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THE FISCAL SPACE AND THE FISCAL STIMULUS DURING CRISIS IN THE WESTERN BALKANS

ABSTRACT: *The fiscal space of the Western Balkan 6 (WB6) economies has been significantly tested by recent crises, including the COVID-19 pandemic and the Energy and Food Price Crisis. This paper investigates the role of pre-crisis fiscal space in shaping fiscal stimulus measures during crises, by endogenizing an expanded set of fiscal space measures. Results reveal that WB6 nations, possessing some fiscal space before previous crises, encountered limitations in formulating and implementing fiscal stimulus measures amid subsequent crises. With fiscal space largely utilized during and post-pandemic, the ability to implement fiscal stimulus during the recent Energy and Food Price Crisis has been considerably restricted. These findings underscore the importance of building fiscal buffers during non-crisis times to maintain resilience for unforeseen challenges. The paper highlights the need for forward-looking fiscal policies, emphasizing the potential adverse effects of overly generous fiscal packages on fiscal sustainability, which could hamper future crisis response capabilities.*

KEY WORDS: *Fiscal space, Fiscal stimulus, Crisis management*

JEL CLASSIFICATION: E62, H12

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1. INTRODUCTION

The COVID-19 pandemic and the recent energy and food price crisis have tested the resilience of the Western Balkan 6 (WB6) economies. As the countries were bouncing back from the impacts of the healthcare crisis, Russia's invasion of Ukraine amplified the fiscal vulnerabilities of the WB6. The sudden energy and food price surges left little room for well-thought-out policies and instead prompted quick actions, many of which were costly. In response to these challenges, ample fiscal support was allocated for food and energy security and for compensating and safeguarding households and companies from the large price shock. Amid resource insecurity and the approaching heating season, in September 2022, Albania, Serbia, and North Macedonia took a collaborative step by agreeing to share food and energy surpluses.

The unprecedented jump in commodity prices caused historic levels of inflation unseen in the Western Balkan region since the 1990s and early 2000s. It was primarily international food prices that impacted inflation rates in the WB6, and they have probably exerted a lasting impact in the region. Minasyan et al. (2023) estimate that domestic factors also impacted the inflation dynamics of the Western Balkan countries. Following peak inflation rates at the end of 2022, signs of a fall were visible in 2023. Monetary policy also aided the decrease in inflation and the curbing of inflation expectations through continued synchronised monetary tightening, and recently, central banks have put a pause on the increase in policy interest rates. The World Bank (2024) estimates that the economic growth of the WB6 in 2023 will reach 2.5 per cent, increasing slowly to 3 per cent and 3.5 per cent in 2024 and 2025, respectively, hence enabling the long-assumed "soft landing."

These multilayer-crisis events have contributed towards increased public deficits and public debts of the WB6, significantly contributing toward narrowing of the fiscal space. This has brought attention to the need to (re)build fiscal buffers and comply with (any) fiscal rules. In 2022 and 2023, the WB6 implemented anti-crisis packages for the support of households and companies, frequently coupled with pressures to increase public wages and pensions. Most measures included various forms of price regulation (caps, freezes) both for energy and food products. WB6 governments did not resist public expectations for wage and pension increases, sometimes beyond prescribed adjustments, which could also

have medium-term implications for price dynamics. According to the International Monetary Fund Regional Economic Outlook (October 2023) (IMF, 2023), the public debt-to-GDP ratios of the emerging European market economies are projected to increase over the medium term, due to slower than expected growth and rising borrowing costs. It is expected that the fiscal consolidation for these economies will reach 0.25 and 0.72 per cent of GDP in 2023 and 2024, respectively.

Challenges will still continue to arise in the upcoming periods, given the ongoing geo-economic events. The energy crisis has highlighted the vulnerabilities of the energy sector of WB6 countries and the impact it can have on fiscal sustainability. Thus, greater attention has been paid to medium-term fiscal planning, with more WB6 countries now incorporating larger energy investments in their long-term development strategies.

