THE FISCAL SPACE IN THE WESTERN BALKANS

Evidence from the recent multilayer crisis

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ABBREVIATIONS

EBRD	European Bank for Reconstruction and Development
EPS	Electricity Industry Serbia from the Serbian Elektroprivreda Srbije
ESM	Power Plants in North Macedonia from the Macedonian Elektrani na Severna Makedonija
EU	European Union
EUR	Euro
EVN	Lower Austria energy supply from the German Energieversorgung Niederösterreich
FE model	Fixed Effects Model
GDP	Gross Domestic Product
GFS	Government Financial Statistics of the IMF
GMM	Gaussian Mixture Model
IEA	International Energy Agency
IEEE	Institute of Electrical and Electronics Engineers
IMF	International Monetary Fund
IV-2SLS	Instrumental Variables – Two Stage Least Squares
KEK	Kosovo Energy Corporation
KESCO	Kosovo Electricity Supply Company
KGOE	Kilograms of oil equivalent
OLS	Ordinary Least Squares
P.P.	Percentage points
SSO	State Statistical Office of North Macedonia
USD	U.S. Dollar
WB	The World Bank
WB6	The six economies of the Western Balkans
WBIF	Western Balkans Investment Framework
WDI	World Development Indicators of the WB
WEO	World Economic Outlook of the IMFFS

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 WB6. The sudden energy and food price surges left little room for well-thought 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 which impacted inflation rates in the WB6, and they have probably exerted a lasting impact in the region. Minasyan et al. (2023) estimate that also domestic factors impacted inflation dynamics of the Western Balkans countries. Following peak inflation rates at the end of 2022, signs of lowering were visible in 2023. Monetary policy also aided the decrease in inflation and curbing inflation expectations through continued synchronized monetary tightening, and recently, central banks have put a pause on the increase of policy interest rates. The World Bank (2024) estimates that the economic growth of WB6 in 2023 will reach 2.5 percent, increasing slowly in 2024 and 2025 to 3 percent and 3.5 percent, respectively, hence enabling the long-assumed "soft landing".

These multilayer-crisis events have contributed towards increased public deficits and public debts of WB6, significantly contributing toward narrowing of the fiscal space. This has brought the attention to the need to (re)build fiscal buffers and comply with (any) fiscal rules. In 2022 and 2023, WB6 implemented anti-crisis packages for the support of households and companies, which ware 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 the public expectations for wage and pension increases sometimes beyond prescribed adjustments, which could also have medium-term implications for price dynamics. According to the IMF Regional Economic Outlook (October, 2023), the public debt-to-GDP ratios of the European emerging 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 percent of GDP in 2023 and 2024, respectively.

Challenges will still continue to arise in the upcoming periods, with 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, larger attention has been paid for medium-term fiscal planning, with more WB6 countries now incorporating larger energy investments in their long-term development strategies.

Within the scope of the 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 Pandemic of Covid-19 in 2020-2021 and the Energy and Food Price Crisis 2022-2023. The main purpose of this study, however, is to assess the effects of the Energy and Food Price Crisis[1] on the fiscal space of the WB6, through

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[1] Within the scope of the study, we use the terms 'Energy and Food Price Crisis' and 'Energy Crisis' interchangeably, as both refer to the same crisis period starting from the end of 2021 up until late 2023. More specifically, we use the term 'Energy Crisis' when we refer to the effects on the energy sector in more detail.

analysis of several segments of fiscal policy such as public debt and public deficit dynamics, the fiscal space and building of buffers, energy subsidies, and governmental anti-crisis support measures. This study also looks at the relationship between the energy sector and fiscal policy, by estimating the fiscal cost of electricity subsidies for households. The end goal of the study is to devise recommendations in the form of policy discussions for improved fiscal space and more efficient government spending in times of crisis. As such, the study is conducted at the end of 2023 and beginning of 2024 when the Crises has been on its sunset yet with luring risks which prevented that we said the crisis was over.

The study is structured as follows. The second chapter consists of a comparative analysis of the fiscal stances of the WB6 over the past seven years, with an outlook for the period ahead. This section also provides an overview of energy indicators, along with ongoing investments in clean energy. Chapter 3 analyses the relationship between fiscal space and fiscal stimulus packages during crises. A Country Focus is presented in Chapter 4, looking at the fiscal cost of household electricity subsidies in North Macedonia, and its effect on segments of government spending. Chapter 5 provides a summary of the key points and offers policy recommendations.

2. COMPARATIVE FISCAL ASSESSMENT OF THE WESTERN BALKAN 6

2.1 THE PRE-PANDEMIC FISCAL CONDITIONS

In the years prior to the pandemic, Western Balkan-6 countries (WB6) showed signs of steady economic prosperity, with moderate public debt and relatively stable budget deficits. Although fiscal deficits were small in most of WB6, averaging 1.5 percent of GDP for the whole region, the fiscal space was still limited (Figure 1a). In the cases of Serbia and Bosnia and Herzegovina, fiscal balances were positive. The pre-pandemic public debt levels averaged 48 percent of GDP for all WB6 (Figure 1b). Montenegro and Albania stood out with high public debt. At that time, Montenegro was building the Bar-Boljare highway project, which significantly increased public debt, amounting to 79 percent of GDP in 2019 (IMF Country Report, 2022). Overall, the pre-pandemic fiscal space in most of WB6 was moderate or, at best, sufficient to soak up a shock of sensible magnitude.

During the pre-pandemic period, WB6 were expanding, with high spending being allocated towards capital investments. Nevertheless, fiscal policy was in need of reform even then, with structural weaknesses present much before the pandemic. All WB6 had room for higher revenue collection from formalizing parts of their economies, i.e. from combatting grey economy. Moreover, issues with spending efficiency were also dominant, with large segments of public budgets being allocated to public wages and social welfare transfers (World Bank, 2019). The periods that followed were unprecedented, both globally and within the region.

