

The Republic of Serbia facing the challenge of preserving the health of citizens amidst falling economic activity and the need for credit

Abstract

This article reviews the initial experiences of Covid-19 in Serbia in the context of other pandemics during the 20th century. The author reviews the data on life expectancy, with a particular eye on the air pollution from which Belgrade suffers particularly badly and which had reached unprecedented levels immediately prior to Covid-19, as well as the pandemic's initial impact on mortality and on key life events including marriages and divorces. The main focus is human life and work, as well as the consequences for the economy, and the author reports in detail the response of the government of Serbia in terms of the declaration of the state of emergency as well as the measures set out to mitigate Covid-19's economic impact. She concludes from prior experience that the Covid-19 pandemic will, one day, be stopped but that what remains as an open question is the consequences it will leave behind across all segments of human activity. Nevertheless, what is quite certain is that, after the pandemic has taken its toll, it will have left the Republic of Serbia with additional credit indebtedness in the long run.

Keywords: Serbia, Covid-19, economic growth, air pollution, mortality, public debt

Introduction

The twentieth century could be considered the most destructive period of civilisation for several reasons. During this century, two world wars were fought as were hundreds of other smaller wars, among the last of which was the bloody collapse of Yugoslavia which culminated, in this century, in the war in Kosovo and the Federal Republic of Yugoslavia being bombed by NATO in 1999.

The wars of the 20th century not only resulted in human casualties¹ but also the collapse of economic systems and the recomposition of geopolitical forces among nations and states. After World War I, certain international organisations were created whose influence did not, however, have sufficient strength to shape the new world in which nationalism, protectionism and economic crisis grew. After World War II, there was greater co-operation and internationalisation at a global level via the IMF and the Bretton Woods system, the Marshall Plan, the UN, the Agreement on Cus-

1 For the First World War, over 37 million victims – more than 15 million dead and 22 million wounded – while for the Second World War, the data range from 56 million dead to up to 85 million.

toms and Trade, etc. New geopolitical relations were formed while, at the end of the 20th century, the processes of globalisation and expansion of information technologies heralded a new future in the 21st century.

However, these significant and well-known events have put themselves in humanity's collective consciousness in front of some other events that left lasting consequences for people. These are the 20th century pandemics that, between them, had a more disastrous impact than the suffering brought by both world wars. It has been shown that these pandemics, in addition to affecting human health directly, have a greater or lesser impact also on economic and geopolitical trends both at global level and at the level of certain regions and sovereign states.

In this same vein, the Covid-19 pandemic is, probably, permanently changing the world as we know it. Its presence is having a huge impact on all countries and people of the world, including the Republic of Serbia whose citizens, economy and credit indebtedness are the focus of this article.

The scale of pandemics, epidemics and other events of consequence for human health

The 1918-1920 influenza pandemic – so-called ‘Spanish flu’ – is considered the most deadly disease to affect the world: no war, famine or other tragic event in the history of civilization has caused so many human deaths in such a short period. It is commonly regarded that this pandemic caused the death of 21.5 million people, with recent studies estimating that number at 50 and even up to 100 million: one-third of the world's population at that time, about 500 million people, were infected and had visible signs of the disease (Cvetnić and Savić 2018).

Influenza had the character of a pandemic on several occasions during the 20th century including ‘Asian flu’ (1957-1958) and ‘Hong Kong flu’ (1968). In the 21st century, the world was threatened by bird flu in 2003 and swine flu in 2009.

In addition to the major flu epidemics, humanity has been threatened by other infectious diseases. Collective consciousness in the Balkans recalls very clearly, for example, the great epidemic of the 20th century *Variola Vera*, the smallpox epidemic which struck in 1972 (Bura 2012; Vučković 1981).

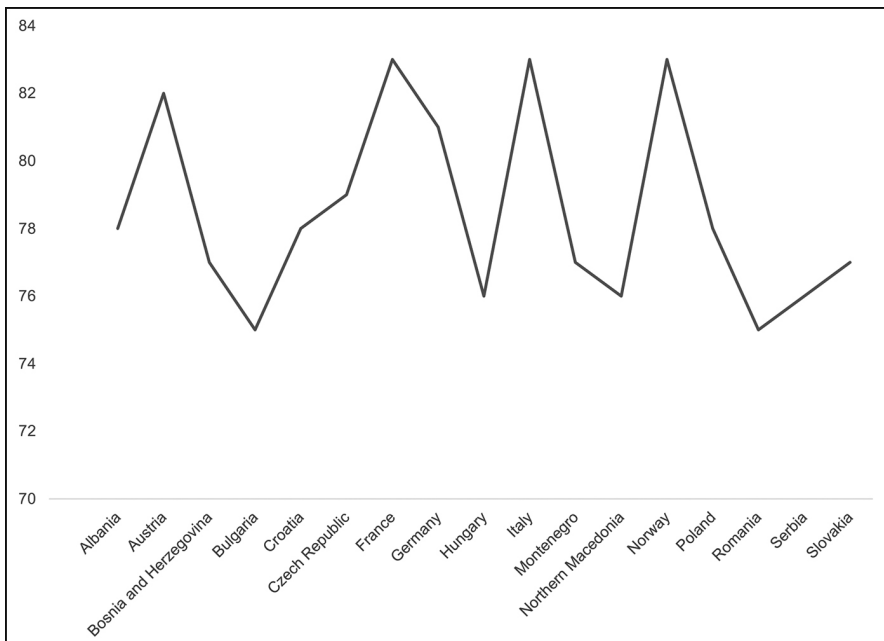
A modern, less infectious disease is the HIV virus and AIDS, which has infected a total of about 60 million people and from whose AIDS-related complications about 25 million people have died. In 2018, some 770,000 people died from AIDS-related diseases and it is estimated that, in 2019, about 38 million people across the globe were living with HIV.

