

Effectiveness of Covid-19 crisis management strategies in the Eastern countries of the European Union with special regard to fiscal and monetary policy tools

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The publication of statistical data related to the last quarter of 2021 provides an excellent opportunity to evaluate the effectiveness of Covid-19 crisis management. The paper shows four different success indicators. These are the employment rate increase, the difference in the slope of GDP growth prior to and during the Covid-19 pandemic to measure the depth of the crisis, the ratio between the depth of economic decline and the required time to recover the economic output of 2019 Q4. These success indicators are compared with the increase of gross public debt. Eleven Central and Eastern European countries are compared with the EU average. Since the Hungarian economy suffered the second largest decline among the Central and Eastern European countries, but Hungary had the second fastest recovery (with a significant public debt increase) and the highest increase in employment rate, the monetary and economic tools of this country are analysed in detail. If we consider the GDP growth difference, Estonia, Slovenia and Croatia performed better than the EU average, whereas Slovakia, Romania and the Czech Republic performed worse. However, this indicator did not consider the depth of the shock that fiscal and monetary policies had to face. If we consider the second indicator – which is called the “boost” indicator, the most successful countries are in descending order: Lithuania, Poland, Estonia, Hungary, and Slovenia. Generally, the countries that were successful were those which spent a significant amount of money to avoid the credit crunch (lowering interest rate, investment boost) and offer tax relief to dedicated sectors. The general welfare spending (wage support, family subsidies, and longer unemployment benefits, health care) seemed to be inadequate in boosting the economy.

Keywords: Covid-19 crisis, fiscal and monetary policy, Central and Eastern Europe.

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Introduction

Two years have passed since the Covid-19 crisis. This gives us enough time to draw some conclusions on how the countries managed the crisis. Several studies examined the effects of the Covid-19 pandemic on the global economy

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(MNB 2021). We do not have a longer timeframe to analyse because the Russia - Ukraine war has created different economic circumstances. This article evaluates the effectiveness of the Covid-19 crisis management strategies in the Eastern part of the European Union based on the recent statistical data provided by Eurostat and the policy tools presented and summarised in the IMF country reports.

This article examines how we can measure the economic success of crisis management strategies and the difference between the tools employed by successful and unsuccessful countries. After introducing some major findings on this issue, the paper presents some indicators for measuring the effectiveness of economic policies. These measures are calculated for eleven Central and Eastern European countries and compared with the EU average. Furthermore, the paper compares the fiscal policy tools of the most and least successful countries. Since the Hungarian economy suffered the second largest decline, but it had the second fastest recovery (with a significant public debt increase), the monetary and economic tools of this country are analysed in detail. Finally, some conclusions are drawn.

Literature review

The Covid-19 crisis is an atypical economic crisis. A typical economic crisis starts with the bankruptcy of an overfinanced economic sector or country. In 1929, it was the security trading in the US; in 1981, it was the indebted South American countries; in 2008, it was the domestic internal market. The significant increase in non-performing loans causes a credit crunch, which turns the fiscal crisis into an economic overproduction crisis. Commodity prices, the employment and private investments fall, which leads to decreasing consumption, which then causes a further decrease in employment and investment, pointing to a vicious cycle (Mattick 2020).

The Covid-19 crisis showed a different pattern (Borio 2020). The crisis disrupted the supply chains, stopped the production and hurt personal services and tourism. It appeared like a lack of supply and led to higher commodity prices. The crisis started with the fall of GDP without the fall of consumption. Even the demand side was boosted by fiscal and monetary policy tools which further increased the prices. The Covid-19 crisis shows more similarities with the oil crisis from 1973 than with other types of crises (Altıparmak 2021), and the answer to the crisis was similar to what they did in the 70s. Pouring money into the economy

using a special lending scheme, tax reliefs and public expenses. In the 1970s, this led to stagflation and protracted crisis.

Naturally, the first phase of the pandemic was dominated by health care expenses and restrictions. Worldwide, the direct health care policy mix for the crisis can be broadly classified into 16 key responses (Goyal–Howlett 2021). The overall policy mix was dominated by authoritative policy tools – such as curfews and lockdowns, border restrictions, quarantine and contact tracing, and regulation of businesses.

In the countries where the median age is higher (which is very relevant in the case of COVID-19 as it disproportionately affects older patients), the number of hospital beds per capita is lower and GDP per capita is higher, the stimulus is more pronounced (Elgin et al. 2020).

