUR 5.4 billion (0.3% GDP) (October 2020), e.g. SMEs grants, support to self-employed</li> <li>6. EUR 32 billion (March 2021), e.g. support to sectors strongly affected by the pandemic</li> </ol>
Japan	<ol style="list-style-type: none"> <li>1. JPY 117.1 billion (20.9 % of 2019 GDP) as <i>Emergency Economic Package Against COVID-19</i> (April 2020), aiming to: <ul style="list-style-type: none"> <li>- develop preventive measures against the spread of COVID-19 + increase treatment capacity (0.4% of 2019 GDP),</li> <li>- protect employment and businesses (15.8% of 2019 GDP),</li> <li>- regain economic activities after lockdown (1.5% of GDP),</li> <li>- reconstruct a resilient economic structure (2.8 % of 2019 GDP),</li> <li>- increase readiness for future (possible) epidemic (0.3 % of 2019 GDP).</li> </ul> </li> <li>2. JPY 117.1 billion (20.9 % of 2019 GDP) – as the 2<sup>nd</sup> supplementary package, intended to support healthcare system, businesses, households, local governments (May-June 2020)</li> <li>3. JPY 73.6 billion as <i>Economic Measures to Secure People’s Lives and Livelihoods toward Relief and Hope</i> (13.1% of 2019 GDP) (December 2020) included measures to: contain COVID-19, promote structural changes and positive economic cycles after the pandemic, increase secure and safety in regard to disaster management.</li> </ol>
United Kingdom	<ol style="list-style-type: none"> <li>1. GBP 48.5 billion – additional fund for <i>National Health Service</i>, public services and charities</li> <li>2. GBP 29 billion – measures to support businesses, including property tax holidays, direct grants for small firms and firm in the most-affected sectors</li> <li>3. GBP 8 billion – increased social support</li> <li>4. July 2020 – a package of measures aiming to protect and create jobs and support the economic recovery</li> <li>5. August 2020 – another package of support, including (among others): <ul style="list-style-type: none"> <li>- 6-month Job Support Scheme (JSS),</li> <li>- extension of the Self Employment Income Support Scheme for those continuing to actively trade but face reduced demand due to coronavirus,</li> <li>- extension of the temporary VAT reduction by 15 percentage points (from 20% to 5%) for tourism and hospitality sectors till the end of March 2021</li> <li>- allowing to pay VAT payments deferred until end-March to be paid in 11 instalments and self-assessed income tax due in July 2020 and January 2021 to be paid in 12 instalments</li> </ul> </li> <li>6. January 2021 – another package of support for businesses amounting to GBP 4.6 billion</li> <li>7. March 2021 – another fiscal package amounting to GBP 59 billion</li> </ol>
China	<ol style="list-style-type: none"> <li>1. Fiscal support amounting to RMB 4.9 billion (4.7% GDP), intended for: increased epidemic control and prevention, medical equipment production, accelerated disbursement of unemployment insurance, extending unemployment insurance to migrant workers, tax relief, social security contributions’ waiving, additional public investment</li> <li>2. Support for businesses outside the budget amounting to RMB 400 billion (0.4% GDP),</li> <li>3. Fee and tariffs cuts amounting to RMB 900 billion (0.9% GDP).</li> </ol>
India	<ol style="list-style-type: none"> <li>1. Below-the-line measures allocated to support businesses and shore up credit provision to several sectors (5.2% GDP) (within the standard budget of 2020)</li> <li>2. Above-the-line measures amounting to 3.2% of 2020 GDP (additional allocation)</li> </ol>
Brazil	<p>Fiscal measures used by the government to fight the pandemic in 2020 amounted to 12% GDP. Support included:</p> <ul style="list-style-type: none"> <li>- increased healthcare spending,</li> <li>- temporary income support to vulnerable households,</li> <li>- cash transfers to informal and low-income workers,</li> <li>- the 13<sup>th</sup> pension payment to retirees,</li> <li>- expansion of the <i>Bolsa Familia</i> programme (by 1 million beneficiaries),</li> <li>- employment and wages support,</li> <li>- reduced taxes and reduced import levies on essential medical supplies.</li> </ul>
Mexico	<ol style="list-style-type: none"> <li>1. Below-the-line measures allocated to fight the pandemic within the 2020 budget: 1.2% GDP.</li> <li>2. Above-the-line measures amounting to 0.9% GDP (additional allocation)</li> </ol> <p>The adopted fiscal response measures were supposed to: ensure sufficient financial resources for medical equipment and materials, support households and companies, increase liquidity, guarantee proper functioning of financial markets, accelerate the tender processes for public expenditure to ensure full budget execution. Moreover, the fiscal response embraced: frontloading payments of the old-age and disability pensions by 8 months, faster procurement processes and accelerated VAT refunds, lending to companies and workers in both formal and informal sectors, liquidity support and guarantees by development banks.</p>

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August 2020: Introduction of an austerity programme for public expenditures, which included reallocation of non-necessary expenditures to top-priority spending and voluntary wage reductions for high-ranked government officials.
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Policies and actions implemented by governments in the first period of the pandemic included support for the hardest hit industries and business, as well as for households and families. The scope of fiscal support depended on the capabilities of individual countries.