In addition, diseases that today have a high mortality rate are cancer and obesity. The number of people suffering from malignant diseases as a result of obesity is constantly increasing: in 2015, some 15.2 million people fell ill and 8.9 million people died as a result of obesity; figures that are expected to rise by 2035 to respectively 24 million and 14.6 million (Matovina-Brko 2020).

Modern science is bringing a growing trend of the rate of certain diseases into a cause-and-effect relationship with the increasing pollution of nature. For example, it is estimated that, at global level during 2016, as many as 4.2 million people died of

heart, blood vessel and respiratory diseases due to poor air quality (Ministry of Environmental Protection 2019b). According to World Bank data, it can be noticed that the population of central and eastern Europe has shorter life expectancy than the population of western Europe and that the gap is growing (Murthi 2015). According to a United Nations report published in the summer of 2019, air pollution in the western Balkans exceeds the legally permitted health norms by up to five times – the reason why citizens of the western Balkans live, on average, 1.3 years shorter in as many as 19 cities (UNEP 2019).

Figure 1 – Life expectancy of the population, selected European countries



Source: World Bank data, drawn down on 15 October 2020.

Air quality and road traffic in Serbia prior to the Covid-19 pandemic

On 17 January 2020, the government of the Republic of Serbia formed a working group targeted at the systemic solution of issues in the field of air pollution protection (Ministry of Environmental Protection 2017, 2018, 2019a; *Official Gazette* 4/2020); and then, at its session on 12 March, adopted a Decree subsidising the purchase of new electric vehicles (*Official Gazette* 27/2020). Previous research had identified heat and electricity production processes (the burning of fossil and other fuels), industrial processes and road traffic as the main causes of air pollution in the Republic of Serbia (Besermenji 2007; Đorđević 2018), but the 12 March decision indicates that the Serbian government was focusing on the cause-and-effect relationship between air pollution and road traffic.

Just three days later, however, in order to suppress the Covid-19 epidemic, a state of emergency was introduced in Serbia which, among other things, included the introduction of a curfew and an absolute ban on movement. Although it was to be expected that air quality would improve due to the stoppage of traffic in Belgrade, on 27 March, Belgrade nevertheless broke into first place on IQAir's list of 'the most polluted cities in the world'. Serbia's media all reported that, due to air quality, serious health problems could be expected in healthy people and in vulnerable groups of the population: the elderly; children; and people with heart and lung diseases. The recommendation for the entire population was:

Avoid all physical activities in the outdoor environment, shorten stays in the open air and redirect the performance of normal activities indoors until the air quality improves. (*Danas*, 15 October 2020)

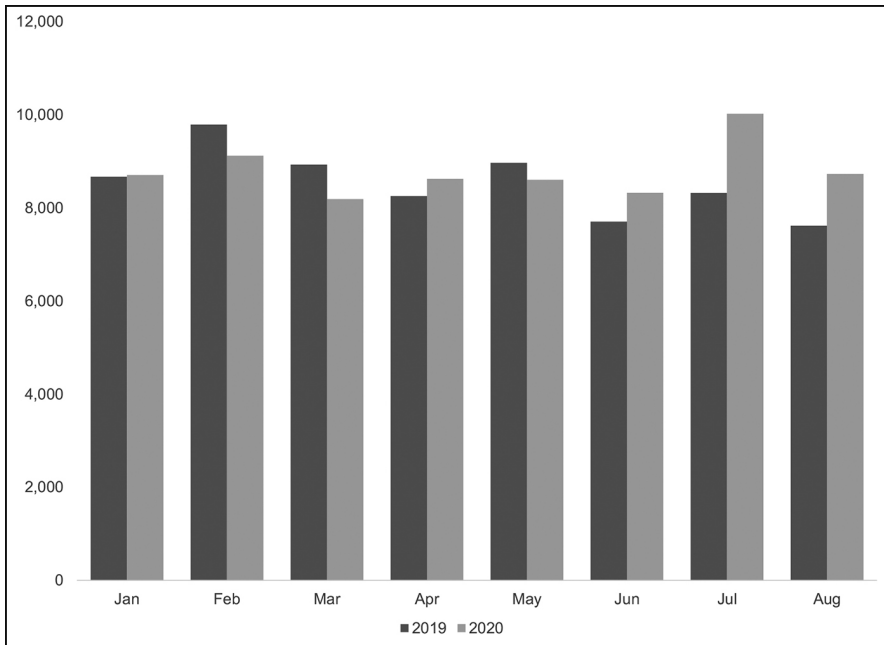
In anticipation of the results of a detailed analysis of air quality measurements in Belgrade for 2020 (to be published in the *Yearbook* of SEPA, the Serbian Environmental Protection Agency), as well as the conclusions of SEPA's professional scientists regarding the causal relationship between air quality and the emission of harmful substances, it is likely that the citizens of Belgrade could thus feel real benefit (in addition to stopping the spread of the Covid-19 pandemic) from the state of emergency as well as from the traffic ban. The latter also saw benefits in terms of the reduction in the level of noise pollution which had exceeded permitted values in 2017, 2018 and 2019 (Petrović 2018: 46; Petrović 2019: 44; Petrović 2020: 9).