Figure 1 - Fiscal stances of WB6 prior to the pandemic

a) Pre-pandemic fiscal balance

b) Pre-pandemic public debt
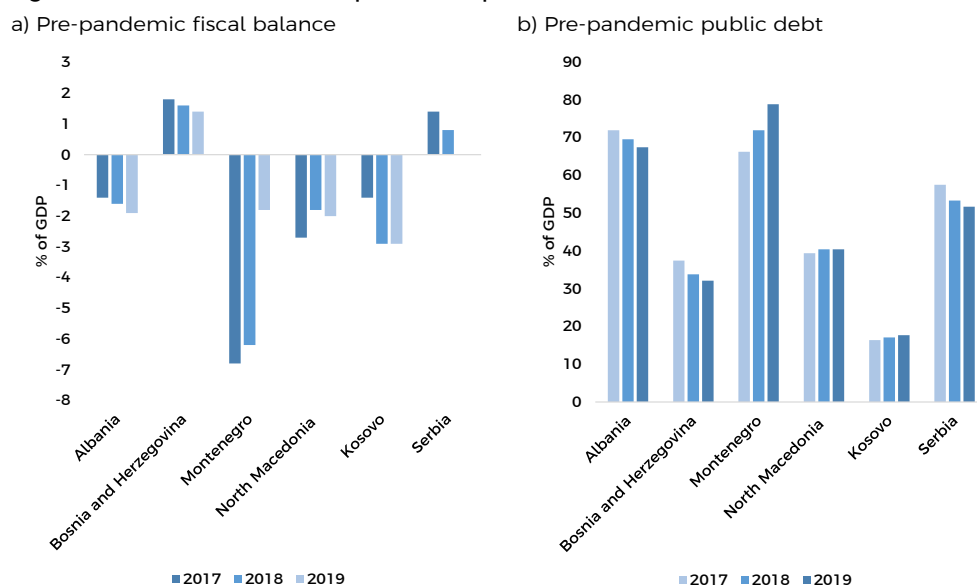
Source: IMF World Economic Outlook Data

2.2 THE FISCAL BURDEN OF THE PANDEMIC

As the COVID-19 pandemic hit, WB6 experienced a notable economic downturn (Figure 2), which deviated significantly from the usual economic trends. It more significantly affected tourism-dependent countries such as Montenegro and Albania, and to an extent Kosovo who is diaspora-dependent. As a consequence, many service-providing businesses were forced to shut down their work. As value chains disrupted, the demand for domestic and foreign goods and services dropped, causing private consumption and investments to plummet. Public budgets experienced a decline in revenues and a significant rise in expenditures for tackling the challenges that arose.

Figure 2 - Real GDP growth rate (%)
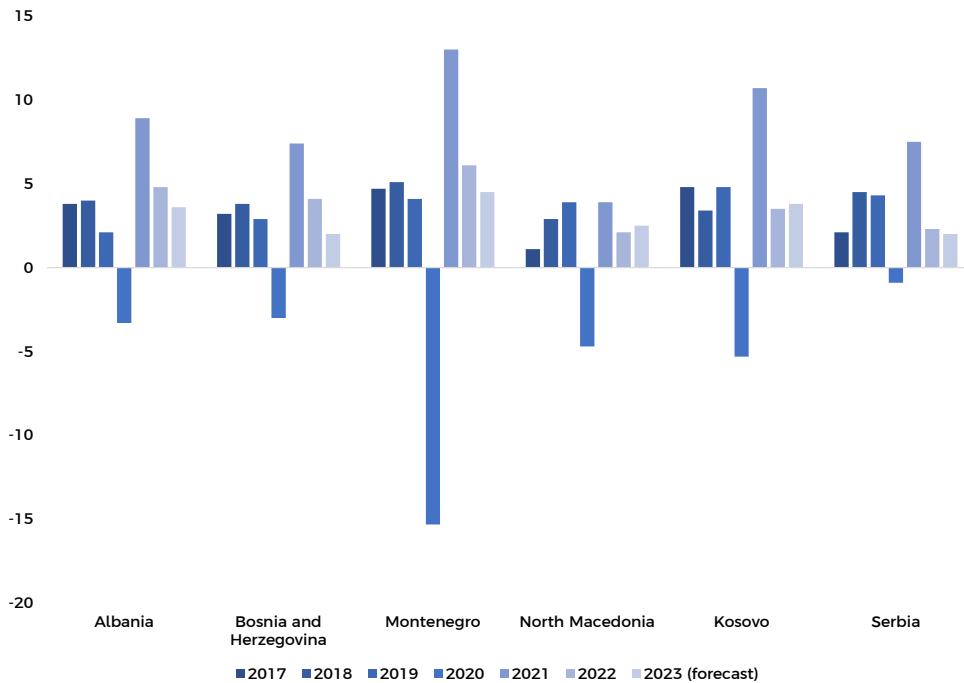
Source: IMF World Economic Outlook Data

To combat the COVID-19 crisis, WB6 governments were faced with the need to provide generous fiscal support, which entailed additional spending and foregone revenue. Apart from aiding the healthcare system, the governments financially assisted households and firms, in order to sustain the employment rate and keep firms from shutting down.[2] Investments in the healthcare infrastructure were undertaken, worker's wages were subsidized and the most vulnerable received financial support. The cost of this support was substantial, averaging 6 percent of GDP for all WB6 in 2020 and 2021 (Figure 3). The large spending, at that time, was seen to be temporary, without the prospects of other potential crisis events which may arise. Having more fiscal room in the years before the pandemic, Serbia significantly surpassed the COVID-19 support of other countries from the region, and offered measures adding up to 12.2 percent of GDP.

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2 A full list of policy responses to COVID-19 can be viewed on the IMF Policy Tracker, available at: **https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19**

Figure 3 - Fiscal cost of COVID-19 measures implemented in 2020 and 2021
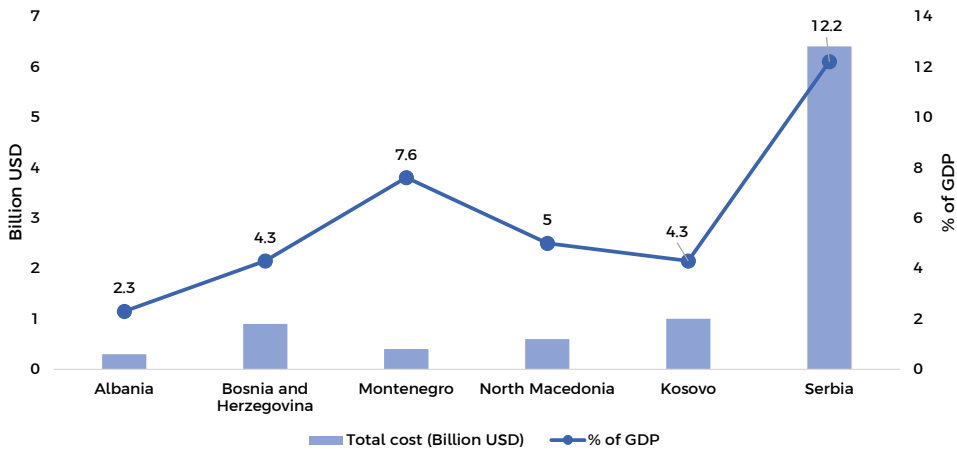
Source: IMF Data