Within the scope of this study, several crisis events are taken into account, such as the global financial crisis 2008–2010, the European sovereign crisis 2011–2013, as well as the latest crises – the COVID-19 pandemic in 2020–2021 and the energy and food price crisis 2022–2023. The objective of the analysis is to understand if fiscal space in the WB6 before a crisis struck played an important role for the fiscal stimuli that governments used as weapons to combat the contraction of the economy caused by that crisis. The novelty of this study is at least twofold: 1) we treat fiscal space in a wider framework devised through four indicators: public debt to GDP, public debt to tax revenues, interest expense to GDP, and the foreign currency sovereign debt ratings; and 2) we extensively examine the endogeneity between the fiscal space and the fiscal stimulus by employing observables related to the various crises, as well as by employing two IV-based estimators. The study is structured as follows. Section 2 presents a brief overview of the literature. Section 3 presents the data and underlying methodology. Section 4 presents the results and offers a discussion. Section 5 concludes.

2. OVERVIEW OF THE LITERATURE

The economic crisis that started during the COVID-19 pandemic, followed by the Ukraine-Russia conflict and the rising prices of food and energy, put an emphasis on fiscal policy as a tool for stirring collapsed demand. It accentuated the importance of governments' potential to use their fiscal policy counter-

cyclically to provide fiscal stimulus and support the contracted economy. Frankel et al. (2013) estimate that the proportion of developing countries that undertook countercyclical fiscal policy rose from 10 per cent in the 1990s to two-thirds after the global financial crisis 2008–2010, as many increased government spending. Countries adopted sizable fiscal stimuli to support economic activity and vulnerable household budgets to prevent serious and long-lasting damage to economic security. According to Lerner (1943, p.39), if economic insecurity exists,

The central idea is that government fiscal policy, its spending and taxing, its borrowing and repayment of loans, its issue of new money and its withdrawal of money, shall all be undertaken with an eye only to the results of these actions on the economy and not to any established traditional doctrine about what is sound or unsound.

Fiscal policy is conceived on the basis of fiscal space and fiscal capacities. Extensive fiscal space provides the government with financial resources and enables them to energise economic activity. Also, it guarantees the credibility of budget sustainability and ensures that financial stimulus supports economic growth. While the definition of fiscal space is blurry, it points to the availability of budget resources for a specific purpose (World Bank, 2008). A formal definition of fiscal space has been introduced by Heller (2005, p.32), defining fiscal space as 'a room in the government's budget that allows it to provide resources for a desired purpose without jeopardizing the sustainability of its fiscal position or the stability of the economy'. The Development Committee (2006, p.3) defines fiscal space as 'the gap between the current level of expenditure and the maximum level of expenditures a government can undertake without impairing its solvency'. Kose et al. (2022) point to the 'ability of the government to service its debt', explaining that countries with low capacity to repay their debt cannot indefinitely finance their operations in a sound manner. The United Nations Development Programme (UNDP) does not justify prioritising fiscal targets ahead of development objectives while defining the concept of fiscal space. They put emphasis on the mobilisation of resources to secure enabling governance, institutional, and economic environments for effective policy actions (Roy et al., 2012). In 2016, the IMF proposed a uniform definition of fiscal space to allow a systematic assessment of fiscal policies across countries. This concept

assesses whether a country has room for discretionary fiscal policy, i.e. whether a country can raise spending or lower taxes without endangering market access and debt sustainability (IMF, 2016).

After the outbreak of the recent crises mentioned above, many economists analysed the relationship between fiscal space and the size of the fiscal stimulus provided. Economies that entered the global financial crisis with ample fiscal space implemented more aggressive fiscal stimuli (Romer & Romer, 2018). China, Korea, and Australia, countries that had sound fiscal space, undertook relatively generous stimuli and greatly reduced the cost of the crisis. Iceland, which entered the crisis with low debt, provided stimuli and increased the debt-to-GDP ratio by 100 percentage points. Hence, low-debt countries faced only modest downturns, while those with a high debt-to-GDP ratio suffered long-lasting economic losses (Jordà et al., 2016). Romer and Romer (2019) explain that the limited response of high-debt countries is driven by two aspects: sovereign market access and the choices of domestic and international policymakers. Scared of borrowers not being able to repay their loans, investors refuse to lend to high-debt countries or push sovereign yields to prohibitive levels. Furthermore, due to current rules or bailout conditionality, international players such as the EU and IMF are not able to support high-debt countries in crisis times, leaving them to respond with very limited funds.

