IMPACT OF PANDEMICS – AN ECONOMIC PERSPECTIVE

Diyana Miteva
Department of Finance, UNWE, Institute for economics and politics at UNWE

Abstract: *Recent COVID-19 pandemic surprised society and state leaders with its sudden appearance finding countries unprepared for common lockdown, travel restriction and high infection rates. It affected heavily society, business and state governance around the world causing unprecedent drop and changes in economic indicators. Therefore, the paper aims to outline the main impact pandemics have on economies. An analysis of the overall economic indicators affected by the Covid-19 pandemic is given where results show that sharp increase of government debt, inflation, financial sector leverage and other indicators are reported following 2020. Data proves the serious crisis that countries are facing because of Covid-19 pandemic and also how vulnerable the world economy is towards pandemic.*

Keywords: *pandemic, impact, crisis, covid-19, economic stability.*
JEL codes: *G01, E66, E43, E63.*

Introduction

The recent COVID-19 pandemics showed the significant magnitude of impact of pandemics on the economy and human life not only on national but also on a worldwide basis. It also proved that besides the fact of a rich history and many investigations and information that had been in place not a single country was prepared to face such an event, no crisis management plans had been written to help to choose appropriate reaction neither knowledgeable experts were in place. All this actually worsen the period during and after the pandemic, but also made its impact more severe than it could have been. The purpose of this paper is to investigate how vulnerable is the economy when exposed to pandemics. Because of the highly globalized world and intensive movement of people the risk of rapidly spreading infectious diseases is higher today than ever before (Brown, 2018). The most affected countries become more isolated in terms of travelling and trade. The economic productiveness and trade decline when many employees leave work. Recent COVID-19 pandemic first of all caught all countries unprepared. A lockdown was in force for many countries around the globe. Some of the main results caused by the lockdown are shown on Figure 1. Many businesses providing services stopped working like for instance restaurants, transport providers, hotels etc. There were travelling restrictions which made actually most of the transport services to fall sharply, especially in the beginning of pandemic.

Education switched to online lessons immediately which continued for more than one year and had a bad effect on students social life, communication and health. The stress and panic on the average person caused by COVID-19 lead to new diseases, worsen social life and deepen depression for those suffering of it. The majority of business which were able introduced immediately after the start of the pandemic home-office working. That continued quite a long time – more than 2 years and allowed people to live and work in different places. Employers are fighting to get back employees to offices offering different incentives as social activities, free or discounted meals, transportation subsidies and child care support – and at the end of 2022 there is a slight increase of office attendance (Partnership of NY, 2022). The social distance measure and shutting down many public places led to an increase in online shopping. More than 25% is the increase of the number of online buyers in 2021 compared to 2016 (Statista, 2021). More online shopping means and more electronic payments combined with more delivery services.

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Fig. 1

It is difficult to cover all affected parties and outcomes. The major impact of one pandemic shows how important it is to understand it in detail in order to react adequately. In this paper an accent on the economic impact is given, therefore others above are just mentioned in terms of their influence. Nevertheless, economy comprises all factors of life and correspondingly they have their influence especially on a long term basis.

Pandemics' impact has been investigated and analyzed widely. There are different approaches in terms of the above dimensions of impact. Yoldascan E, et. al (2010) for example try to measure the economic impact of SARS in 2003 in the case of Turkey, calculating the actual costs born by the pandemic proving it has a significant effect on the economy bringing costs between 1.364 billion dollars and 2.687 billions dollars for Turkey.

Significance of impact and costs depends on the magnitude of the pandemic. Milder ones bring smaller costs but they seem to increase the harder the pandemic is (Smith, R., Keogh-Brown, M.,2013). The same study argues that it is very difficult to estimate the impact of pandemics because of the lack of data or if in place it is on an annual basis which does not allow extracting the individual impact of pandemics and is rather mixed with other factors. Also, authors conclude that the unavoidable absence from work caused by morbidity and mortality could have a more damaging impact to low-income countries compared with more developed countries. Another research (Gong et. al, 2021), shows that H1N1 cases is positively associated with loan spread, while negatively associated with loan amount.

On the demand side, a pandemic is likely to affect consumer confidence and change consumption and social patterns. It will also affect investor confidence, which can have important long-term consequences[1].

Pandemic significantly affected SMEs in EU (Ali S. et al, 2021) leading to a decline of 10% of their number.