The COVID-19 pandemic caused a significant increase in budget deficits and public debt in most countries. In the group of developed countries, government deficit reached the level of 11.7% of GDP in 2020 (while in 2018-2019 it was below 3% of GDP). Moreover, government deficit of over 10% of GDP is projected for this group of countries in 2021 (according to IMF forecasts from April 2021). A significant increase in government deficit was also recorded for emerging markets and middle-income countries (from 3.8% of GDP in 2018 and 4.7% of GDP in 2019 to 9.8% of GDP in 2020 (Table 2).

*Tab. 2 General government deficit (-) / surplus (+) 2018-2020 and projections for 2021-2025, by country groups, (% GDP) [9, p. 67, 75, 83]*

Specification	2018	2019	2020	Projections for the year				
				2021	2022	2023	2024	2025
Developed economies	-2.5	-2.9	-11.7	-10.4	-4.6	-3.2	-3.0	-3.0
Emerging markets and middle-income economies	-3.8	-4.7	-9.8	-7.7	-6.7	-6.1	-5.6	-5.2
Low-income economies	-3.4	-3.9	-5.5	-4.9	-4.4	-4.0	-3.8	-3.7

Table 3 presents the situation with regard to the level of government deficit in selected countries. Government deficits amounting to over 10% GDP were noted in the following countries: the United States of America (15.8% GDP) [25], Spain (11.5% of GDP), Japan (12.6% of GDP), United Kingdom (13.4% of GDP), Canada (10.7% of GDP), India (12.4% of GDP), China (11.4% of GDP), Brazil (13.4% of GDP), Saudi Arabia (11.1% of GDP), South Africa (12.2% of GDP). Government deficits close to 10% of GDP were observed in France, Greece and Australia. According to the IMF projections (of April 2021), government deficits will be extremely high in 2021 in the following economies: the United States of America (15% of GDP), Australia and South Africa (over 10% of GDP), the United Kingdom (almost 12% of GDP), India (10% of GDP), as well as in: Japan and China (close to 10% of GDP), Italy, Spain, Greece (around 9% of GDP), Brazil (over 8% of GDP).

*Tab. 3 General government deficit (-) / surplus (+) 2018-2020 and projections for 2021-2025, selected economies (% GDP) [9, p. 67, 75, 83]*

Economy	2019	2020	Projections for the year		
			2021	2023	2025
USA	-5.7	-15.8	-15.0	-4.6	-5.0

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Australia	-3.8	-9.9	-10.4	-4.9	-3.1
Germany	+1.5	-4.2	-5.5	+0.4	+0.5
France	-3.0	-9.9	-7.2	-3.8	-3.5
Italy	-1.6	-9.5	-8.8	-3.8	-2.0
Spain	-2.9	-11.5	-9.0	-4.9	-4.3
Greece	+0.6	-9.9	-8.9	-2.0	-1.7
Poland	-0.7	-8.2	-4.7	-2.9	-2.8
Japan	-3.1	-12.6	-9.4	-2.5	-2.3
United Kingdom	-2.3	-13.4	-11.8	-4.0	-3.3
Canada	+0.5	-10.7	-7.8	-1.3	+0.1
China	-6.3	-11.4	-9.6	-7.9	-6.5
India	-7.4	-12.3	-10.0	-8.4	-7.7
Russian Federation	+1.9	-4.1	-0.8	-0.5	0.0
Brazil	-5.9	-13.4	-8.3	-7.3	-6.6
Mexico	-2.3	-4.6	-3.4	-2.6	-2.5
Saudi Arabia	-4.5	-11.1	-3.8	-2.0	-0.9
Nigeria	-4.8	-5.8	-4.2	-4.4	-5.1
South Africa	-5.3	-12.2	-10.6	-7.1	-6.7

The application of fiscal measures during the first year of the pandemic was reflected in increased public debt [17]. In the case of developed economies public debt exceeded 120% of GDP in 2020. The IMF forecasts that it will be impossible to reduce the public debt to GDP ratio for this group of countries below 120% by the year 2025. When it comes to emerging and middle-income countries as well as low-income countries, public debt to GDP ratio also increased in 2020, but the scale of this increase was much lower and public debt levels were not that high.