Many countries entered the pandemic crisis with a deteriorated fiscal stance due to the successive shocks of the global financial crisis and the 2014 plunge in commodity prices. The fiscal space of developing countries was generally more limited, especially in the low-income ones that already faced a high risk of debt distress. Hence, they had limited space to implement stimulus measures, resulting in wide disparities in the fiscal response compared to developed countries, whose fiscal packages were 700 times more valuable than those of the least developed countries (OECD, 2022).

Apeti et al. (2021) evaluate the effect of pre-pandemic fiscal space on the size of the fiscal stimulus package in 125 developed and developing countries, using three indicators for fiscal space: debt-to-GDP ratio, debt-to-taxes ratio, and sovereign debt rating to capture countries' access to finance. Their results reveal a lack of association between fiscal space captured through the debt-to-GDP ratio

and fiscal stimuli, even after controlling for potential omitted-variable bias. The other two indicators of fiscal space are statistically significant, suggesting that the degree to which public debt is backed up with tax revenues is a significant predictor of the size of fiscal stimuli; a higher debt-to-taxes ratio is associated with lower fiscal stimuli. The credit rating is positively related to fiscal stimuli; a one-standard-deviation increase in the rating increases fiscal stimuli by three percentage points. Benmelech and Tzur-Ilan (2020) find similar results, estimating a positive or close-to-zero relationship between the pre-pandemic debt-to-GDP ratio and fiscal stimuli in a set of 85 countries. According to them, the most important driver of fiscal policy is its pre-crisis sovereign credit rating. A country's credit rating affects its ability to follow an expansionary fiscal policy and provide ample fiscal stimuli during a crisis.

Bianchi et al. (2023) confirm that countercyclical fiscal policies are not common for countries with low credit ratings. Grion and Correa (2021) support the finding through their estimations on the fiscal stimuli undertaken during the pandemic. Their estimations show that the size of undertaken measures varied with the available fiscal space among countries, ranging from 10–12 per cent of GDP in high-income countries to 0.2–1.8 per cent in low-income countries that have limited tax capacity and sizable debt overhang.

In summary, the literature posits that prior fiscal space is significant for providing substantial fiscal stimulus to the economy during crisis times. An ample fiscal stimulus can greatly reduce the costs of a macroeconomic crisis, while lack of fiscal space can greatly constrain the stimulus and result in large income and job losses. Therefore, having fiscal room to manoeuver is very valuable for crisis times.

3. METHODOLOGY AND DATA

To address the research question of this paper, we utilise data for the six economies of the Western Balkans spanning the period 2003–2022. The advantage of employing such a lengthy time span is twofold: it allows for more robust statistical estimates and enables the examination of the repercussions of multiple crises, including the global financial crisis 2008–2010, the European sovereign crisis 2011–2013, as well as the more recent crises such as the COVID-19 pandemic in 2020– 2021 and the energy and food price crisis 2022–2023,

which are the focal points of our investigation. However, a drawback of this extended time frame is that it may encompass other fiscal pressures experienced by these countries, including those of a political nature. At present, we overlook this aspect, as major political and/or military events have subsided since the onset of the observation period.

At the methodological level, there are two key issues to address. The first concerns the definition of fiscal stimulus, which constitutes the phenomenon we aim to elucidate and serves as the dependent variable. Strictly speaking in terms of crisis spending, a fiscal stimulus could be construed as the packages of anti-crisis measures deployed by governments during various crises. While this approach may be feasible for the pandemic, for instance, through the utilisation of the IMF's database of fiscal policy responses, as demonstrated by Apeti et al. (2021), it may pose challenges in capturing fiscal stimuli across different crises. This is primarily because there is no unified database systematically collecting data on such fiscal packages. Instead, we opt for an alternative approach.