Unsurprisingly, the EU countries relied extensively on fiscal policies to mitigate the harmful consequences of the Covid-19 pandemic for their economies (Haroutunian et al. 2021). A wide range of measures were implemented, from liquidity measures like loan expansion to tax cuts and public expenditure boost. Some targeted specific sectors, like health care spending, other were more general, like welfare spending. Since the Covid-19 crisis hit all the countries mostly in the same way, their fiscal responses in the early stages of the crisis were similar in terms of the instruments used.

Emergency fiscal packages were mostly targeted at limiting the economic decline by protecting firms and workers in the affected industries. Extensive liquidity support measures were introduced in the form of tax deferrals and State guarantees for the firms that were particularly affected by the containment policies to avoid liquidity shortages. In order to support the recovery, general fiscal stimulus tools were implemented, such as government investments. The Next Generation EU package can play a key role in the future.

Three dimensions of fiscal policy responses to Covid-19 show similarities and heterogeneity, namely the size of fiscal spending, the types and targets of fiscal policy responses (Chen et al. 2021). Managing the Covid-19 crisis with transboundary spillovers requires a coherent fiscal and monetary strategy as well as institutionalised mechanisms of coordination and support across levels of government, territorial jurisdictions (Liu–Geva–May 2021).

However, a remarkable part of the European economy remained demand constrained during the Covid-19 pandemic. Globally, the fiscal policy helped offset about 8% of the downturn caused by Covid-19, with a low ‘traditional’

fiscal multiplier (Gourinchas et al. 2021). But the recovery would put significant upwards pressure on global interest rates which imposes an additional headwind on European recovery. Corporate and sovereign spreads rise when global rates increase, suggesting that public debt financing may face challenging external funding conditions as advanced economies normalise (Gourinchas et al. 2021).

To put the focus now on Central and Eastern Europe (hereinafter referred to as the CEE), the strong reliance on exports has rendered all the countries vulnerable to the international evolution of the Coronavirus-induced economic crisis. Poland is the only exception because of its huge domestic market (Podvrsic et al. 2020). The lockdown implemented in the first quarter of 2020 deeply affected many areas of the service sector (personal social services, transportation, trade, tourism). Considering the countries' credit risk, the S&P rating of Central European countries shows significant differences between the Czech Republic, Slovenia, Estonia (AA+) at the one end and Romania and Croatia (BBB-) at the other (tradingeconomics.com 2021). The three Baltic states, Slovakia and Slovenia are members of the Eurozone, while the Czech Republic, Poland, Croatia and Hungary have their own national currencies.

Table 1. Annual GDP growth, employment rates and gross public debt/GDP in the analysed countries and the EU average at the end of 2019

Countries	Abbreviations	GDP growth	Employment rate	Debt/GDP
EU average	EU	1.8	72.9	77.5
Bulgaria	BG	4.0	73.9	20.0
Croatia	HR	3.5	67.5	71.1
Czech Republic	CZ	3.0	80.3	30.1
Estonia	EE	4.1	81.5	8.6
Latvia	LV	2.5	77.6	36.7
Lithuania	LT	4.6	78.3	35.9
Hungary	HU	4.6	77.6	65.5
Poland	PL	4.7	75.7	45.6
Romania	RO	4.2	65.7	35.3
Slovakia	SK	2.6	75.2	48.1
Slovenia	SI	3.3	75.6	65.6

Source: Eurostat (2022)

Table 1 shows the initial state of the countries' analysed indicators prior the Covid-19 crisis. In 2019, all Central European countries achieved higher economic

growth rates than the EU average. Since these countries' GDP per capita figures are lower than the EU average, the higher growth shows a growing European cohesion. The employment rate varies between 81.5% (Estonia) and 65.7% (Romania). In the northern and western parts of Central Europe, we see higher employment rates than in the southern and eastern parts. The public debt is over 50% in the southwest part of this area (Croatia, Hungary, Slovenia), Slovakia's debt is average, while the rest of the countries have moderate public debt, which gave them more flexibility in monetary and fiscal ease.

Research question and indicators used

The goal of this paper was to evaluate the effectiveness of Covid-19 crisis management strategies in Central and Eastern European countries. More specifically, it examined the trade-off between some success factors and the public debt increase. The following hypothesis was formulated: *The larger the size of public spending, the greater the success.*

This hypothesis assumes the same effectiveness of public spending. If a government spent less on crisis management, the success was lower, if the spending was significant, the success was higher.

If this hypothesis is rejected because the link between the spending and some success factors cannot be verified, the practices of the most effective countries are worth studying.