As a consequence, the healthcare crisis affected the fiscal deficits in all WB6, reaching an average of 7.5 percent of GDP (more than 6 percentage points above the pre-pandemic level) (Figure 4a), significantly consuming the fiscal space. Solely Montenegro reached a public deficit of 11 percent of GDP in 2020. Public debt for all WB6 on average increased by 10 percentage points, reaching 58 percent of GDP in 2020 (Figure 4b). Most Western Balkan countries turned to external financing options during this period, apart from Kosovo and Bosnia and Herzegovina, which had limited access to international capital markets. In 2020, Albania, Montenegro, North Macedonia, and Serbia collectively issued Eurobonds amounting to €5.1 billion. These funds were utilized for refinancing debt and covering expanding deficits. (World Bank, 2021). As a result of Montenegro's high deficit, it's no surprise that it also has the largest public debt that year, reaching 107 percent of GDP. Nevertheless, WB6 economies bounced back quickly in 2021.

Figure 4 - Fiscal stances of Western Balkan countries in 2020 and 2021
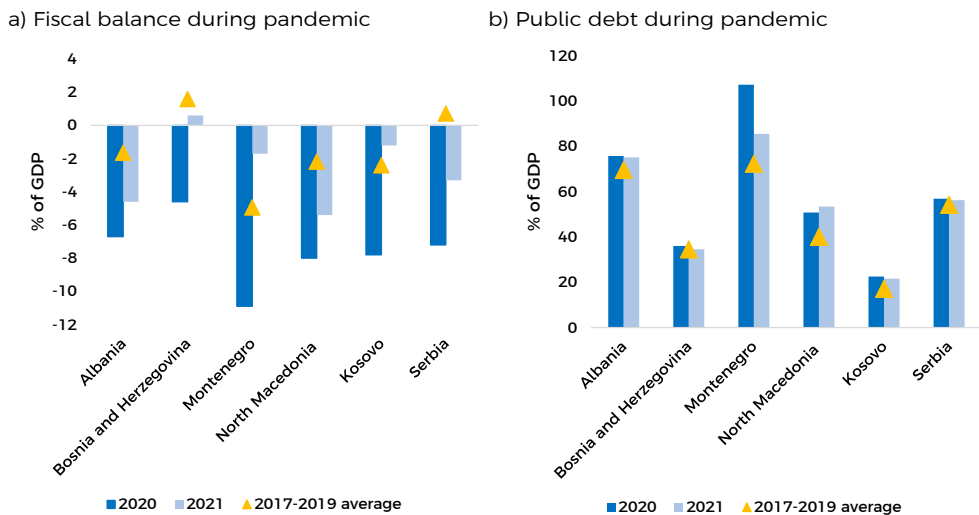
a) Fiscal balance during pandemic

b) Public debt during pandemic

Source: Author's estimates based on IMF World Economic Outlook data
Note: For depicting the pre-pandemic fiscal stances on the figure, the average values of the fiscal balances and public debt levels were taken from the period 2017 to 2019.

2.3 RECOVERY ON THE HORIZON OVER 2021

Some fiscal support for COVID-19, such as wage subsidies and support to the most vulnerable, continued in 2021, however in more limited scopes. As mobility restrictions started to loosen, economic growth was spurred by increased availability of services, as well as increased private consumption and tourism. As fiscal support started to subside, WB6 emerged strongly in 2021, with higher real economic growth than pre-pandemic rates to compensate the 2020 fallouts (Figure 2). However, the pre-pandemic level of economic activity or employment was not achieved in most of the WB6. Private and public investments started to grow together with consumption which led the economic rebound. Interestingly, the consumption level was above its pre-pandemic levels in all WB6, and it was at least twice as high in Albania, North Macedonia, and Serbia (World Bank, 2022a). Fiscal deficits on the other hand varied among WB6 in 2021 (compared to before the pandemic), with improvements in Kosovo, Montenegro, and deterioration in Serbia, Albania, Bosnia and Herzegovina and North Macedonia (Figure 4a). This implies that the massive utilization of the fiscal space over 2020 has not stopped over 2021, but rather continues with a calmer pace. The average fiscal deficit for the region in 2021 equaled 2.6 percent of GDP, bouncing back by 4.9 percentage points compared to 2020. On average, the public debt of WB6 in 2021, dropped by 4 percentage points compared to 2020, amounting to 54.5 percent of GDP for the whole region (Figure 4b). That year, Serbia and North Macedonia placed Eurobonds once more, in the amount of €1 billion and €700 million, respectively (World Bank, 2021).

The promising outlooks for renewed growth were challenged again by the unforeseen geo-political conflict to come. Signs of increased inflation were felt in 2021, averaging 2.8 percent for the whole region, only to be exacerbated in 2022. The rigidities in the value chains globally affected domestic inflation over the second half of 2021, including due to structural misbalances in some sub-markets, like that for raw oils.

2.4 THE DETERIORATING FISCAL SPACE PROMPTED BY THE RUSSIAN INVASION OVER UKRAINE

With the Russian Federation's invasion to Ukraine in February 2022, food and energy prices started to soar rapidly, causing historic levels of inflation and significantly affecting the public finances of the WB6. In 2022 and 2023, WB6 faced a multitude of challenges to remain resilient. In the attempt to balance between curbing inflation, securing normal energy provision and supporting the most vulnerable, governments have been tasked with maintaining a somewhat stable or consolidating fiscal balance, given the fiscal space has been already exhausted to a large extent, while international financing conditions tightened.