We define the fiscal stimulus as government spending that exceeds the spending in a usual or normal year, as reflected in the budget balance. During a crisis year, the budget deficit typically deepens to an extent that mirrors the severity of the crisis's impact on the economy. To estimate the long-term trajectory of the budget deficit, we employ Hodrick-Prescott filtering, under the assumption that a certain budget balance is appropriate for the structure and current stage of development of the economy. Subsequently, the disparity between the actual value and the long-term value of the budget deficit (as a percentage of GDP) is regarded as the deployed fiscal stimulus, i.e., the government spending that can be robustly attributed to the crisis. For instance, for the COVID-19 year of 2020, **Table 1** demonstrates that our calculation yields estimates similar to the actual realisation of the anti-crisis measures. Furthermore, the calculation accurately identifies that the two highest-ranked years over the period 2003–2022, based on the amount of the fiscal stimulus, are clearly the pandemic year of 2020 and either the hardest-hit year of the global financial crisis (2008–2010) or of the European sovereign crisis (2011–2013).

Table 1 – Fiscal stimulus during 2020: actual versus estimated

	Value of fiscal stimulus during COVID-19 / Fiscal year 2020 (% of GDP)		Lowest point year (2003–2022)	
	IMF*	Own estimates**	First lowest	Second lowest
Albania	1.2	2.7	2020	2009
Bosnia and Herzegovina	5.1	4.7	2020	2009
Kosovo	5.6	4.9	2020	2004
Montenegro	8.0	5.2	2020	2009
North Macedonia	2.9	3.4	2020	2012
Serbia	5.6	5.2	2020	2012

Sources: **IMF Database of Country Fiscal Measures in Response to the COVID-19 Pandemic; and IMF staff estimates. Only additional spending or foregone revenues considered. Estimates as of end-2020. ** Own calculation for the rest of the table.*

The second crucial methodological concern pertains to measuring the abstract concept of fiscal space. We employ three measures for fiscal space as follows. Ghosh et al. (2013) explore the negative correlation between public debt (as a percentage of GDP) and fiscal space, indicating that higher public debt leads to lower fiscal space. Building on Bohn's (2008) emphasis on the significance of primary surpluses for debt sustainability, Apeti et al. (2021) and Kose et al. (2022) propose using public debt as a ratio of taxes to understand how public debt is accommodated by fiscal revenues. Additionally, Minea and Villieu (2009, 2012) stress the importance of the debt burden, considering the cost of debt in the budget constraint accounting, including crowding-out effects. Blanchard's (2019) observation underscores its ability to account for potential risk premiums, suggesting a growing risk to debt sustainability and consequently reducing fiscal space. Therefore, the third and fourth measures of fiscal space we employ are interest expenses as a percentage of GDP and foreign currency long-term sovereign debt ratings from Kose et al. (2022) to gauge countries' ability to access finance on international markets. We introduce a one-year lag for fiscal space, reflecting the notion that sufficient fiscal space today facilitates navigating a crisis tomorrow more effectively.

We rely on a simple empirical model to estimate the effect of fiscal space on fiscal stimulus, as follows:

$$Fiscal\_stimulus_{i,t} = \beta_1 Fiscal\_space_{i,t-1} + \beta_2 X_{i,t}^{j} + \alpha_i + \varepsilon_{i,t} \quad (1)$$

where $Fiscal\_stimulus_{i,t}$ is the budget deficit (defined as positive values) in excess of the normal-year budget balance, as a percentage of GDP, for country *i* at time *t*; and $Fiscal\_space_{i,t-1}$ is respectively defined through public debt as a percentage of GDP and as a percentage of tax revenue, interest expenses as a percentage of GDP, and the sovereign debt ratings (index ranging from 1 to 21) for country *i* at time *t-1*. $X_{i,t}^{j}$ is a vector of *j* control variables, α_i is the country fixed effects, while $\varepsilon_{i,t}$ is the error term, which is assumed to be well-behaved.

The selection of control variables is guided by factors that typically influence spending levels during a crisis, drawing insights from Aizenman and Jinjarak (2010). We include GDP per capita (in logarithmic form) to reflect the economic development level; population density (in logarithmic form) to account for the strain of crises on healthcare, infrastructure, and employment; inflation to capture the urgency of government support amid eroding living standards; and an index of democracy to account for potential political budget cycles and transparency in crisis management, as in Apeti et al. (2021). The democracy index is derived from the average of Freedom House's political rights and civil liberties indices.