Additionally, as a consequence of the ban on movement, it was expected that there would be a smaller number of deaths caused by traffic accidents; this was indeed confirmed later by official statistics.

Mortality and social statistics during the Covid-19 pandemic

Results of water, air and soil monitoring in the Republic of Serbia in the period 2005-2019, as reported annually by SEPA, indicate the possible risks to human health and mortality but the effects of air pollution, especially in Belgrade in March 2020, is now entering an unknown scenario given the outbreak of the Covid-19 pandemic. Scientific recommendations regarding air pollution had been aimed equally at banning outdoor trips and movement in general, and mortality statistics clearly indicate that, for the first three months of 2020, 1,381 fewer people died in Serbia than in the same period of 2019 (Statistical Office of the Republic of Serbia (2020d). According to the same statistics, however, the number of deaths in April 2020 exceeded the number of deaths in the same month in 2019, while the same was true (and much more so) in June, July and August – see Figure 2. Given the unprecedented level of air pollution at the end of March, it is possible that some of the consequences of this pollution were reflected through the mortality rate in April 2020.

Figure 2 – Deaths in the Republic of Serbia, January-August 2019-2020

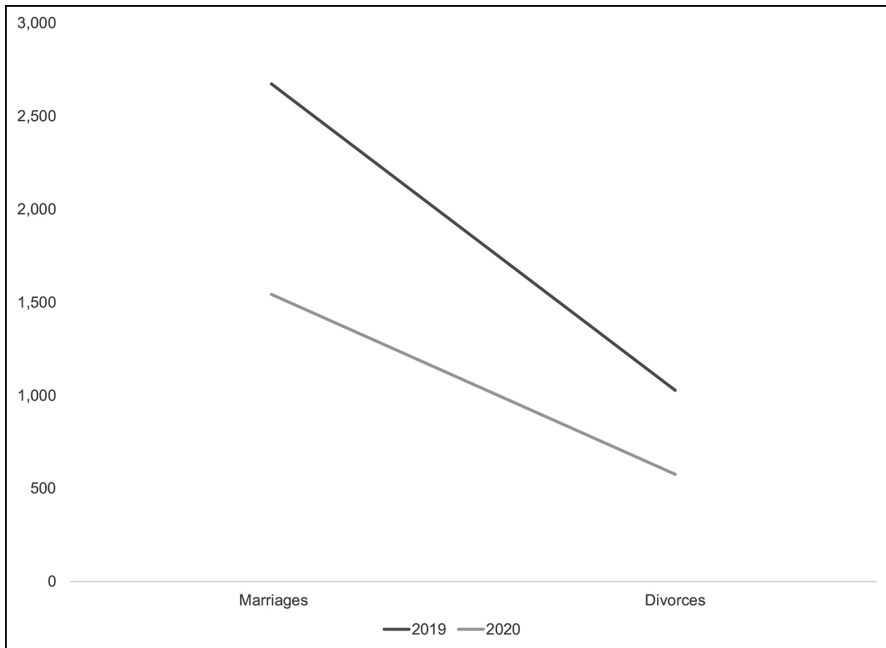


Source: Statistical Office of the Republic of Serbia (2020d)

The mortality rate for the first three months of 2020 was lower compared to the same period in 2019 but it is likely that, by the end of 2020, the population mortality rate in Serbia, for reasons which cannot be attributed to the Covid-19 pandemic, will be higher than at the end of 2019. The point is that, in Serbia, the generation of people born after World War II and in the 1950s is dominant; it is this generation that has now entered the ‘third age’ which will inevitably cause the number of deaths to be higher in the coming years. Special attention should be made that this generation was at an increased risk of other diseases due to the introduction of the state of emergency, the ban on movement and the transformation of health institutions (hospitals, clinics and dispensaries) into Covid-19 hospitals and centres. Serbia is, already, among the top ten countries in the world in terms of the number of deaths from cardiovascular diseases and malignant tumours (Marinković 2012; Marinković and Radivojević 2016).