The sacrifice of fiscal and monetary policy tools is measured by the increase in gross public debt. The advantages of this indicator are that:

- It is available and downloadable from the Eurostat website,
- The methodology for determining the gross public debt is standardised across the European Union, thus country data are comparable.

The benefits of fiscal and monetary policy tools are measured by four indicators. Since the public deficit is a national level indicator, the benefits are also considered at a national level.

- Employment rate – The most devastating effect of an economic crisis is the decline in activity. People lose their jobs and have to cut their spending, which further deteriorates the economic situation by decreasing the aggregate demand. The uncertainty caused by staggering unemployment presses people to save more and consume less. Falling employment may increase social tensions and the emerging strikes lead to further economic decline. Employment is a crucial
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question since the longer the time spent in unemployment, the less probable and less successful it is to eventually find a proper job. To measure the economic efforts to save jobs, the employment rate changes between 2019 Q4 and 2021 Q4 were chosen as the most important success indicator in the following way:

$$\text{Change} \in \text{employmentrate} = \text{Employmentrateof2019Q4} - \text{Employmentrate2021Q4}$$

- GDP trend difference – The indicator compares the quarterly GDP growth before and after the outbreak of the crisis. A linear trend was calculated from the quarterly GDP figures between 2013 Q1 and 2019 Q4 (this represents the pre-crisis trend) and between 2020 Q1 and 2021 Q4 (this represents the post-crisis trend). The slope of pre- and post- crisis trends measures the average quarterly GDP growth. The difference between the post- and pre-crisis slopes is used as a success indicator. A higher value means a better adaptation of the economy to the crisis.

- Depth of crisis: The limitation of the previously used GDP trend difference in evaluating the performance of fiscal and monetary policy is that the success of adaptation is not only due to economic policy. If the national economy consists of less crisis-sensitive sectors, or the size of the economy is large, or the health restrictions were less rigid in the country, the GDP trend difference may have a positive value, regardless of the quality of fiscal and monetary response. To get a more policy-focused indicator, the depth of crisis indicator was calculated. It is the range between the maximum and minimum quarterly GDP in the period of 2020–2021. If there was a big decline in economic output in the first quarter of 2020, which was compensated by a massive recovery, then the depth will be great, which indicates that the fiscal policy was able to counterbalance the vast negative effects of the crisis. If the depth is moderate, the economy withstood the crisis and there was no need for boosting public spending.

$$\text{Depth of crisis} = \text{MaximumofquarterlyGDP} - \text{MinimumofquarterlyGDP} \quad (1)$$

- Boost: The depth of crisis indicator is determined by the recovery speed, which is identified as the number of quarters required to reach the GDP level of 2019 Q4. This indicator tries to measure the effectiveness of the public spending boost. The greater the depth and the quicker the recovery, the higher the boost indicator.

$$\text{Boost} = \frac{(\text{Depth of crisis})}{(\text{Recovery speed})}$$

All these four indicators were examined in function of public debt increase, which represents the cost of economic policy.

Naturally, both the examined subject and the research methodology have limitations. Only the Eastern part of the EU was examined and compared to the EU-27 average. Alternatively, the EU-15 average can also be used. All the analysed countries have a lower GDP per capita than the EU average, and the key question here was whether these countries continued to catch up with the European average during the Covid-19 crisis. The EU-27 average is a better indicator.

Only one cost indicator – the public debt increase – was examined. This indicator – whose methodology is clear – has several shortcomings in measuring the public cost of the economic policy. Some of them are presented next. If favourable lending is financed from the private market rather than from public funds, only the total assets of the national bank will rise without any effect on the public debt. However, the potential risk of such lending is that it can cause a future increase in public debt if commercial banks (or the national bank) have to be rescued. Similarly, if the state provides guarantees to a private company rather than subsidies, it doesn't increase the public debt, but the latter may require additional public spending. To sum up, future optional commitments are excluded from the analysis.

Another potential public policy cost is higher inflation. The public spending (and the expensive monetary policy) increases the aggregate demand, but private actors can raise their prices rather than their output. In that case, the spending has an adverse effect. This could be a topic for further discussion.

Only Hungarian monetary and fiscal tools are analysed in detail. In the future, we will search for partners to make cross-country, qualitative analyses.

Methodology

Most of the data come from the Eurostat database. Table 2 summarises the sources of data used.