Additionally, we incorporate three variables that may be closely correlated with the three largest crises observed during the period: exports (in logarithmic form) as the primary channel during the global financial and European sovereign crises of 2008–2013, the case fatality rate to reflect the severity of the COVID-19 pandemic in 2020, and global prices of wheat and oil to reflect the impact of the energy and food price crisis of 2022–23.

Our key parameter of interest is β_1, which should be statistically significant and positive, revealing a favourable effect of the higher prior fiscal space on the subsequent fiscal stimulus.

Our data are collected from various sources: IMF's World Economic Outlook (IMF WEO), IMF's Government Finance Statistics (IMF GFS), World Bank's World Development Indicators (WB WDI), database of fiscal space of Kose et al. (2022), Freedom House's dataset on political rights and civil liberties (https://freedomhouse.org/), the Institute of Electrical and Electronics Engineers (IEEE) (https://www.ieee.org/), and World Bank Commodity Price Data – The Pink Sheet (https://www.worldbank.org/en/research/commodity-markets). Variables' descriptions and descriptive statistics are provided in the Appendix.

The primary challenge in estimating equation (1) lies in the simultaneity between fiscal space and fiscal stimulus. A higher desired fiscal stimulus necessitates greater fiscal space, and vice versa. However, we address this endogeneity concern through several strategies. First, the fiscal stimulus, being an excess of public spending compared to a 'normal' amount, is unlikely to influence the buildup of fiscal space as it is an unexpected event, especially for the small and open economies considered here, which are largely exogenous. Second, following the approach of Apeti et al. (2021), we lag the fiscal space by a year to account for the role of accumulated fiscal space in the past in shaping present actions.

Third, we employ a range of explanatory variables to mitigate potential omitted-variable bias, including factors directly related to crises' fiscal stimuli, such as the slowdown in export dynamics during the global financial crisis, the infection fatality rate during the pandemic, and the surge in commodity prices of wheat and oil during the energy and food price crisis.

Despite these efforts, we acknowledge that a simple fixed effects (FE) estimator may not fully capture the causal effect of fiscal space on fiscal stimulus. Anticipation of increased future fiscal spending can influence the buildup of fiscal space today, presenting a remaining source of endogeneity in equation (1). Therefore, in addition to FE estimates, we employ a standard instrumental variables two-stage least squares (IV-2SLS) estimator and the Arellano–Bover (1995) system generalized method of moments (GMM) estimator. The latter addresses endogeneity concerns by using lagged values of the endogenous variables as instruments, with their validity assessed through various tests.

By instrumenting the endogenous regressors with their lagged values, the Arellano–Bover estimator helps mitigate simultaneity bias in dynamic panel

models, particularly in the presence of unobserved individual heterogeneity. This makes it a valuable tool for analysing the dynamics of economic and social phenomena across different units over time.

4. RESULTS AND DISCUSSION

Our baseline results are presented in **Table 2**. The organisation of the results is such that columns (1)–(4) represent the FE estimates, columns (5)–(8) correspond to the IV-2SLS estimates, and columns (9)–(12) pertain to the system GMM estimates. Each set of columns examines the effects using different measures of fiscal space: public debt-to-GDP, public debt-to-tax revenues, interest expenses-to-GDP, and foreign currency sovereign debt ratings.

The findings indicate that a higher public debt as a percentage of GDP, reflecting a smaller fiscal space, leads to a reduction in the potential fiscal stimulus. Specifically, a one-percentage-point (p.p.) increase in public debt as a share of GDP is associated with a decrease in the fiscal stimulus ranging from 0.02 to 0.06 p.p. of GDP. The coefficients tend to be higher in IV-based estimates. Similarly, a higher public debt as a percentage of tax revenues results in a reduced fiscal stimulus potential, with coefficients ranging from 0.004 to 0.015 p.p. of GDP. Although these coefficients may appear small, they signify that a country with a 10 p.p. lower public debt-to-GDP ratio before the pandemic could deploy a higher fiscal stimulus package by up to 0.6 p.p. of GDP in the upper bound. This may reflect the perception that pre-COVID-19 public debt in the WB6 was moderate, averaging 48 per cent of GDP, thus providing sufficient fiscal space to cushion crisis effects.