The state of emergency declared due to the Covid-19 pandemic has significantly affected all segments of life in Serbia – something that is also confirmed by data related to divorces and marriages for the periods January-June 2019 and January-June 2020, as Figure 3 shows:

Figure 3 – Marriages and divorces in the Republic of Serbia, January-June, 2019-2020



Source: Statistical Office of the Republic of Serbia (2020c)

Impact of the Covid-19 pandemic on human life and work in the Republic of Serbia

In order to make the country functional under the conditions of the state of emergency, a number of regulations (decisions, decrees and orders) have been adopted in Serbia at government level regarding the prevention of the spread of Covid-19.² The entire education system has been urgently reoriented to online teaching (*Official Gazette* 30/2020) while art has moved from the real framework of theatres, exhibition spaces and concert halls to the virtual world.

During the state of emergency, the internet became a key factor in everyday life, with employees whose jobs are related to the use of modern information technology able to perform their jobs at home (*Official Gazette* 30/2020). However, what must be pointed out is that not all jobs may be done through modern technologies, while not all households in Serbia are connected to the internet. According to research, in 2018, 72.9 per cent of households had an internet connection, an increase of 4.9 per cent percentage points compared to 2017 (Kovačević *et al.* 2018). In 2019, this had

2 See the list which, as of February 2021, is regularly updated at: <https://www.paragraf.rs/svi-pr-opsi-uputstva-za-sprecanje-sirenja-korona-virusa-covid-19.html>.

risen to 80.1 per cent (Kovačević *et al.* 2019) and, in 2020, to 81 per cent (Kovačević *et al.* 2020). Between 2017 and 2020 there was thus a noticeable increase in the percentage of households having the internet but, in 2020, 19 per cent of households still did not. Children from households that did not have access to the internet during this time could not attend regular classes in primary and secondary schools, while the same is true for those in higher education institutions. Similarly, households that do not have the internet could not access the ability to work from home and neither could they use other services, for example being able to follow cultural programmes (theatres, exhibitions, concerts, libraries).

Why do households not have access to the internet? Is it because they do not have the necessary knowledge and skills in the use of information technology, or is it because they cannot afford it? According to official data, the at risk of poverty rate in 2019 was 23.2 per cent (compared to 2018, it is lower by 1.1 percentage points); while the rate of risk of poverty or social exclusion was 31.7 per cent (a drop of 2.6 percentage points on the 2018 data) (Statistical Office of the Republic of Serbia 2020e). Eurostat classifies the Republic of Serbia, along with Northern Macedonia, Turkey and Romania, as a country with a very high risk of poverty (Eurostat 2020) with percentages that are higher than those published domestically.

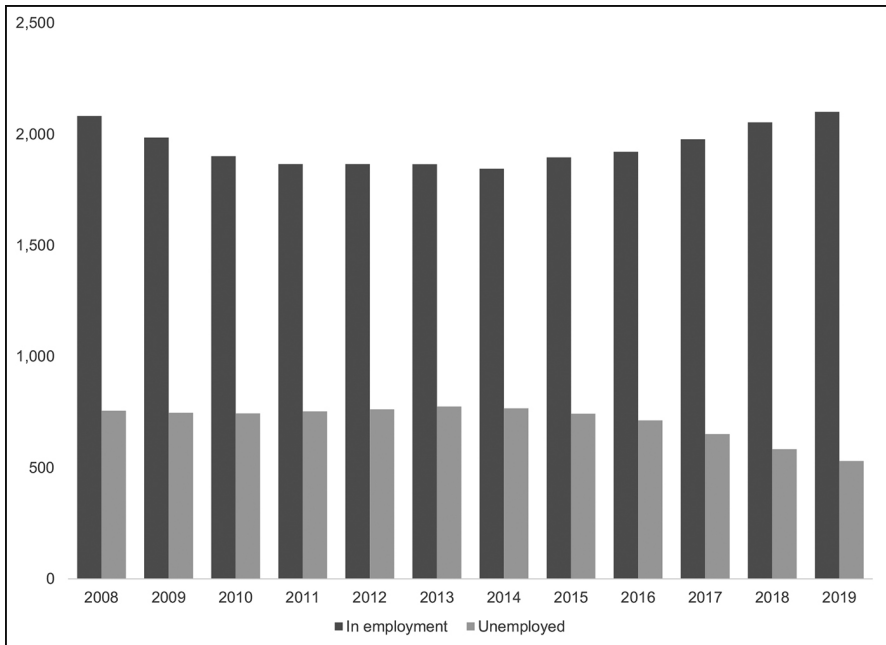
We don't know the impact of the pandemic on the percentage of the population at risk of poverty, but the Covid-19 pandemic certainly threatens to have much wider consequences for the Serbian economy than the health of the population alone.