Since the sample size is small (11 units), the main analytical tool was graphically presented. Scatter plot graphs were used to illustrate the countries. The vertical axis represents the various success indicators; the horizontal axis shows the increase in public debt between 2019Q4 and 2021Q4. Three lines were drawn in each of the scatter plot graph. The first one was the regression line (and the R^2 was written in the top left corner). Two lines were drawn vertically and

horizontally from the point of the EU average, which separates four areas. The distance of the countries from the EU average was registered and noted.

Table 2. The source of Eurostat data used

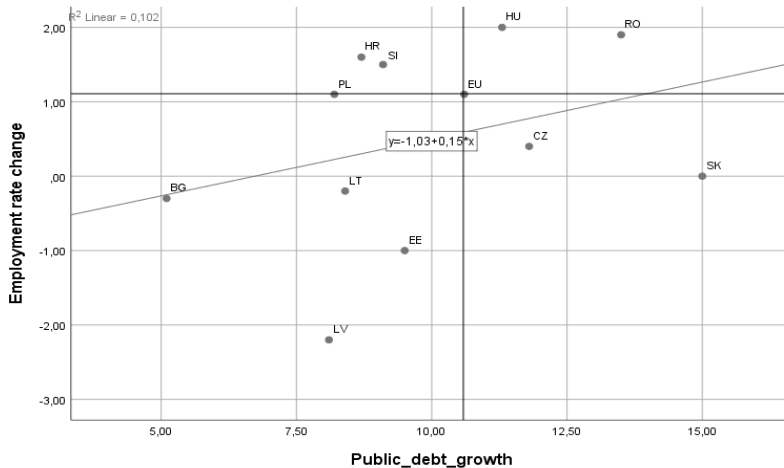
Variable name	Description	Name of Eurostat table	Time period
Employment rate	Employment and activity by sex and age - quarterly data from 20 to 64 years	LFSI_EMP	2019Q4 and 2021Q4
Quarterly GDP	GDP and main components (% of 2010 level)	NAMQ_10_GDP	2013Q1-2021Q4
Gross public debt	Government debt (in % of GDP)	GOV_10DD_EDPT1	2019Q4 and 2021Q4

Source: Eurostat (2022)

Results

Employment rate

In social perspectives, the employment rate has the highest importance. At first, the change in employment rate was presented in function of public debt increase. Both indicators refer to the difference between 2021 Q4 and 2019 Q4.



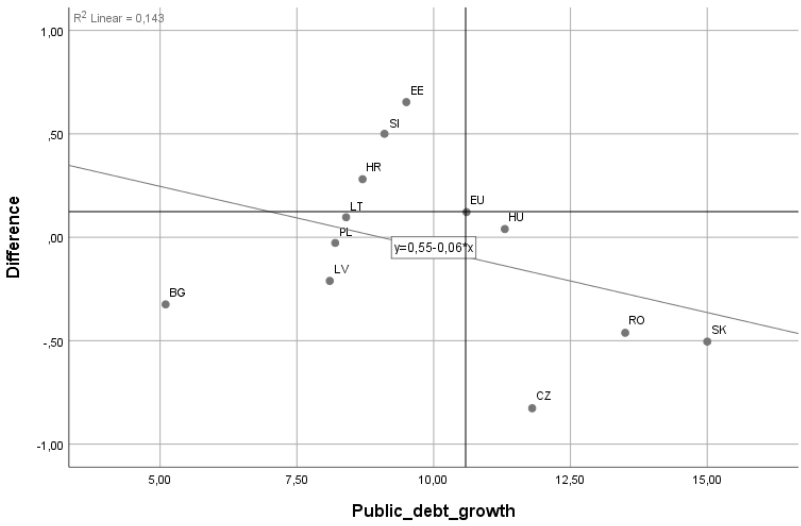
Source: Eurostat (2022)

Figure 1. The change of employment rate in function of public debt growth among CEE countries between 2021Q4 and 2019Q4

There is a very weak and non-significant connection between employment rate changes and public debt growth. You can see it from the very low slope of the regression line (0.15) and from the determination coefficient (R^2 in the upper left corner) was only 0.1. It means that the effectiveness of public spending varies among the countries. Successful countries compared to the EU average (employment rate growth, low debt growth – upper left quarter) are Croatia, Slovenia, Poland. Growing employment rates are detected in Hungary and Romania, but with a greater-than-average increase in public debt (upper right corner). Less successful countries with declining employment rates are Latvia, Estonia, Lithuania, Bulgaria, while unsuccessful countries regarding this aspect are Slovakia and the Czech Republic since their employment rates increased less than the average, but their public debt growth exceeded the average.