Differences between pandemics

While it is important to know how pandemics impact economy it is necessary to make distinction between them. First of all, the time and power of the pandemic is vital for its influence, but also the social reaction and state measure against it.

COVID-19 was the first global pandemic of 21st century that affected the whole world and practically leaded to a global lockdown and also continued quite a long time almost two and half years of serious measures. That led to more long-lasting effects. Whereas in shorter pandemic events less measures are taken and less affected the economic participants are, which does not mean that additional costs are not triggered.

If the mortality is high and the health system does not have tools to fight with the disease than the measures and outcome tend to be much heavier.

[1] https://www.adb.org/sites/default/files/publication/28082/pb042.pdf

COVID-19 pandemic

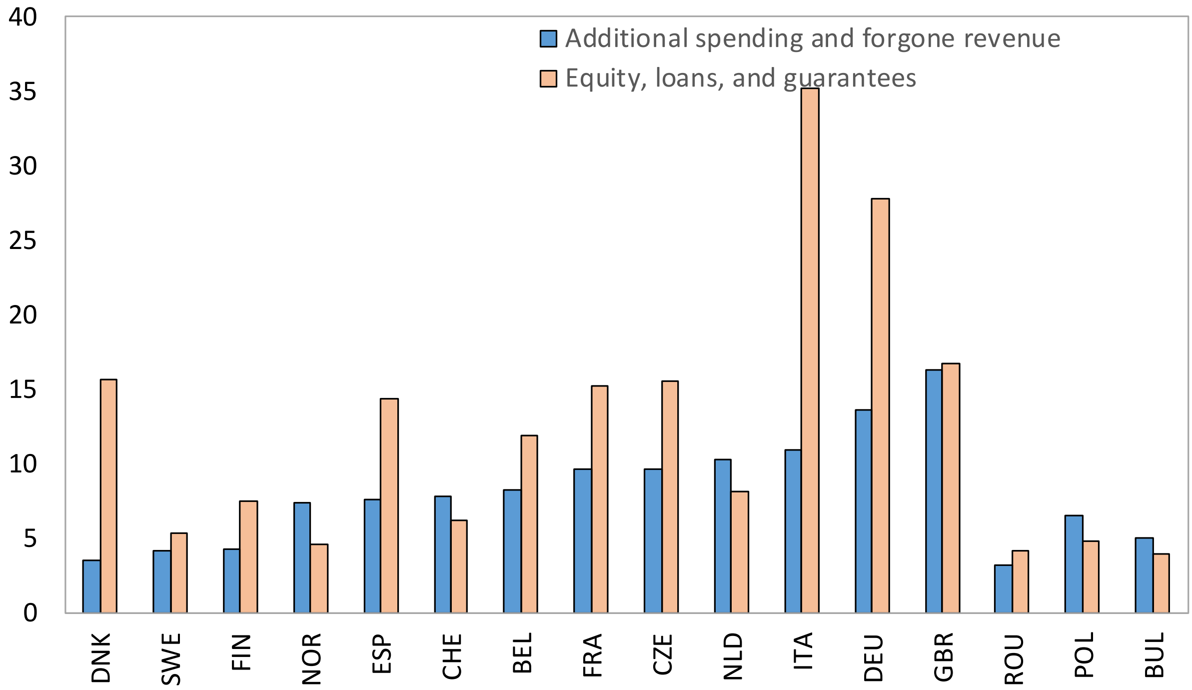
Covid-19 pandemic was different than SARS, TORS, H1N1 which also caused economic hardens in some regions, but being more resistible and contagious Covid-19 was more difficult to be focalized.

Covid -19 pandemic is therefor more important to investigate as it lasted longer and caused many changes in economic and social behavior and overall economic performance.

This paper reviews several main effects of the last pandemic on public finance and companies' debt structure. First of all, *government measures* and stimulus for the economy, while many sectors were shut down or restricted, brought huge costs for the state budgets which inevitably affected the government debt. These measures were introduced in order to save companies of default and also to lighten the impact of government health-related restrictions. This concerns different regimes for loans and guarantees, direct corporate and household transfers, which on the other hand maintained the consumption, also a variety of stimulus programs were introduced. Monetary policy measures provided liquidity which was necessary for the outlined measures. Easing of macro-prudential requirements can make it easier for financial intermediaries to provide loans to households and firms (Wieland, 2022). According to IMF data (IMF, 2021) the total amount of measures taken by the EU was 10.2% of GDP. The fiscal response by countries as a percentage of GDP is given on Figure 1 for selected EU countries. Equity, loans, and guarantees were prevailing for the majority of the countries.