To combat the surge of inflation, WB6 tightened their monetary policy rates. In the case of Montenegro, the policy rate responses were introduced with a delay due to political changes (EBRD Transition Report, 2020-23). Currently (November 2023), it is estimated that policy rates might have reached their peak, and fiscal policy will need to play a larger role for achieving medium-term sustainability. As part of efforts to strengthen fiscal capacities, WB6 have made efforts to introduce medium-term planning, or create Medium-Term Fiscal Strategies. Additionally, Montenegro, North Macedonia and Serbia have already formed Fiscal Councils that function on a governmental level.

In large part due to the nominal effect of inflation, fiscal deficits and public debt showed signs of narrowing in 2022. The fiscal deficit of all WB6 reached an average of 2 percent of GDP (0.6 percentage points lower than the level in 2021, but 0.85 percentage points higher than pre-pandemic levels) (Figure 5a). Bosnia and Herzegovina is an outlier in this regard, showing a budget surplus in the years 2021 and 2022 (still lower than the pre-pandemic level), with an estimated deficit in

2023. The positive balance in the past two years could be primarily a result of under execution of the public budget, helped with strong domestic energy production and export from coal and hydropower, which shielded Bosnia and Herzegovina from sudden shocks in the energy market. Comparatively, North Macedonia has had the highest primary deficit in 2022 and 2023, which could be a result of the significant support packages provided to tackle the Energy and Food Price Crisis. Moreover, the announced infrastructural project in North Macedonia for the highways Corridor 8/10d is expected to cost 10 percent of 2022 GDP, causing a significant fiscal burden in the following years (IMF Country Report, 2022).

With the 'Europe Now' reform program announced in Montenegro in 2022, expansionary policies were introduced. On the other hand, healthcare contributions were removed from gross wages while the non-taxable income portion was raised to 700 EUR, impacting public revenue collection. Additionally, to tackle the informal economy and discourage out-migration, as part of 'Europe Now', Montenegro introduced a sharp increase in the minimum wage from 250 to 450 euros, which is well above the minimum wages of other WB6 countries. The potentially lower revenues, in combination with increased expenditures affected the rise in public deficit in 2022, and might also have medium-term effects (IMF Country Report, 2022).

Public debt for all WB6 on average decreased by 5.6 percentage points, amounting to 48.8 percent of GDP in 2022, which is close to pre-pandemic levels (Figure 5b). Despite the fact that most WB6 countries saw a general decrease in public debt, North Macedonia and Kosovo saw an increase in debt levels in 2022 and in the projected levels for 2023. The lowering or stabilization of general government debt is, in part, due to inflation-driven growth which lowered the debt ratios. It is estimated that for countries with debt over 50 percent of GDP, a 1 percentage point surprise increase in inflation can reduce public debt by 0.6 percentage points of GDP, with a medium-term lasting effect. (IMF Fiscal Monitor, April 2023).

Figure 5 - Fiscal stances of Western Balkan countries in 2022 and 2023
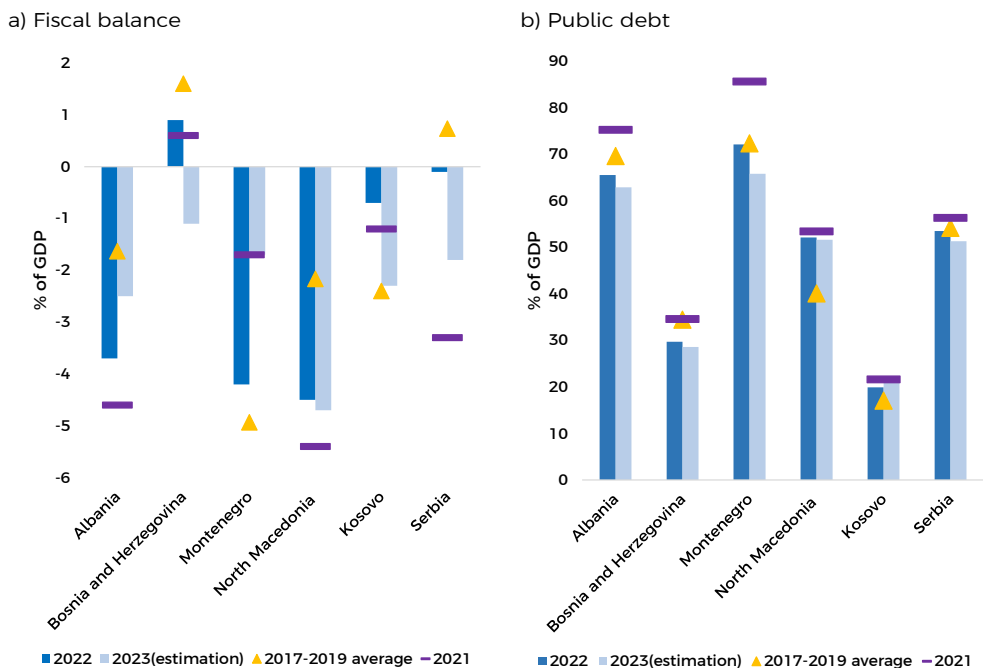
a) Fiscal balance

b) Public debt

■ 2022 ■ 2023(estimation) ▲ 2017-2019 average ▬ 2021

■ 2022 ■ 2023(estimation) ▲ 2017-2019 average ▬ 2021

Source: Author's estimates based on IMF World Economic Outlook data
Note: For depicting the pre-pandemic fiscal stances on the figure, the average values of the fiscal balances and public debt levels were taken from the period 2017 to 2019.

In all WB6, significant spending was felt in the increase of pensions, minimum wages, social welfare support, public wages, and in the case of North Macedonia an increase of salaries of public officials by 78 percent[3]. While relatively recent, the wage and pension measures could have a medium and long-term impact on fiscal balances. In Serbia, the announced 5.5 percent rise in pensions was extraordinary, on top of the expected increase due to indexation (Serbian Fiscal Council, 2023). In the case of North Macedonia, the fiscal implications of the increase in public wages is estimated between 0.7– 0.8 percent of GDP on average per year and add to the prior minimum wage and public officials' wage increase (World Bank, 2023b).

Despite the fact that this time round WB6 had less fiscal room to implement new anti-crisis measures, they offered various forms of support for households and firms, which inflicted a significant fiscal burden. In fact, the fiscal cost of the energy measures which were provided in the first half of 2022 by emerging market economies such as the Western Balkan region, is typically larger than the support provided in more advanced economies (Ari et al. 2022).