GDP trend difference

Let us look at the changes caused by the Covid-19 crisis in the trend of economic growth. Economic growth is calculated as the slope of regression line among the seasonally adjusted quarterly GDP values as a percentage of the 2010 GDP. The difference between the post-crisis period and the pre-crisis period was calculated. The country data were demonstrated in function of public debt growth.



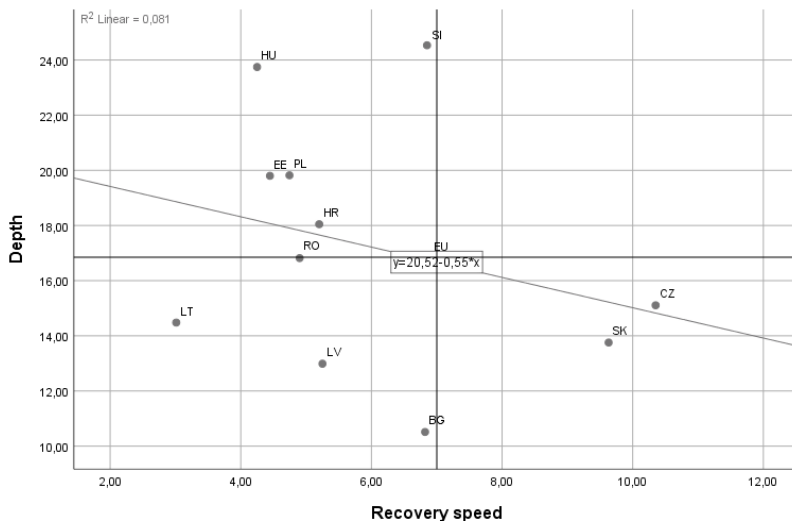
Source: Eurostat (2022)

Figure 2. The difference in slope of quarterly GDP in function of public debt growth among CEE countries between 2021Q4 and 2019Q4

There is a weak connection between growth difference and public debt growth since the determination coefficient is only 0.15. Successful countries are Estonia, Slovenia and Croatia, with a high positive difference and low debt growth, while less successful countries (a low difference and low public debt increase) are Latvia, Poland, Lithuania, Bulgaria. Unsuccessful countries are the Czech Republic, Slovakia, Romania, Hungary, where the GDP growth difference is lower than the average and the public debt increase is higher. These countries lagged behind the EU average during the Covid-19 crisis. It is worth mentioning that, except for Slovakia, these countries are using their national currencies rather than the euro, while the successful countries are part of the Eurozone or are close to joining the Eurozone (like Croatia which is in the ERM mechanism). The euro seemed to act as a stabiliser during the Covid-19 crisis.

Depth of crisis versus recovery speed

Our third success indicator was the magnitude of the quarterly GDP figure from 2019 Q4 to 2021 Q4. The higher the magnitude, the more successful the effort to recover the economy will be. The second aspect of recovery is the time required to return to pre-crisis GDP levels. The recovery time is measured in quarters. These two aspects are presented in Figure 3.



Source: Eurostat (2022)

Figure 3. Depth of crisis in function of recovery speed among CEE countries between 2021Q4 and 2019Q4

It seems that there is no link between the depth of crisis and the recovery speed – R^2 is only 0.081. The most successful countries can be found on the upper left corner of this figure; in those countries, the depth of crisis was great, but the economies recovered quickly. The magnitude of quarterly GDP is the biggest here, which indicates that after the fall of GDP in the first quarter of 2020, the recovery and economic growth were very intense. The recovery speed was also better than the EU average. Hungary, Slovenia, Estonia, Poland and Croatia belong to this group, while Romania is at the border. In the case of Lithuania, Latvia and Bulgaria, the depth of crisis was smaller, and the recovery speed was also quick. Slovakia and the Czech Republic can be considered unsuccessful countries since the recovery speed was slow (it takes about 10 quarters to reach the 19 Q4 GDP level) against the moderate depth of crisis (the range of quarterly GDP is about 15%).