The economy in the Republic of Serbia from the 2008 economic crisis to the Covid-19 pandemic

Data on the employment rate in Serbia in the period 2008-2019 indicate a slight level of change which, from the initial year, shows a downwards trend during the first part of this period, a consequence of the economic crisis in 2009.³ The slight decline in the employment rate is, however, not proportional to the oscillations observed in Gross Domestic Product, especially in 2009 when a decline in GDP of 2.7 per cent was recorded. In 2012, the decline was 0.7 per cent and, in 2014, there was a 1.6 per cent drop (National Bank of Serbia 2020: 118). From 2015 to 2019, however, employment growth was noticeable while, in the same period, the Gross Domestic Product curve is characterised by sharp changes albeit all in the area of growth.

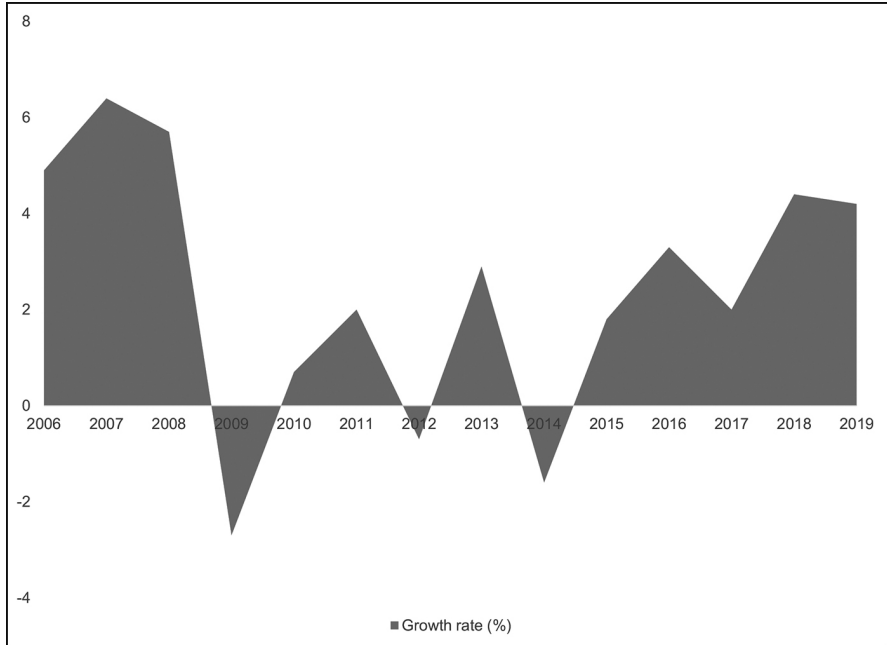
3 The following analysis is based on data published in the *Statistical Bulletin of the National Bank of Serbia* (National Bank of Serbia 2020: 124). The data refer to the number of employees of legal entities and entrepreneurs, excluding registered individual farmers. Only active unemployed people are counted, not all those who are registered with the National Employment Service.

Figure 4 – Employment in the Republic of Serbia in the period 2008-2019 (000, average)



Source: National Bank of Serbia (2020)

Chart 5 – GDP of the Republic Serbia, 2006-2019



Source: National Bank of Serbia (2020)

The foreign trade balance of Serbia was constantly in deficit between 2015 and 2019. Proportionately speaking, the foreign trade balance was highest in 2016.

Table 1 – Foreign trade balance of the Republic of Serbia, 2015-2019 (\$m)

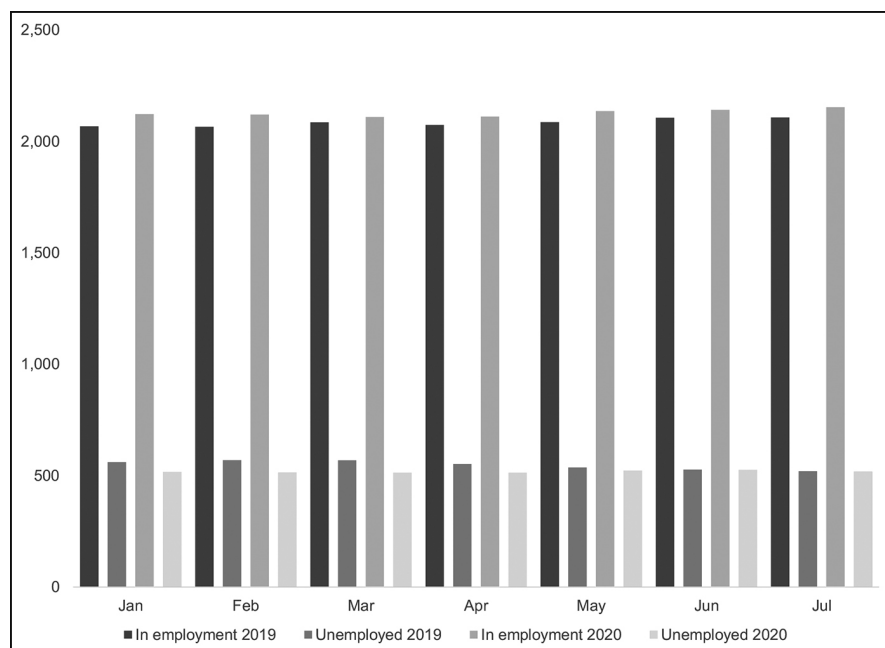
	2015	2016	2017	2018	2019
Exports	13,376	14,883	16,997	19,239	19,630
Imports	17,875	18,899	21,921	25,883	26,730
Deficit	-4,499	-4,016	-4,923	-6,644	-7,101
Coverage of imports by exports (%)	74.8	78.8	77.5	74.3	73.4