On the revenue side, measures such as reduction of VAT rate on food and energy were introduced, as well as reduction of excises on fuel and food import fees. On the spending side, subsidies to food and energy companies were implemented, along with direct support to the most vulnerable in the form of cash transfers and vouchers.

Arregui et al (2022) have estimated the fiscal cost of measures for the support of households in 2022 and 2023 in Europe. In the Western Balkan region, approximately two thirds of household support measures were untargeted, with the exception of Bosnia and Herzegovina whose measures are predominantly targeted (Table 1). Measures which are included in this estimation span from public and minimum wage increases, pension adjustments, subsidies to the energy sector, cash transfers to citizens or public servants, price freezes or trade margin caps, reduced VAT rates on food and energy, as well as agricultural subsidies. The most significant cost can be attributed to subsidies in the energy sector, covering measures such as paying for higher electricity imports, supporting state owned gas and electricity companies or capping the prices of fuel products along with VAT and excise rate reductions.

The collected data covers measures from 2022 and announced measures for 2023. Therefore, it is most likely that the fiscal costs for the whole duration of the crisis is higher.

Table 1 – Fiscal cost of household support measures in 2022 and 2023 (percent of GDP)

Country	Targeted	Untargeted	Total
Kosovo	1.41	2.17	3.58
North Macedonia	0.64	2.46	3.10
Serbia	0.89	2.18	3.06
Albania	1.00	1.65	2.65
Bosnia and Herzegovina	1.15	0.88	2.03
Montenegro*	0.09	0.14	0.23

Source: Adapted from Arregui, et al. (2022). IMF Working Papers, 2022/262
* The measures in Montenegro are only for the year 2022.

Western Balkan countries suffer from many years of poor management and underinvestment in the energy sector. As a result, countries from the region were relatively unprepared for the energy-price shock. When it comes to subsidies in the energy sector, Kosovo, Albania, Serbia and North Macedonia allocated between 1.17

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3 This was in fact an adjustment to base for calculation of public officials' wages – which was the average wage frozen to the value in the year 2012.

and 1.93 percent of their GDP for electricity producing companies (Table 2), while Bosnia and Herzegovina and Montenegro did not provide any financial support for this purpose. North Macedonia stands out for providing the most extensive support relative to its GDP. Having this in mind, the Country Chapter of this study includes a dedicated section examining the fiscal implications of electricity subsidies in North Macedonia. On a regional level, the World Bank has estimated that, electricity subsidies for covering operational losses added up to 2.4 percent of GDP of WB6 (World Bank, 2023a). As evident from Table 2, the subsidies directly provided to citizens for covering part of the electricity bills are comparatively smaller, even insignificant when compared to the ones provided to electricity companies.

Table 2 - Fiscal cost of electricity subsidies for electricity companies and for citizens directly, in 2022 and 2023 (percent of GDP)

Country	Subsidies for electricity companies	Electricity subsidies for citizens	Total
Kosovo	1.17	0.23	1.4
North Macedonia	1.93	0.01	1.94
Serbia	1.4	0.07	1.47
Albania	1.6	0.01	1.61
Bosnia and Herzegovina	NA	0.02	0.02
Montenegro*	NA	NA	NA

Source: Adapted from Arregui, et al. (2022). IMF Working Papers, 2022/262
* The data for Montenegro is only for the year 2022.

In North Macedonia, the government subsidized the energy bills of households and small business consumers (part of the regulated market), through the state-owned electricity-producing company ESM, which sells electricity at a below-market price to the universal supplier EVN. ESM took out a liquidity support loan from the EBRD in 2022, which was later approved in 2023. The loan in the sum of €100 million was utilized for providing the subsidized price and covering all operational losses. In July 2022, a four-segment tariff system was introduced for the regulated prices, enabling progressive pricing of electricity usage among households and small business consumers (depicted in more detail on Table 5).

Kosovo provides 90 percent of the electricity through a bulk supply agreement between Kosovo Energy Corporation (KEK) and Kosovo Electricity Supply Company (KESCO), where final consumer prices are regulated by tariffs. (European Commission, 2023). In February 2022, tariffs were increased for households consuming more than 800 kilowatts of electricity per month.

In Serbia, the main supplier of natural gas is Srbijagas, which imports natural gas for domestic use and sells it at a lower than market price to its consumers. The difference in the price is subsidized by the government. As for electrical energy, the state-owned company EPS has been generating large operational losses over the years and has not been able to meet the domestic electrical energy demand. Consequently, EPS had to import electrical energy over the course of the Energy Crisis. Having in mind the growing inefficiency of EPS, steps have been taken to change the management of the state-owned energy enterprise EPS to a joint-stock company (Serbian Fiscal Council, 2023).

It is evident that actions for higher energy transition will be necessary in the coming years. A positive feature of recent Fiscal Strategies formed by WB6 is that they have started including larger plans for reforms in the energy sector.

2.5 THE OVERALL PICTURE AND ITS OUTLOOK: PRE-PANDEMIC, PANDEMIC, ENERGY-FOOD CRISIS

This section delves into the fiscal positions of WB6 from a grand perspective. Since 2017, increases in government revenues can be noticed in most WB6 countries, apart from Bosnia and Herzegovina and Montenegro (Figure 6a). The increase in government revenue can be mainly attributed to nominal increases in GDP due to the accelerating inflation. In the periods to come, fiscal consolidation on the revenue side will be crucial, mainly in the form of tax reforms. When it comes to revenue collected from taxes, Albania is behind other WB6 based on the tax-to-GDP ratio, mainly as a result of the large presence of informality (IMF Country Report, 2022).

Despite the increases in revenues in most WB6 countries, the expenditures are in most cases much higher (Figure 6b). Fiscal consolidation will be essential in the periods to come, both on the revenue and expense side. To increase revenue, it would be necessary to increase tax-collection capacities, while on the spending side, fiscal support should be strictly targeted.