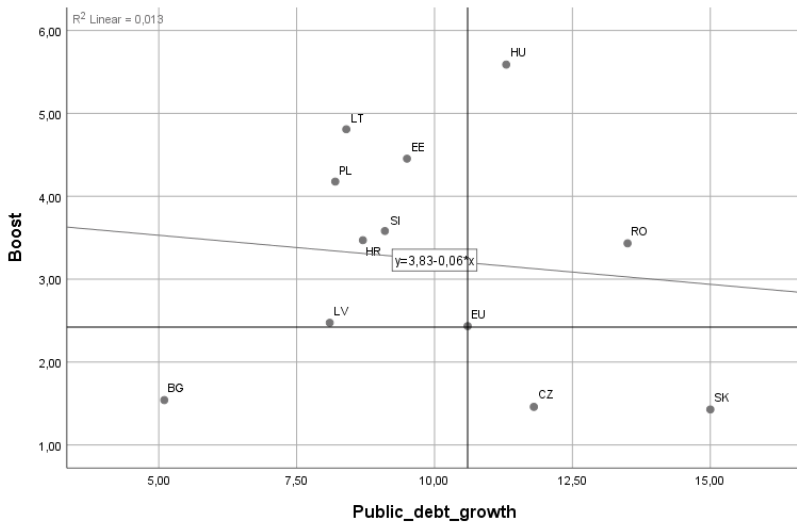
Since there is no detectable link between the depth of decline and the recovery speed (a smaller decline doesn't mean a quicker recovery), the effectiveness of policy mix is significantly different.

Supposing that the magnitude of quarterly GDP is an exogenous factor since it depends mostly on the nature of economy and the weight of crisis-sensitive sectors like tourism, the automotive industry, transport, but the fiscal policy can significantly influence the recovery speed, we should also consider the ratio between these two indicators as a success factor.

Boost

The boost indicator can be considered as the measurement of the economic policy's effectiveness. The increase in public debt is used as a proxy variable to the cost of expansive economic policy. The link between these two indicators is graphically presented in Figure 4.

If you consider only the vertical axis, you can see the effectiveness of the policy. Regarding this aspect, Hungary performed the best, while Slovakia had the worst results. Considering the cost of government intervention, you can see that there is no detectable link between the boost and public debt growth (which would mean that a larger public stimulus leads to larger boost), the effectiveness of policy mix is significantly different. If we drew a line from the initial point to the countries and ranked the countries in descending order, we could make a general ranking that takes into account the effectiveness and the cost of the economic intervention.



Source: Eurostat (2022)

Figure 4: Boost of recovery in function of recovery speed among CEE countries between 2021 Q4 and 2019 Q4

The resulting ranking is as follows: Bulgaria, Lithuania, Poland, Croatia, Estonia, Hungary, Slovenia, Latvia, the EU average, Romania, the Czech Republic and, finally, Slovakia.

If we consider the location of the countries compared to the EU average, we can categorise the countries in the following way: Lithuania, Poland, Estonia, Slovenia, Croatia and Latvia (at the border) were successful countries, where the boost was higher and the debt increase was lower than the EU average. Both the boost and the government intervention were low in Bulgaria, while Hungary was more successful than Romania since Hungary reached a bigger boost with a smaller public debt increase than Romania. Unsuccessful countries are once again the Czech Republic and Slovakia.

Summarising the results, there are two countries which performed better than the EU average in all the four analysed aspects. These are Slovenia and Croatia. Both countries are attractive tourist destinations, but they successfully managed the crisis with a relatively small public debt increase. Poland and Estonia were successful on all but one indicator. In the case of Poland, this exception was the

GDP growth difference – Poland’s economic growth was very impressive in the pre-crisis period. In the case of Estonia, the employment rate fell compared to the level of 2019, but Estonia has the highest employment rate among the CEE countries.

At the opposite end, we find two countries, which were unsuccessful on all indicators – these are Czech Republic and Slovakia. These countries had a relatively low GDP growth prior to the crisis, and during the crisis both countries followed harsher health restrictions. Their public debt increase was higher than the average, but their initial indebtedness was relatively low.

The Hungarian case is special. The Hungarian public debt increase was slightly over the EU average, therefore only in one case proved to be a successful country, when we consider the two variables of boost (Beke 2022). One of the possible explanations for this public debt growth is the suspension of EU subsidies (Portfólió 2022b).

If the debt growth were lower than the EU average, Hungary would be as successful as Poland. Hungary is an absolute winner on three of the four success indicators (employment rate increase, boost) and comes in second place in crisis debt (after Slovenia) and second in recovery speed (after Latvia).

Since the Hungarian economic policy was one of the most effective, it is worth examining its elements. Effective crisis management can be the basis for rapid development in the future (Csiki 2021).

Policy effectiveness

Hungary

The following two tables (Table 3 and Table 4, respectively) show the main fiscal and monetary policy tools employed by the Hungarian fiscal and monetary authorities. In the brackets you can see the estimated cost as % of GDP (Lentner 2021).