Interest expenses as a percentage of GDP consistently show insignificance despite being negatively signed, while sovereign ratings only reveal significance in system GMM estimates, suggesting that countries with better ratings were able to provide more fiscal stimulus during crisis years.

Among the control variables, economic development level shows no significance, whereas inflation shows some importance. Higher inflation is associated with a smaller fiscal stimulus, likely due to the nominal effect of higher inflation on fiscal revenues, reducing the need to expand the budget deficit for counteracting measures. Similarly, higher exports correlate with a smaller fiscal stimulus,

indicating that periods of increased export coincide with good economic conditions requiring smaller or no fiscal stimulus.

The infection fatality rate is positively associated with a higher fiscal stimulus, reflecting increased measures to finance the health sector during the COVID-19 pandemic. Likewise, a higher international wheat price, particularly in 2022, correlates with a higher fiscal stimulus, as governments opted to shield the real value of the consumption basket by offering anti-crisis packages amid soaring prices.

Overall, the results suggest that WB6 countries, which had some fiscal space before the global financial crisis of 2008 and particularly before the COVID-19 pandemic, were reasonably constrained by this space in designing and deploying fiscal stimulus amid subsequent crises. Consequently, since much of the fiscal space was utilised during and after the pandemic, the findings indicate that during the ongoing energy and food price crisis, fiscal stimulus has been significantly constrained by exhausted fiscal space. Alternatively, if countries opted for more generous packages during the current crisis, it substantially impaired fiscal sustainability more than during previous crises. This aligns with previous evidence on the importance of fiscal space for governments' policies during crises. (see e.g. Aizenman & Jinjarak, 2010; Apeti et al., 2021; Jordà et al., 2016; Romer & Romer, 2019).

Table 2 – Results for the effect of fiscal space on fiscal stimulus in the WB6

	Dependent variable: Fiscal stimulus (% of GDP)											
	Fixed Effects				IV-2SLS				Arellano–Bover System-GMM			
VARIABLES	Public debt as % of GDP	Public debt as % of tax revenues	Interest expense as % of GDP	Foreign currency sovereign debt ratings♠	Public debt as % of GDP	Public debt as % of tax revenues	Interest expense as % of GDP	Foreign currency sovereign debt ratings♠	Public debt as % of GDP	Public debt as % of tax revenues	Interest expense as % of GDP	Foreign currency sovereign debt ratings♠
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Fiscal stimulus (lagged)									0.458***	0.455***	0.395***	0.468***
									(0.052)	(0.055)	(0.025)	(0.040)
Public debt as % of GDP (lagged)	-0.0201**				-0.0587*				-0.0293***			
	(0.007)				(0.035)				(0.010)			
Public debt as % of tax revenues (lagged)		-0.00514**				-0.0148**				-0.00404*		
		(0.002)				(0.007)				(0.003)		
Interest expense as % of GDP (lagged)			-0.210				-0.650				-1.741	
			(0.388)				(0.535)				(1.292)	
Foreign currency sovereign debt ratings (lagged)				0.489				0.935				0.755**
				(0.365)				(0.601)				(0.360)
GDP per capita (log)	-0.667	-0.473	-1.39	-0.143	1.602	2.205	-0.475	2.272	-1.462	-1.869	-2.579	-4.527***
	(1.328)	(1.441)	(1.537)	(5.339)	(2.470)	(2.570)	(2.557)	(6.319)	(1.293)	(1.212)	(3.196)	(1.369)
Inflation (%)	-0.165***	-0.164***	-0.157***	-0.135**	-0.209***	-0.206***	-0.189***	-0.0885	0.0787	0.086	0.0824	0.0563
	(0.029)	(0.029)	(0.029)	(0.036)	(0.068)	(0.070)	(0.067)	(0.089)	(0.107)	(0.108)	(0.106)	(0.098)
Population density (log)	7.105	7.209	6.846	6.239	9.842	10.37	8.337	11.9	-1.140*	-0.892	-1.725	-1.026
	(6.567)	(6.514)	(6.594)	(10.710)	(9.838)	(9.963)	(9.597)	(13.560)	(0.642)	(0.604)	(1.650)	(0.957)
Democracy index	-0.457	-0.483	-0.405	-1.055	-0.48	-0.551	-0.337	-1.457	-0.114	-0.0517	-0.394	-0.390**
	(0.405)	(0.419)	(0.334)	(0.961)	(0.502)	(0.503)	(0.538)	(1.032)	(0.084)	(0.075)	(0.292)	(0.171)
Exports (log)	-0.0792**	-0.0764**	-0.0586*	-0.0762	-0.132**	-0.122*	-0.0771	-0.096	-0.196***	-0.184***	-0.176***	-0.209***
	(0.026)	(0.021)	(0.025)	(0.053)	(0.065)	(0.066)	(0.065)	(0.072)	(0.030)	(0.029)	(0.064)	(0.037)
Infection fatality rate	1.568**	1.558**	1.605**	1.438*	1.456**	1.436**	1.569***	1.612***	2.253***	2.295***	2.162***	2.012***
	(0.596)	(0.597)	(0.542)	(0.662)	(0.567)	(0.558)	(0.583)	(0.619)	(0.694)	(0.696)	(0.732)	(0.679)