Source: Statistical Office of the Republic of Serbia (2020f)

A comparative review of employment in Serbia for the periods January-July 2019 and the same period in 2020 indicates a fairly stable relationship in the labour market, regardless of the impact of the Covid-19 pandemic, with neither employment nor unemployment showing any significant changes. Such a result stems from the activities of the government which, through a series of measures adopted during the state

of emergency and after its abolition, sought to mitigate the negative consequences of the pandemic and preserve economic stability (*Official Gazette*, various, as listed in the References).

Figure 6 – Overview of employment and unemployment in the Republic of Serbia, January-July, 2019-2020 (000, average)



Source: National Bank of Serbia (2020)

The Republic of Serbia took on the payment of the March monthly net minimum wage (30,367 dinars – c. €259) for all employees in micro, small and medium enterprises and of entrepreneurs for a period of three months as long as the employer did not reduce the number of employees by more than 10 per cent in the period between 15 March (when the state of emergency was introduced) and 10 April. Large companies were entitled to subsidies of 50 per cent of the net minimum wage for employees put temporarily out of work. Additionally, companies were allowed to postpone tax payments for March, April and June, with the possibility of repayment in 24 monthly instalments starting in 2021, although companies in the financial sector (banks and insurance companies) were not entitled to support via this measure.

Additionally, a capital credit line was extended for micro enterprises, SMEs and entrepreneurs amounting to 24 billion dinars with a grace period of twelve months, a repayment period of 36 months and an interest rate of 1 per cent. The condition for obtaining such a loan was, likewise, that the employer had not reduced the number of employees by more than 10 per cent since March 15. The state also took on the role

of providing commercial bank loan guarantees in order to maintain the liquidity and working capital of micro enterprises, SMEs and entrepreneurs, as well as registered agricultural holdings. The repayment period for these loans is 36 months, including a grace period of between nine and twelve months (*Official Gazette*, various, as listed in the References).

In the public sector, the salaries of health workers were increased by 10 per cent (*Official Gazette* 48/2020). Furthermore, one-off support of 11,759 dinars (€100) was paid to each adult citizen (*Official Gazette* 60/2020).

However, despite all the efforts to reduce the negative effects of the pandemic, economic activity in Serbia dropped significantly in the early days, with industrial production decreasing in April by 16.6 per cent and in May by 9.3 per cent. Retail sales fell by 18.6 per cent in April while the tourism sector experienced a record decline of 97.9 per cent in April and 87.6 per cent in May. Foreign trade also saw a significant decline, falling by 28.2 per cent in April and 26.4 per cent in May (Statistical Office of the Republic of Serbia 2020a, 2020b).

Along with the decline in economic activity, what is additionally burdening Serbia is the level of state support made to reduce the negative impacts. This was not financed from within the economy but from international credit (*Official Gazette* 52/2020). Serbia received a loan of \$100m from the World Bank on 26 May while previously approved credit funds (\$70m) under the name of the Disaster Risk Management Project were also drawn down from the same source. How these newly incurred liabilities will affect public debt remains to be seen. What is clear is that public debt has increased. According to the Public Debt Administration, the public debt balance amounted at the end of 2018 to €23.3bn, rising by the end of 2019 to €24.5bn. The estimated number of inhabitants of Serbia in 2019 was 6.95m, which would mean that each inhabitant is indebted to the tune of €3,531.

We will know how much the Covid-19 pandemic has increased the public debt after the end of the pandemic; but what is already quite certain is that the poor will be even poorer and that a poverty pandemic is yet to come.

Conclusions

The first case of Covid-19 in Serbia was registered on 6 March 2020. This was followed by various government orders seeking to control the spread of the virus, including the introduction of a curfew, restrictions on movement, the closure of schools, a ban on gatherings, etc. culminating in the declaration of the state of emergency on 15 March. The mitigation of the rigorous measures began on 21 April 21 while the state of emergency was lifted on 6 May although various restrictions remained in force.