Figure 6 - General government revenues and expenditures of WB6

a)   General government revenue (Percent of GDP)

b)   General government total expenditure (Percent of GDP)
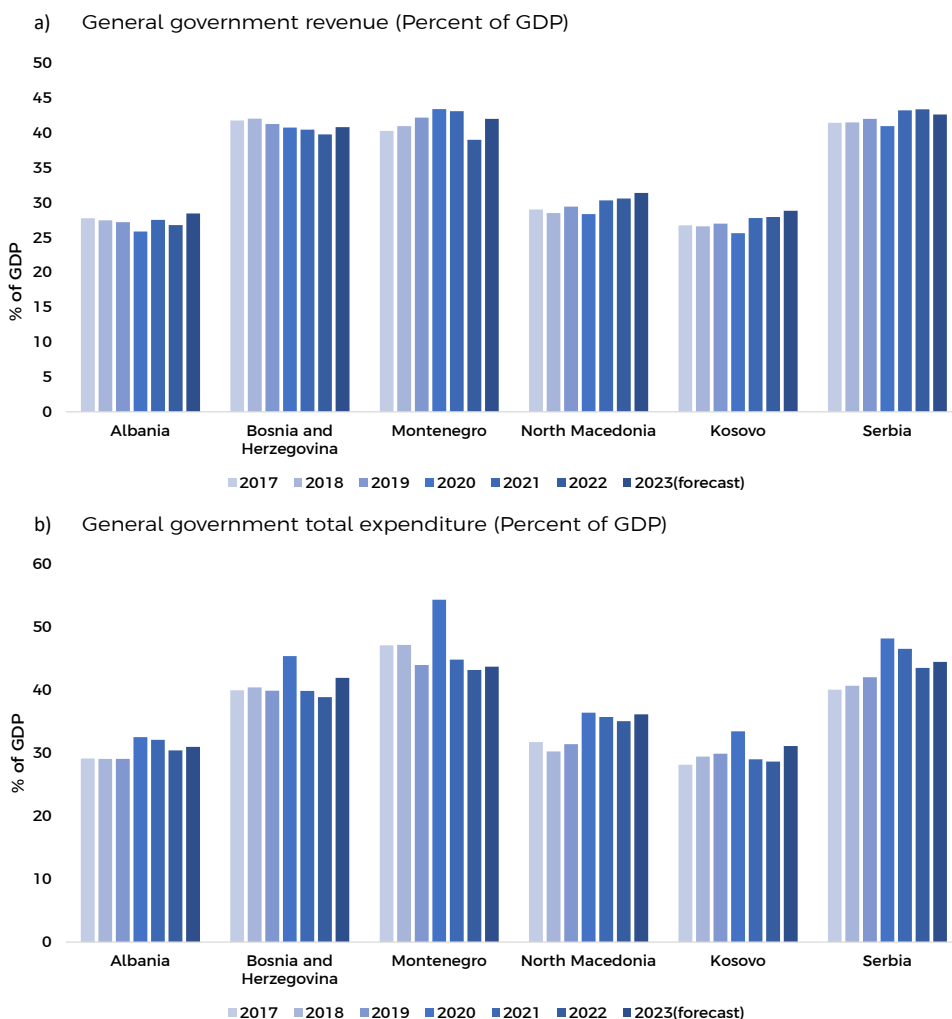
Source: IMF World Economic Outlook Data

Observed in its entirety, the most significant primary deficits in WB6, as elsewhere, were undoubtedly made in the year 2020, as all countries had to intervene during the healthcare crisis (Figure 7). If we compare the primary balances of pre-pandemic periods to now, the results are mixed. Serbia, Albania, Bosnia and Herzegovina and North Macedonia have worse fiscal stances now, while Kosovo and Montenegro have much lower primary deficits than before. While lower primary deficits could be a sign of fiscal consolidation, they can also be attributed to under execution of capital spending during the COVID-19 crisis and overall. More recently, however, primary deficits are starting to narrow down. Serbia and Bosnia and Herzegovina's balance sheets show a primary budget surplus in 2022. Serbia stands out with an overall negative fiscal balance (Figure 5a), but a positive primary balance in 2022 (Figure 7), which could be a result of rising interest expenditures.

Figure 7 - General government primary net lending/borrowing (Percent of GDP)
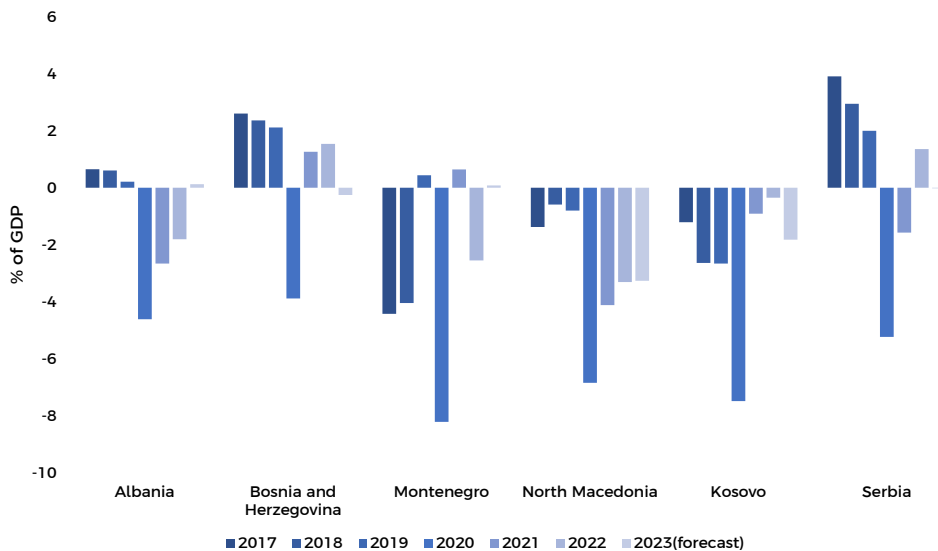
Source: IMF World Economic Outlook Data

After a significant deterioration in primary expenditures in 2020, as inferred from their negative value on Figure 8, the following year marks a reversal among all WB6, on average by 3.6 percentage points (inferred from the positive value). However, in 2022, as larger fiscal support was provided, the reduction in primary expenditures has been smaller or they stalled, as inferred by their small positive values in this year for all WB6, except Serbia. Compared to pre-pandemic levels, the increase in interest expenditures is important (yet not easily visible on Figure 8 in a comparative sense) in most of WB6, averaging an increase of 0.2 percentage points in 2022. This is most noticeable in the cases of North Macedonia, Serbia and Montenegro. Contractionary monetary policy could increase external debt in developing countries, which are more vulnerable to rising interest rates. As a result, WB6 are expected to have higher interest expenditures in the near future. The field of energy supply has proven to be especially important with regards to fiscal sustainability. Having that in mind, the following sub-section looks at some key energy indicators and investments.