International wheat price (log)	4.094**	4.108***	3.907**	4.092*	4.603*	4.615*	3.965*	2.128	0.841	0.775	0.928	2.511*
	(1.027)	(0.991)	(1.121)	(1.863)	(2.635)	(2.586)	(2.407)	(3.205)	(1.117)	(1.084)	(1.560)	(1.361)
International Brent oil price (log)	-0.6	-0.649	-0.422	-0.999	-0.89	-0.986	-0.303	-0.459	-0.266	-0.14	-0.738	-1.353
	(0.769)	(0.798)	(0.640)	(0.734)	(1.993)	(1.969)	(1.760)	(2.289)	(1.501)	(1.505)	(1.997)	(1.696)
Constant	-40.89	-42.6	-34.64	-41.98					19.43	20.64	34.83	34.22***
	(34.520)	(35.060)	(34.490)	(77.890)					(14.090)	(14.540)	(31.530)	(10.650)
Observations	103	103	103	83	99	99	99	76	103	103	103	83
R-squared	0.285	0.287	0.281	0.26	0.262	0.261	0.276	0.26				
Number of countries	6	6	6	5	6	6	6	5	6	6	6	5
Underidentification test (Kleibergen–Paap rk LM statistic) (p-val)					0.0000	0.0000	0.0000	0.0001				
Weak identification test (Kleibergen–Paap rk Wald F statistic)					76.92	94.87	228.6	166.9				
Hansen J statistic (overidentification test of all instruments) (p-val)					0.103	0.0589	0.961	0.665				
Arellano–Bond test for AR(1) in first differences (p-val)									0.147	0.148	0.143	0.164
Arellano–Bond test for AR(2) in first differences (p-val)									0.191	0.197	0.112	0.21
Sargan test of overid. restrictions (p-val)									0.212	0.241	0.531	0.0363

Source: *Author's calculations. *, **, and *** signify a statistical significance at the 10%, 5%, and 1% levels, respectively. Robust standard errors provided in parentheses.* ♣ *The variable is not available for Kosovo.*

5. CONCLUSION AND POLICY LESSONS

In response to various crises – most recently, the global financial crisis, the European sovereign crisis, the COVID-19 pandemic crisis, and the energy and food price crisis – governments globally, including those in the WB6, implemented fiscal stimuli. This paper investigates the role of pre-crisis fiscal space in shaping the fiscal stimulus provided during crises, drawing on a significant body of literature emphasising the benefits of fiscal space for fiscal policy in times of crisis.

The findings suggest that WB6 nations, having some fiscal space before the global financial crisis of 2008 and notably prior to the COVID-19 pandemic crisis of 2020, faced limitations – albeit reasonably manageable ones – stemming from this fiscal capacity in formulating and implementing fiscal stimulus measures amid subsequent crises. With substantial utilisation of fiscal space during and after the pandemic, the results indicate that the ongoing energy and food price crisis has considerably restricted the ability to implement fiscal stimulus due to depleted fiscal space. Alternatively, should countries opt for more generous financial packages amid the current crisis, it will likely substantially compromise fiscal sustainability to a greater extent than observed during previous crises.