From 5 June, life returned to normal and, on 10 June, a football match was played in Belgrade at which 25,000 people gathered. Parliamentary elections were held on 21 June and, just a few days later, the number of new Covid-19 cases began to grow again. As of 1 July, the mandatory use of masks was re-introduced in public places and on transportation and, on 7 July, the President announced the possibility of reintroducing curfews. This provoked protests from citizens, especially in Belgrade although this was where the number of new infections had drastically in-

creased. In September, the epidemic again began to subside and a large number of citizens used this time to go on vacation outside the borders of Serbia, forcing the government to adopt new measures, with October bringing a new wave of infections.

Economic recovery depends significantly on how the pandemic will continue to develop. It is clear that state support in relation to suppressing the negative economic consequences of the pandemic will affect GDP, especially since these have, for the most part, been financed by credit. Experience with the pandemics of the twentieth century suggest that Covid-19 will, one day, be stopped. What remains is the question of its consequences across all segments of human life and work although what is quite certain is that, at this point, it will have created additional indebtedness for the country.

References

- Besermenji, S (2007) 'Zagađenje vazduha u Srbiji' ('Air pollution in Serbia') *Journal of the Geographical Institute "Jovan Cvijić" SASA* 37: 495-501.
- Bura, N (2012) *Without autopsy – a book on the epidemic of smallpox in Serbia* Novi Sad.
- Chan, M (2009) 'World now at the start of 2009 influenza pandemic' Press Statement by the Director-General of the World Health Organization, 11 June, accessed 4 February 2021 at: https://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/.
- Cvetnić, Ž and V. Savić (2018) 'Prije 100 godina španjolska gripa „majka“ svih pandemija poharala je svijet' ('100 years ago, the Spanish flu, the 'mother' of all pandemics, ravaged the world' *Veterinarska stanica* 49 (5): 333-341.
- Đorđević, M (2018) 'Zagađivanje i zaštite vazduha, vode i zemljišta' ('Pollution and the protection of air, water and land' *Vojno delo* 7: 465-474.
- Eurostat (2020) 'Income poverty statistics' last updated 4 December 2020 and accessed 4 February 2021 at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Income_poverty_statistics.
- Kovačević, M, K. Pavlović and V. Šutić (2018) *Upotreba informaciono-komunikacionih tehnologija u Republici Srbiji, 2018 (Use of information and communication technologies in Serbia in 2018)* Beograd: Republički zavod za statistiku.
- Kovačević M, V. Šutić, U. Rajčević and A. Milinković (2019) *Upotreba informaciono-komunikacionih tehnologija, 2019 (Use of information and communication technologies in 2019)* Beograd: Republički zavod za statistiku.
- Kovačević M, V. Šutić, U. Rajčević and A. Milinković (2020) *Upotreba informaciono-komunikacionih tehnologija, 2020 (Use of information and communication technologies in 2019)* Beograd: Republički zavod za statistiku.
- Matovina-Brko, G (2020) 'Maligne bolesti i gojaznost su dve epidemije savremenog sveta' ('Malignant diseases and obesity are two epidemics of the modern world') *Actavis* blog 31 January 2020, last accessed on 4 February at: <https://www.ac->

tavis.rs/terapeutske-oblasti/opta-medicina/article-pages/maligne-bolesti-i-gojaznost-su-dve-epidemije-savremenog-sveta/.

- Marinković, I (2012) 'Causes of death in Serbia since the middle of the XX century' *Stanovništvo (Population)* 50 (1): 89-106.
- Marinković, I and B. Radivojević (2016) 'Mortality trends and depopulation in Serbia' *Geographica Pannonica* 20(4): 220-226.
- Ministry of Environmental Protection (2017) *Annual report on the state of air quality in Republic of Serbia for 2016* Belgrade: Ministry of Environmental Protection/ Environmental Protection Agency.
- Ministry of Environmental Protection (2018) *Annual report on the state of air quality in Republic of Serbia for 2017* Belgrade: Ministry of Environmental Protection/ Environmental Protection Agency.
- Ministry of Environmental Protection (2019a) *Annual report on the state of air quality in Republic of Serbia for 2018* Belgrade: Ministry of Environmental Protection/ Environmental Protection Agency.
- Ministry of Environmental Protection (2019b) *Environment in Serbia 2004-2019: Extended Summary* Belgrade: Ministry of Environmental Protection/ Environmental Protection Agency.
- Murthi, M (2015) 'In Europe, life gets shorter for some' *Brookings* blog, 21 April 2015, accessed 4 February 2021 at: <http://www.brookings.edu/blogs/future-development/posts/2015/04/21-europe-aging-murthi>.
- National Bank of Serbia (2020) *Statistical Bulletin of the National Bank of Serbia* August.
- Official Gazette of the Republic of Serbia* (including, amongst others, the following key announcements):
- 4/2020: Decision on the formation of a working group for the systemic solution of air protection issues
 - 27/2020: Decree on the conditions and manner of implementation of the subsidized purchase of new vehicles that have exclusively electric drives as well as vehicles that, in addition to an internal combustion engine, also start with an electric drive (hybrid drive)
 - 30/2020: Decision on the suspension of teaching; Decree on organising the work of employers during the state of emergency; Decision on limiting the price of basic foodstuffs and protective equipment
 - 35/2020: Decision on limiting the prices and margins of basic foodstuffs and protective equipment
 - 37/2020: Decision on amending the Decision on a temporary ban on the export of basic products important for the population
 - 38/2020: Regulation on tax measures during the state of emergency; Decree on the use of financial resources of the budget during the state of emergency