Fig. 1

Discretionary fiscal response to Covid-19 crisis in selected European countries



Source: IMF, Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic.

Huge economy stimulus, energy prices global supply chain reflected on the inflation value. In the begging of the pandemic, there was a decline of inflation as the world aggregate demand collapsed, but with 2021 inflation starts rising and increased to historically high levels after many years of low inflation rates that were below the targets pursued by central banks (Wieland, 2022). Energy prices, in particular, dropped quickly. They are very flexible and quickly incorporate changes in expectations. However, the start of 2021 witnessed a rebound of inflation due to global supply chain troubles, transport hurdles, shifts in consumption towards durable goods instead of services requiring social contact contributed to soaring inflation. The beginning of the war in Ukrane further worsen the situation and boosted inflation. In 2022 and next couple of years this is going to be the most complicated and urgent challenge for governments to fight with as the ultimate raise of goods and services prices brings a lot of pressure to households and business.

As pointed out one of the main negative outcomes of the pandemic is the ultimate increase of the countries' debt. On Table 1 data for the gross government debt as a share of GDP is shown for EU countries for the period of 2017 to 2021. Data shows clearly an increase in all countries of the government debt reported by the end of 2020 compared with a year before. On overall basis the average increase is 23%, where more than half of the countries increased their debt by more than 20%. This is the biggest increase for the last 23 years, where only in 2009 because of the world financial crisis there was a similar increase of the government debt (19% on average for the EU) while all other years data shows slight changes of several percentages.

Table 1. General government gross debt for EU countries (2017-2021) as a share of GDP

	2017	2018	2019	2020	2021	Annual Change 2020	Annual Change 2021
European Union - 27 countries (from 2020)	81.7	79.7	77.5	89.8	87.9	16%	-2%
Euro area - 19 countries (2015-2022)	87.9	86.0	83.9	97.0	95.4	16%	-2%
Belgium	102.0	99.9	97.6	112.0	109.2	15%	-3%
Bulgaria	25.1	22.1	20.0	24.5	23.9	23%	-2%
Czechia	34.2	32.1	30.0	37.7	42.0	26%	11%
Denmark	35.9	34.0	33.7	42.2	36.6	25%	-13%
Germany	64.6	61.3	58.9	68.0	68.6	15%	1%
Estonia	9.1	8.2	8.5	18.5	17.6	118%	-5%
Ireland	67.6	63.0	57.0	58.4	55.4	2%	-5%
Greece	179.5	186.4	180.6	206.3	194.5	14%	-6%
Spain	101.8	100.4	98.2	120.4	118.3	23%	-2%
France	98.1	97.8	97.4	115.0	112.8	18%	-2%
Croatia	76.5	73.2	71.0	87.0	78.4	23%	-10%
Italy	134.2	134.4	134.1	154.9	150.3	16%	-3%

Cyprus	92.6	98.1	90.4	113.5	101.0	26%	-11%
Latvia	38.9	37.0	36.5	42.0	43.6	15%	4%
Lithuania	39.1	33.7	35.8	46.3	43.7	29%	-6%
Luxembourg	21.8	20.9	22.4	24.5	24.5	9%	0%
Hungary	72.1	69.1	65.3	79.3	76.8	21%	-3%
Malta	47.8	43.7	40.7	53.3	56.3	31%	6%
Netherlands	57.0	52.4	48.5	54.7	52.4	13%	-4%
Austria	78.5	74.1	70.6	82.9	82.3	17%	-1%
Poland	50.8	48.7	45.7	57.2	53.8	25%	-6%
Portugal	126.1	121.5	116.6	134.9	125.5	16%	-7%
Romania	35.3	34.5	35.1	46.9	48.9	34%	4%
Slovenia	74.2	70.3	65.4	79.6	74.5	22%	-6%
Slovakia	51.5	49.4	48.0	58.9	62.2	23%	6%
Finland	66.0	64.9	64.9	74.8	72.4	15%	-3%
Sweden	41.0	39.2	35.2	39.5	36.3	12%	-8%
Average	69	67	64	77	74	**23%**	**-3%**