*Tab. 4 Public debt 2018-2020 and projections for 2021-2025, by country groups, (% of GDP)[9, p. 73, 81, 87]*

Specification	2018	2019	2020	Projections for the year				
				2021	2022	2023	2024	2025
Developed economies	102.5	103.8	120.1	122.5	121.6	121.8	121.5	121.4
Emerging markets and middle-income countries	52.4	54.7	64.4	65.1	67.3	69.2	70.8	72.2
Low-income developing countries	42.8	44.3	49.5	48.6	48.2	47.5	46.9	46.3

Table 5 presents public debt to GDP ratio in selected economies in 2019-2020 and projections for 2021-2025 (according to IMF calculations of April 2021). The situation in several economies should be underlined here: Japan (public debt increased from 234.9% of GDP in 2019 to 256.2% of GDP in 2020, i.e. by 21.3 percentage points), Greece (public debt increased from 184.9% of GDP in 2019 to 213.1% of GDP in 2020, i.e. by 28.2 percentage points), Italy (public debt increased from 134.6% of GDP in 2019 to 155.6% of GDP in 2020, i.e. by 21.0 percentage points), USA

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(public debt increased from 108.2% of GDP in 2019 to 127.1% of GDP in 2020, i.e. by 18.9 percentage points), Spain (public increased from 95.5% of GDP in 2019 to 117.7% of GDP in 2020, i.e. by 21.6 percentage points). In many other countries, public debt to GDP ratio also increased significantly. Obviously, the situation of each economy is different, therefore, the analysis should include various additional debt characteristics (e.g. total debt service costs, debt structure, in that share of foreign debt and domestic debt).

*Tab. 5 Public debt 2018-2020 and projections for 2021-2025, selected economies (% of GDP) [9 p. 73, 81, 87]*

Country	2019	2020	Change 2020/2019	Projections for the year		
				2021	2023	2025
USA	108,2	127,1	+18,9 p.p.	132,8	132,4	133,9
Australia	47,5	63,1	+15,6 p.p.	72,1	78,0	76,0
Germany	59,6	68,9	+9,3 p.p.	70,3	64,8	59,6
France	98,1	113,5	+15,4 p.p.	115,2	115,2	116,3
Italy	134,6	155,6	+21,0 p.p.	157,1	155,1	152,0
Spain	95,5	117,1	+21,6 p.p.	118,4	117,3	117,7
Greece	184,9	213,1	+28,2 p.p.	210,1	193,1	184,8
Poland	45,7	57,7	+12,0 p.p.	57,4	55,4	55,4
Japan	234,9	256,2	+21,3 p.p.	256,5	252,9	254,0
United Kingdom	85,2	103,7	+18,5 p.p.	107,1	110,7	112,2
Canada	86,8	117,8	+31,0 p.p.	116,3	109,3	102,0
China	57,1	66,8	+9,7 p.p.	69,6	77,3	83,3
India	73,9	89,6	+15,7 p.p.	86,6	85,7	83,8
Russian Federation	13,8	19,3	+5,5 p.p.	18,1	17,6	17,3
Brazil	87,7	98,9	+11,2 p.p.	98,4	100,1	101,4
Mexico	53,3	60,6	+7,3 p.p.	60,5	60,7	60,7
Saudi Arabia	22,8	32,4	+9,6 p.p.	31,0	31,1	32,4
Nigeria	29,2	35,1	+5,9 p.p.	31,9	33,0	35,3
South Africa	62,2	77,1	+14,9 p.p.	80,8	87,2	92,5

Despite numerous threats resulting from high public debt to GDP ratio, International Monetary Fund stressed the necessity to continue fiscal support in 2021 [11]. A similar position was taken by the European Commission; it was reflected in the updated assumptions of fiscal policy in response to the COVID-19 pandemic and the continued use of fiscal support to develop sustainable and resilient recovery while suspending the application of EU requirements in the construction of budgets [4]. Schwab and Malleret [22], as well as Cherukupalli and Frieden [5] also pointed to the need for incurring all necessary expenses by states in order to protect citizens' health and collective wealth, in order to enable the sustainable recovery of economies.