The measures are grouped based on two aspects. The instructions can be constant, which means that they remain part of the Hungarian economic system after this period, or they can be interim, which means that they concerned a single event or were valid only for a certain period of time, namely for the last two years. The second aspect refers to the effects on society. General measures affect the broader society, while targeted measures tried to help the most vulnerable sectors.

Table 3. Fiscal policy tools in Hungary between 2020Q1 and 2021Q4

Aspects	General	Targeted
Constant	Decrease of payroll taxes (2%) Lowering taxes for SMEs and farmers (1%) Shorter VAT reclaim period for reliable taxpayers	Personal Tax exemption for vulnerable groups (people under 25 years old, pensioners, mothers with 4 children) (0.5%) VAT decrease for accommodation and new flat buildings (0.3%) <i>New retail trade tax (-0,1)</i> Gradually introducing a 13th month pension (0.6%)
Interim	Suspending liquidation and tax executions Credit moratorium until mid-2021 Personal tax refund for families (1.3%) Great public investment programmes (6.3%) Extraordinary health expenses (2%)	Suspending payroll taxes for personal services, tourism. Increasing cafeteria-spending limits for cultural, sport and domestic tourism spending. Up to 70% wage support for struggling enterprises (1.8%) Prefinancing of EU programmes (4%) <i>New banking tax (-0.2)</i>

Source: IMF (2022), kormanyzat.hu

The new retail tax (among constant, targeted tools) and the new banking tax (interim, targeted tools) counterbalance the expansionary policy to some extent; they are in italics (Terták–Kovács 2020). The general, constant tools tried to maintain or even increase the employment rate by lowering payroll taxes or sole proprietorship taxes. The shorter VAT reclaim period improves the liquidity of reliable taxpayers. Among the constant, targeted instructions you can find a social instruction like the 13th month pension, while the other ones lower the taxes paid by vulnerable sectors. So the major tools were not the direct subsidies but tax allowances and tax reliefs. It is worth mentioning that the lowering of direct taxes is a long-term policy of the current Hungarian government, which is only accelerated by the response to the crisis (Nagy 2021).

The general interim actions other than health expenses tried to avoid the credit crunch, improving the liquidity of enterprises and ordinary households. The great public investments directly helped the building industry, while indirectly helping the whole economy. Thanks to the moratorium and the suspension of liquidation, the non-performing loan ratio did not worsen during the crisis.

The targeted, interim instructions were dominated by the pre-financing of EU programmes and the wage support. The lower taxation of cafeterias helped tourism, accommodation, cultural and sport services.

Table 4. Monetary policy tools in Hungary between 2020Q1 and 2021Q4

Aspects	General	Targeted
Constant	Reserve rate to 0% (0.05%) Direct purchase of state securities (5%)	Extending the Credit for Growth programme (4%)
Interim	Expanding the currency swap limit to strengthen banks' liquidity (0.3%) Accepting corporate loans as a collateral for refinancing loans (2%)	Corporate bond purchase programme (5.4%) Refinancing of special retail loan programmes to encourage the home building sector (5%)

Source: MNB (2020)

The monetary policy mostly increases the funding available for the economy. The National Bank began to directly finance the state (Portfolio 2022), extended the Credit for Growth programmes, which help the domestic-owned SME sector, continued the corporate bond purchase programme, which encourages the development of larger Hungarian companies. The favourable refinancing of special retail loans (mostly for households, but also for SMEs) provides adequate demand for the building industry. The expansion of the currency swap limit strengthens bank liquidity, and the easing of collateral conditions encourages banks to take higher lending risks.

As you can see, the Hungarian policy mix focuses on the following three goals:

- Provide demand for the economy by encouraging the lending of banks, or by issuing corporate bonds, refinancing EU programmes.
- Defend vulnerable sectors and individuals through a credit moratorium, the suspension of liquidation, an increase in health expenses.
- Give direct tax allowances and tax cuts to encourage individuals and companies to work more.

It is also interesting to see what kind of instructions were not used by the Hungarian government.

- It did not increase the duration and size of unemployment benefits.
- It avoided direct subsidies, but rather employed tax cuts.
- It did not increase social aids, except for the introduction of the 13th month pension.

In contrast, let us look at the major instructions of successful and unsuccessful countries. The source of information is the website of the International Monetary Fund (IMF 2022), which summarises the main policy tools of its member states.

Let us see the main instructions of the two countries that were unsuccessful on our four indicators. These countries reached moderate results with high public debt growth.