Source: https://ec.europa.eu/eurostat/databrowser/view/sdg_17_40/default/table?lang=en

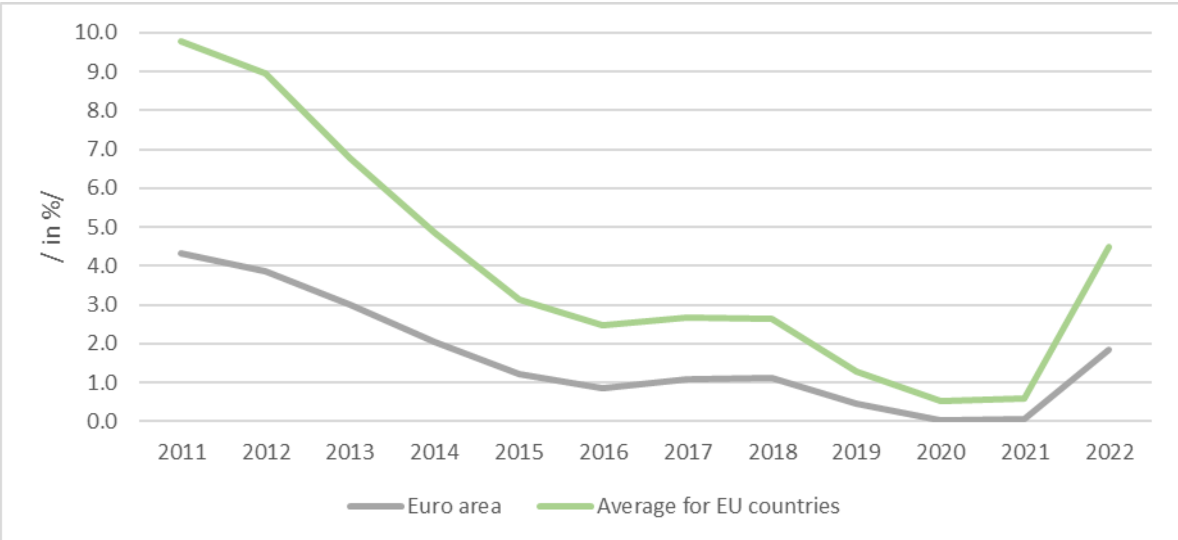
Higher government debt means higher government costs on a long term basis. The increase in the same time has different effect for each country as it does matter what the initial status of its debt condition is. For example, countries which had debt of 100% or more suffer much more difficult situation then countries with low level of debt like for instance Bulgaria, Baltic countries, Scandinavian countries etc.

May be the sector that suffered the most from the pandemic was tourism. Countries with a higher share of the tourism sector in the economy suffered, at least initially, more severely than those with a higher share of manufacturing (Wieland, 2022) but manufacturing significantly dropped in the second quarter of 2020 and with time when households expenditure switched from contact intensive services to more durable goods, the manufacturing sector recovered more quickly. Unfortunately, the increase of debt was followed by a period with increased inflation and interest rates after almost a decade of historically lowest interest rates. The increase of intereset rates impact directly the yield to maturity of government bonds (the price of the debt) where they jump out of zero levels t for a few months in 2022 to reach levels of a decade ago. That means when the new debt will have to be paid in several years most probably this will be by issuing new one at a higher price. The pace of debt increase should be very carefully taken estimating many factors that will influence the future repayment of the debt.

Wieland (2022) pays special attention to this problem where the author calculate three scenarios for the future price of debt with raise of 1,2 and 3 percentage points prediction will lead to 4% of GDP interest payment for Italy in the worst scenario, while in Spain and France it would stay below 2%. On Figure 2 is shown the ten-year government bond yield curve for Euro area and the average for EU countries. After a decade of decline there is a steep increase синце the pandemic reaching levels of over 4% interests. Some countries have significant increase of more than 3 percentage points as Hungary, Poland and Romania. The sharp increase may lead to more difficulties for debt issue as governments may consider the price of debt asked by the market too high as it was the case for Bulgaria and its last auction in September, 2022 which was canceled by the government after receiving too high offers of the market players.

Fig. 2

10-year government bonds yields for Euro area and average for EU countries



Source: Eurostat database: EMU convergence criterion series - annual data, author's calculations.