The policy lesson derived from this conclusion is that fiscal buffers should be built during non-crisis times as they crucially determine the government's manoeuvering space when a crisis occurs. This is particularly relevant when countries operate with lower levels of fiscal space due to earlier government actions or crises that depleted this fiscal capacity. This was evident for all WB6 countries in the COVID-19 pandemic crisis of 2020, during which public debt increased, on average, by 10 percentage points of GDP. This left these countries with limited options for the subsequent shock from the energy and food price crisis stemming from Russia's invasion of Ukraine in February 2022. As a result, fiscal stimuli during and after the ongoing energy and food price crisis have been constrained or have posed a threat to the sustainability of public finances.

Policymakers are encouraged to adopt forward-looking fiscal policies that balance the use of fiscal space during economic downturns with the imperative of maintaining resilience for unforeseen challenges. Establishing fiscal rules pertaining to public debt and budget deficit can significantly help in replenishing

fiscal space promptly. A positive aspect is that most WB6 countries have introduced fiscal mechanisms, such as medium-term fiscal planning and fiscal councils in some countries. Additionally, the results caution against overly generous fiscal packages during crises, highlighting the potential adverse effects on fiscal sustainability, which could hamper future crisis response capabilities. Fiscal rules can assist in this regard by ensuring that anti-crisis packages are strictly targeted to avoid deadweight losses arising from assisting households and companies that were less impacted during the crisis or could have withstood the pressure themselves.

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APPENDIX – VARIABLES' DESCRIPTIONS AND BASIC STATISTICS

Table A 1 – Variables' descriptions and sources

VARIABLES	DESCRIPTION	Source
Fiscal stimulus	Estimated variable as a difference between actual budget balance and the long-run budget balance implied from an HP trend	Own calculations based on data from IMF WEO
Public debt as % of GDP	General government gross debt, % of GDP	IMF WEO
Public debt as % of tax revenues	General government gross debt, % of average tax revenues	IMF GFS
Interest expense as % of GDP	Interest expenses, % of GDP	IMF WEO (Implied from the primary balance data)
Foreign currency sovereign debt ratings	Foreign currency long-term sovereign debt ratings, index from 1–21	Database of fiscal space (Kose et al., 2022)
GDP per capita	GDP per capita (constant 2015 US$), logged	WB WDI
Inflation (%)	Inflation, consumer prices (annual %)	WB WDI
Population density	Population density (people per sq. km of land area), logged	WB WDI, National data for Kosovo
Democracy index	Average of the political rights and civil liberties	Freedom House
Exports (log)	Exports of goods and services (constant 2015 US$), logged	WB WDI
Infection fatality rate	Case fatality rate, attack rate data of COVID-19	IEEE, https://ieee-dataport.org/open-access/case-fatality-rate-attack-rate-data-covid-19
International wheat price	Wheat (U.S.), ($/mt), logged	World Bank Commodity Price Data – The Pink Sheet, https://www.worldbank.org/en/research/commodity-markets
International Brent oil price	Crude oil, Brent, $/bbl, logged	World Bank Commodity Price Data – The Pink Sheet, https://www.worldbank.org/en/research/commodity-markets

Table A 2 – Variables' descriptive statistics

VARIABLES	Observations	Mean	St.dev.	Min	Max
Fiscal stimulus	120	(0.10)	2.32	(9.95)	5.49
Public debt as % of GDP	117	43.87	20.14	5.57	107.35
Public debt as % of tax revenues	117	211.01	102.91	28.16	436.14
Interest expense as % of GDP	120	1.33	1.00	(0.46)	4.40
Foreign currency sovereign debt ratings	91	8.67	1.45	6.00	11.00
GDP per capita	115	8.42	0.27	7.78	8.97
Inflation (%)	114	3.19	3.86	(2.41)	16.12
Population density	114	4.46	0.38	3.82	5.12
Democracy index	111	3.85	1.59	2.00	7.00
Exports (log)	112	21.90	1.88	4.40	24.25
Infection fatality rate	120	0.11	0.53	0.00	3.87
International wheat price (log)	120	5.37	0.27	4.91	5.95
International Brent oil price (log)	120	4.20	0.38	3.36	4.72