40/2020: Decree on limiting the retail price of protective equipment during the state of emergency

41/2020: Decision amending the Decision on a temporary ban on the export of basic products important for the population

42/2020: Regulation on investment of foreign currency funds managed by the Deposit Insurance Agency; Decision on fees in payment operations and transfer of funds for the purpose of receiving donations

43/2020: Decision amending the Decision on a temporary ban on the export of basic products important for the population

48/2020: Decree on the supplement to the basic salary of employees in health care institutions and certain employees performing activities in the field of health

50/2020: Decree amending the Decree on obtaining consent for new employment and additional employment from users of public funds

52/2020: Decree on additional borrowing during the state of emergency by taking loans, issuing government securities on domestic and international financial markets and providing guarantees of the Republic of Serbia; Decision on the formation of a Coordination Body for the implementation of a programme of measures to support the economy of the Republic of Serbia

54/2020: Regulation on fiscal benefits and direct benefits to economic entities in the private sector and financial assistance to citizens; Decree on the procedure for issuing debt securities; Decree on the conditions and criteria for compliance with state aid; Decree on the conditions and criteria for the compliance of state aid; Decree on establishing a programme of financial support to economic entities for maintaining liquidity and working capital; Decree on moving the deadline for the submission of quarterly reports on the implementation of the business programme

57/2020: Regulation on financial support to agricultural holdings through facilitated access to the use of loans; Decree on the postponement of deadlines for holding a regular session of general meetings and the submission of financial reports, as well as deadlines for filing income tax and income tax returns; Decree on establishing a guarantee scheme; Decree amending the Decree on establishing a programme of financial support to economic entities

60/2020: Decree on the establishment of a temporary register and the payment of one-off financial assistance to all adult citizens

Petrović, Z (2018) *Statistical Yearbook of Belgrade 2017* Belgrade: Secretariat for Administration – Sector of Statistics.

Petrović, Z (2019) *Statistical Yearbook of Belgrade 2018* Belgrade: Secretariat for Administration – Sector of Statistics.

Petrović, Z (2020) *Belgrade in Figures* Belgrade: Secretariat for Administration – Sector of Statistics.

Statistical Office of the Republic of Serbia (2020a) *Monthly Statistical Bulletin* 4/2020, Beograd: RZS.

- Statistical Office of the Republic of Serbia (2020b) *Monthly Statistical Bulletin* 5/2020; Beograd: RZS.
- Statistical Office of the Republic of Serbia (2020c) *Monthly Statistical Bulletin* 7/2020, Beograd: RZS.
- Statistical Office of the Republic of Serbia (2020d) 'Živorodeni i umrli, januar-avgust 2020' ('Live births and deaths, January-August 2020') *Press Release No. 261*, 25 September 2020, accessed 4 February 2021 at: <https://www.stat.gov.rs/en-us/vesti/20200925-zivorodjeni-i-umrli-januar-avgust-2020/>.
- Statistical Office of the Republic of Serbia (2020e) *Siromaštvo i socijalna nejednakost, 2019 (Poverty and Social Inequality 2019)*, 15 October 2020, accessed 4 February at: <https://www.stat.gov.rs/sr-Latn/vesti/20201015-siromastvo-i-socijalna-nejednakost-2019>.
- Statistical Office of the Republic of Serbia (2020f) *Statistical Calendar of the Republic of Serbia 2020* available at: <https://www.stat.gov.rs/en-us/calendar/>.
- UN Environment Programme (2019) 'Air pollution is responsible for every fifth premature death in 19 cities in the Western Balkans', Press Release, 4 June 2019, accessed 4 February 2021 at: <https://www.unep.org/news-and-stories/press-releases/air-pollution-responsible-one-five-premature-deaths-19-western>.
- Vučković, B (1981) *Epidemic of smallpox in Yugoslavia in 1972 – Between government and the public* Graduate Thesis, Belgrade: Faculty of Philosophy.

Miscellaneous websites:

www.srbija.gov.rs

www.paragraf.rs

<https://www.stat.gov.rs/sr-latn/oblasti/stanovnistvo/procene-stanovnistva/> (20 October 2020)

www.actavis.rs

www.istorijskizabavnik.rs

www.who.int

www.worldbank.org

www.ec.europa.eu/eurostat/statistics

www.iqair.com/world-air-quality-ranking

www.danas.rs/drustvo/beograd-najzagadjenija-prestonica (15 October 2020)

www.unenvironment.org

www.batut.org

www.javnidug.gov.rs

www.sepa.gov.rs

<https://www.nationalgeographic.rs>

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