Figure 8 - Drivers of changes in the Fiscal Balance (2019-2022)
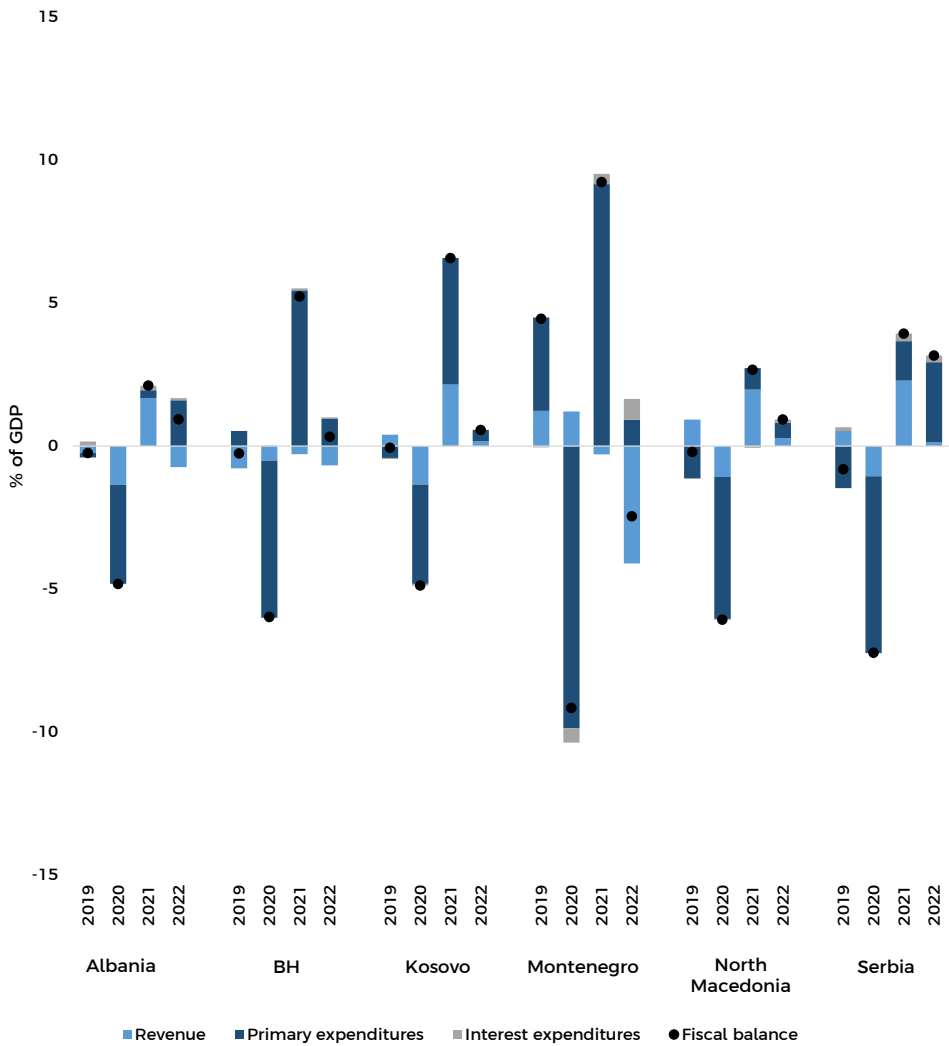
Source: Author's estimates based on IMF World Economic Outlook Data.
Note: The figure shows annual changes in the fiscal balance (black dot) and contributions from revenues (blue), interest expenses (gray), and primary expenditures (orange). Positive (negative) values show improvement (deterioration) compared to the previous year. Positive values from primary expenditures, for example, imply a reduction in primary expenditures as a share of GDP compared to the previous year.

2.6 RISING GREEN TRANSITION IN WB6 TO SUPPORT FISCAL SPACE IN THE MEDIUM RUN

WB6 are characterized by old infrastructure in the energy sector, high dependence on fossil fuels (primarily from coal), low energy efficiency, high rates of energy intensity, as well as limited market mechanisms and private sector participation (WBIF, 2023). High energy dependence of WB6 has highlighted the need of further investments in the energy sector, especially in the energy transition to renewable sources of energy. This is critical for future shocks of similar type and magnitude as recent ones to prevent large weight onto the fiscal space. Over the past few years, WB6 have received significant financial support in green investments from financial organizations and donors. In December 2022, the EU announced a €1 billion energy support package for the Western Balkans, the first half of which was utilized for government policy measures for households and small and medium-sized enterprises (WBIF, 2022). From the €500 million allocated for budgetary support, Serbia received the most significant support in the amount of €165 million (Figure 9). While this support was announced in 2022, 90% of the funds were due to be dispersed in January 2023 (WBIF, 2022).

Figure 9 - EU energy support packages for government policy measures in WB6 (Million EUR)
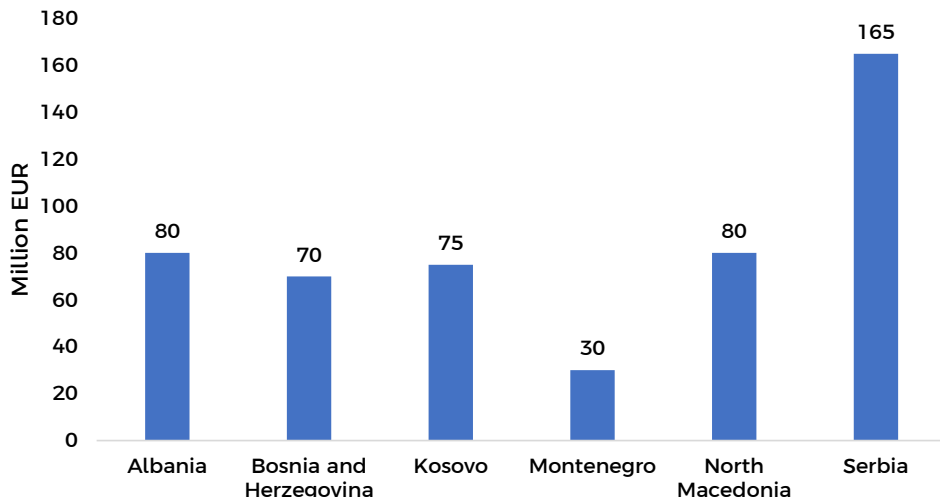
Source: WBIF (2022)