It should be underlined here that the European Union plans to launch a number of initiatives and programmes supporting socio-economic development in the post-pandemic period (recovery after the COVID-19 pandemic is at the centre of the current EU financial perspective, adopted for the years 2021-2027) [6].



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## Conclusion

The COVID-19 pandemic poses the greatest challenge to the world economy after World War II. It marks the end of the current global order [3; 21; 24; 27]. The SARS-CoV-2 has rapidly spread worldwide, resulting in the pandemic that affected almost 160 million people in 220 countries and territories and caused over 3.3 million deaths till May 10, 2021 [31]. In addition to the health crisis, the COVID-19 pandemic has had enormous economic, financial, social, psychological, and political consequences. Restrictions on mobility were needed to halt, or at least delay and slow down the spread of the coronavirus. Lockdown was introduced in many countries (the first one in spring 2020, the second one in the fall / winter period of 2020, yet another one in spring 2021). The conducted research indicated that the negative consequences of the pandemic were reflected both in the decline in GDP and the reduced international trade (both at the global level and in individual groups of countries). The pandemic brought a significant deterioration in the situation on the labour market, reflected by increased unemployment statistics. The scale of the negative consequences of the first year of the pandemic varied in different parts of the world / group of countries and individual economies. The situation in China, however, was completely different than the situation in the rest of the world. China was the only country to record an increase in GDP in 2020 (+ 2.3%) as well as an increase in real GDP per capita (PPP) (+ 2%). According to the IMF projections of April 2021, China's GDP is to rise by 8.4% in 2021. Unemployment rate in China remained practically unchanged and really low – 3.6% - 3.8% in 2019-2020 and is projected to be kept on the very same level in 2021-2022.

The application of fiscal measures during the first year of the pandemic was reflected in huge increase of public debt. Public debt of developed countries exceeded 120% of GDP in 2020 and is not likely to be reduced below 120% of GDP by 2025. The list of countries with extremely high levels of public debt to GDP in 2020 embraced: Japan (256.2% of GDP), Greece (213.1% of GDP) Italy (155.6% of GDP), USA (127.1% of GDP in 2020), Spain (117.7% of GDP). High public debt to GDP ratios were characteristic for them all before the outbreak of the COVID-19 pandemic. The pandemic worsened the situation of their public finance sector; e.g. public debt to GDP in Greece increased by over 28 percentage points in 2020.

The pandemic situation in May 2021 remains very difficult. Many governments decided to reintroduce and/or prolong restrictions on mobility, economic activity and social contacts. Extended lockdown has resulted in further negative consequences for the economy, and has increased frustration (often even social unrest and protests). The following industries have been most severely affected by the crisis: air transport, tourism and travel, entertainment and recreation, culture, fitness industry, catering industry (restaurants, bars, cafes), hospitality industry. On the other hand, however, the pandemic created huge development impulse for other industries, including: e-commerce, IT services, mobile telecommunication services, as well as medical industry - manufacturers of medical equipment and personal protective equipment. Another issue of concern was the functioning of education sector during the pandemic. Digital and/or broadcast remote learning policies were introduced at various levels – from pre-school and early childhood education to university education – in many countries. The introduction of the digital and/or broadcast remote learning was

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intended to ensure learning and education continuity during the pandemic. Unfortunately, many children and young people have been deprived of access to education - especially in developing countries, but also – partly – in developed economies and emerging countries. According to UNICEF, remote learning was (potentially) available for 69% of schoolchildren in pre-primary to secondary education globally (at maximum), while 31% of schoolchildren worldwide, i.e. around 463 million could not be reached by the remote education either because of the lack of necessary technological assets at home, or because they were not targeted by the adopted education policies [28].

The pandemic will affect the global economy and societies for decades to come. The impact of the pandemic will be reflected in a changed architecture of the global economy and in changed functioning of societies due to modifications in social relations. The post-pandemic world economy will have to be reorganized in many aspects (e.g. new consumption patterns and changed supply chains). The post-pandemic world will be different from the pre-pandemic normality we knew and were used to. The end of any crisis means a new beginning. Therefore, a simple return to the pre-pandemic lifestyle and economic relations will not be possible. The COVID-19 pandemic will force and speed up changes at all levels and in all dimensions, fields and areas. [14; 1; 18; 19; 23).

It is necessary to indicate and point out the limitations of the research. The COVID-19 pandemic is still under way. That's why it was not possible to identify all the consequences for the global economy, as well as for its individual regions, groups of countries and individual national economies in various areas and in particular for public finance sector, in that public debt. Further research should focus on identifying and assessing the mid-term and long-term effects of the pandemic on the global economy, its actors and the relationship between them.

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