Looking at the financial data another problem that can be indicated is the raise of financial sector leverage (debt to equity) in 2020 and afterwards (Eurostat, 2021) in comparison to 2019 and the period before, again much higher increase compared to the previous years and valid for most of the EU countries, which is not good indicator for the stability and liquidity of the sector. Higher leverage rates can be a factor of default problems for companies exposed to additional shocks. Not only did business faced external problems with consumption, lockdown and health measures but financial burdens and external financing were additional management challenges.

Conclusion

The short analyses above show the huge magnitude of impact one global pandemic can have on economy. Not only serious health consequence for people all over the world are caused by pandemics, but also severe social and psychological effects appeared and have serious impact to the quality of living and economic prosperity. The more global and sever one pandemic is the higher costs and impact it has on the global economy. It was observed that countries' indebtedness increased uncomparable high and also the cost of debt sharply increased which will be a long-term problem for the state government and especially for countries with higher debt.

In the same time the financial structure of companies balance sheet also was affected increasing the level of leverage which also will be a long-term challenge. Inflation and new work situation are more of the consequences of pandemic.

One recommendation that some authors draw (Al-Dabbagh Z., 2020) is to work towards and achieve sustainable development which can contain the occurrence and emerging crises.

The one thing that is certain is that the consequences of the pandemic will spread their shadow and effects for the years to come and there will be years necessary to recover. Most important are the lessons of such crisis that taught companies to better prepare their crisis management plans and always be flexible in finding decisions for different work and life conditions. For sure governments will have to not only reassess the importance and stability of health systems but also to prepare better recovery and emergency plans for a proper and sustainable response to future pandemic crisis.

References

Al-Dabbagh Z., Sustainable development and its role in containing crises: Corona virus pandemic crisis (COVID-19) in China as a model, 2020, Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7461010/

Ali S., Ali I. , Novák P. EU-27 SMEs during pre-Covid-19 and COVID-19 crisis: SME-related brief insights, 2021, Proceedings of the 15th International Scientific Conference INPROFORUM 2021: „New trends and challenges in the management of organisations", http://omp.ef.jcu.cz/index.php/EF/catalog/book/74

Bloom E., Wit V., Carangal-San JoseM., Potential Economic Impact of an Avian Flu Pandemic on Asia, 2005, ERD POLICY BRIEF NO. 42. https://www.adb.org/sites/default/files/publication/28082/pb042.pdf

Braun D., 2018, "Why Viruses and Bacteria Constitute a Security Policy Issue", link at:

https://www.kas.de/en/web/auslandsinformationen/artikel/detail/-/content/unsichtbare-gegner

Di Gong a, Tao Jiang b, Liping Lu, Pandemic and bank lending: Evidence from the 2009 H1N1 pandemic, Finance Research Letters, 2021.
https://www.sciencedirect.com/science/article/pii/S1544612320305882?via%3Dihub

Partnership of NY, Partnership survey finds slow but steady increase in workers returning to the office, topping 50% by the end of the year, 2022, https://pfnyc.org/news/partnership-survey-finds-slow-but-steady-increase-in-workers-returning-to-the-office-topping-50-by-the-end-of-the-year/

Smith, R., Keogh-Brown, M., Macroeconomic impact of pandemic influenza and associated policies in Thailand, South Africa and Uganda ,2013, Influenza and other respiratory viruses, Volume 7, issue 2.

https://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC5909395&blobtype=pdf

Yoldascan E., Kurtaran B., Koyuncu M. Koyuncu E.,2010, Modeling the Economic Impact of Pandemic Influenza: A Case Study in Turkey, *Journal of Medical Systems*, Volume 34, pages139–145 ,2010 https://link.springer.com/article/10.1007/s10916-008-9225-x

Wieland V., Overview of how major economies have responded to the Covid-19 pandemic, 2022, Requested by the ECON committee.

https://www.europarl.europa.eu/RegData/etudes/STUD/2022/689450/IPOL_STU(2022)689450_EN.pdf

Database sources:

IMF, Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic, *Link:* https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19

Eurostat database (2022)

https://ec.europa.eu/eurostat/databrowser/view/tipsfs20/default/table?lang=en

Statista, 2021, Number of digital buyers worldwide from 2014 to 2021 (Visited on 1.02.2023)

https://www.statista.com/statistics/251666/number-of-digital-buyers-worldwide/