The Czech Republic

The government introduced a fiscal package of 4% of GDP in 2020 and another one of 6% in 2021. These new compensatory bonuses were selected to support companies and healthcare expenditure. Additionally, 80 percent of the wages were compensated for the employer if the employees were put in quarantine. If the business was closed, the workers received 100 percent of their wages as compensation, while sole proprietors received 60% of their income as compensation. A new compensatory bonus for self-employed persons was approved. If the company suffered a decrease in revenue of more than 50%, it could apply for direct subsidies. The tax reduction was quite insignificant – it allowed for accelerated depreciation and a small reduction of personal income tax and lowering the VAT in vulnerable sectors.

The monetary policy employed measures like lowering the prime rate (by 50 basis points), more frequent repo operations, easing collateral commitment (higher LTV ratio).

Slovakia

The Slovakian government used similar tools to those employed by the Czech Republic. The main fiscal measures were the following: wage compensation for affected businesses and self-employed persons, subsidies to individuals with no income, enhanced unemployment benefits, and sickness and nursing benefits, rental subsidies. State guarantee schemes were launched, up to a total of 4.4 percent of 2020 GDP, covering both SMEs and large firms.

Households, self-employed persons and SMEs were also entitled to defer loan repayments for up to 9 months. The banks benefited from capital adequacy relief, but no special lending schemes were introduced.

The common characteristic of the tools employed by these countries is that they were mostly based on direct subsidies to the companies and individuals in trouble. Thus, the government solved the problems instead of encouraging legal entities and natural persons to find their own solutions.

Croatia

Croatia and Slovenia were the two most successful countries according to our analysis since they were able to reach high performance without a significant public debt increase. The measures used by these two countries are similar to those employed by the Hungarian government, but their effect in the overall economy was not as extensive as in Hungary.

The major instruction included the deferment of public obligations, free of interest for three months, which can be extended by additional three months if necessary, temporary suspension of payments of selected parafiscal charges; interest free loans to local governments, subsidization of net minimum wages for three months to preserve jobs, which could be extended for another three months; and early refund of taxes for individuals, payment acceleration of some EU Structural and Investment Funds, new extended lending facilities for companies, and state purchase of unsold stocks of finished goods in agriculture, the food processing industry, medical equipment, and similar strategic goods. Later, a significant corporate tax reduction was introduced, and VAT payments were suspended until the customer paid the bill. The government launched a part-time work programme to save jobs in specific sectors. For the activities that were particularly at risk (passenger transport, hospitality, travel agencies and recreation-related businesses, as well as cultural, business and sports events), direct support was provided based on the number of employees if the turnover dropped by more than 60 percent.

The Croatian National Bank provided additional liquidity, supported the government securities market, and temporarily eased the regulatory burden on banks. A three-month moratorium on bank obligations was introduced. Special lending schemes were introduced.

Slovenia

The fiscal authorities adopted tax and spending measures, including tax deferrals for up to 24 months or 24-month tax instalment plans, limited wage subsidies for suspended employees due to pandemic-related closures and for quarantined people, guarantees to struggling companies to help them improve liquidity, new lending facilities for SMEs. Corporate tax and social security payments could be deferred. Electricity prices were cut. Later, selective tax exemptions and the co-financing of social contributions were introduced for vulnerable groups as well as tourism vouchers. In 2021, further instructions were

made to extend favourable funding and to support self-employed persons and micro companies as well as R&D spending. Part-time employment programmes were subsidised.

A credit moratorium was introduced, and a global guarantee fund was established to cover loans for non-banking corporations. Bank fees were frozen.

Lowered taxes, the moratorium, and lending incentives help companies and individuals to solve their problems. Direct subsidies are supporting these entities and deter them from making significant efforts.

Conclusions

There are big differences regarding the effectiveness of COVID-19 crisis management strategies among Central European countries. The most successful countries based on the four success criteria that we analysed are Slovenia (4), Croatia (4), Poland (3) and Estonia (3), while the least successful countries are the Czech Republic (4) and Slovakia (4).

The absolute winners are the following: employment rate – Hungary; growth difference – Estonia; depth – Hungary; recovery speed – Latvia; boost (debt/recovery speed) – Hungary.

Generally, the countries that were successful were those which spent a significant amount of money to avoid the credit crunch (advantageous loans, lowering interest rate, investment boost) and offer tax relief to dedicated sectors. The general welfare spending (wage support, family subsidies, longer unemployment benefits, health care) seemed to be inadequate in boosting the economy.

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