The second part of the energy support package, provided through WBIF, consists of support targeted towards energy transition and greater energy independence. While such support is critical to support the fiscal space in WB6, it implies that green transition is supported in a way to secure stronger sustainability over the medium run. The dependency on energy imports in the WB6 ranges between 20 and 40 percent, with the exception of North Macedonia with a comparatively higher dependency (Figure 10a). The trend of growing dependency could be attributed to the loss of lignite reserves, which were the main supplier of energy in North Macedonia in the previous years. Reducing the dependency in imports and investing in renewable and clean energy will be crucial in the next years, inclusive for the sustaining of the fiscal space in the medium run, despite it may cause further fiscal pressure in the short run. The energy intensity of the WB6 is around three times higher than the average energy intensity of the European Union (World Bank, 2018). It has not changed much in the WB6 over the years (Figure 10b). In other words, the efficiency in producing a given level of output has remained stagnant. Albania stands out since most of electricity generation is derived from hydropower. However, this makes Albania particularly vulnerable to natural factors such as changes in rainfall patterns.

Figure 10 - Energy indicators for WB6

a)   Energy import dependency (%)   b) Energy intensity
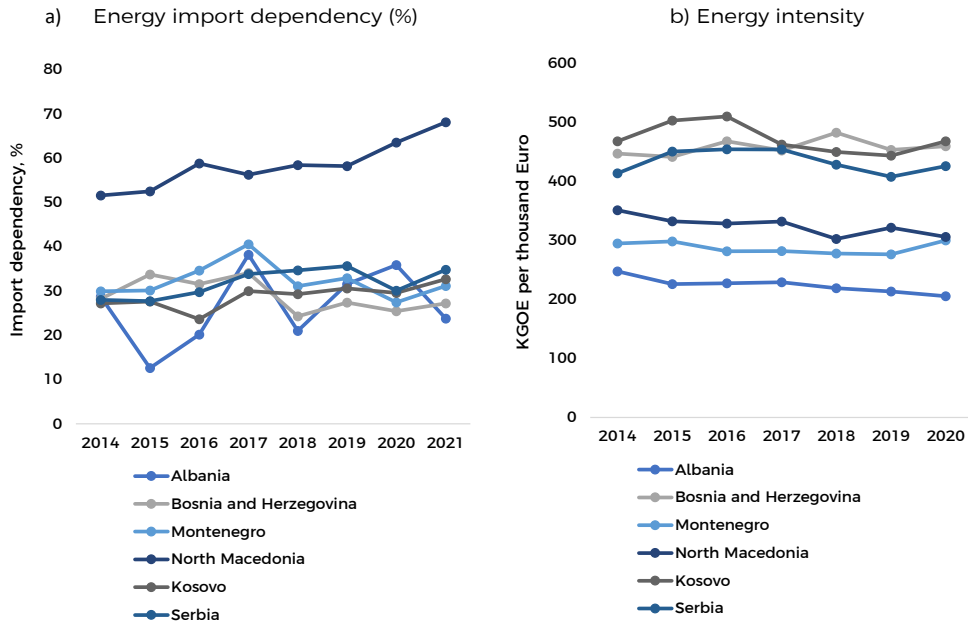
Source: Eurostat Data

In the period 2009 - 2023, financial institutions and donors within WBIF have invested approximately €503.8 million in the form of grants for Clean Energy (Figure 10), which is also critical for the support of the fiscal space. The whole investment for clean energy for the Western Balkans, encompassing various forms of financing (loans, grants and investments), is estimated at €5.4 billion. When it comes to WBIF grants, those implemented at a regional level have received the largest financial support in the past decade (Figure 11a), further accentuating the necessity for larger economic and energy community integration. Namely, at the 2015 Vienna Summit of the WB6 Initiative, countries signed a Declaration to increase the energy market connectivity by creating a Regional Electricity market, for which several steps have been undertaken. Energy efficiency and renewable energy, with grants adding up to €194.4 and €153.7 million respectively, can be highlighted as sub-sectors which have been most supported from WBIF, together with electricity transmission which is crucial for energy market integration (Figure 11b).

Figure 11 - Western Balkans Investment Framework grants for Clean Energy, in the period 2009 to 2023 (Million EUR)

a)   Grants by country   b) Grants by sub-sector
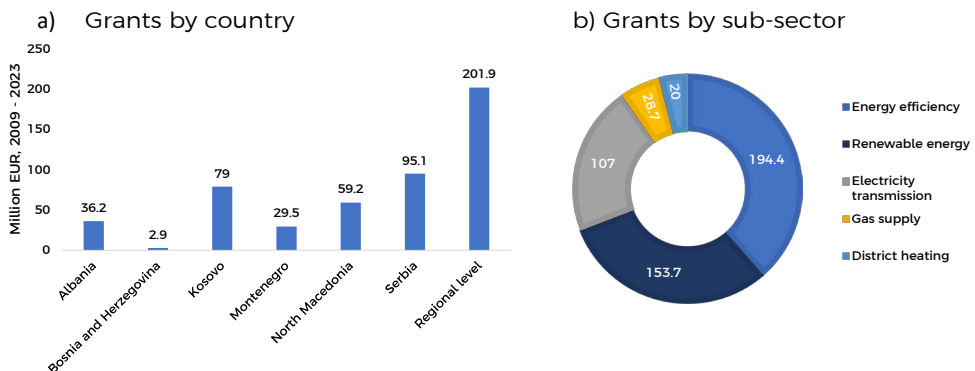
Source: WBIF (2023)

3. THE FISCAL SPACE AND THE FISCAL STIMULUS DURING CRISIS IN THE WESTERN BALKANS 6

3.1 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 the fiscal policy as a tool for stirring collapsed demand. It accentuated the importance of government's potential to use their fiscal policy counter-cyclically, in order 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 raised from 10 per cent in the 1990's 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) households' budget, to prevent serious and long-lasting damage on the economic security. According to Lerner (1943, p.39) if an 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 it 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 fiscal space and fiscal capacities. An effusive fiscal space provides government financial resources and makes them able to energize the economic activity. Also, it guarantees the credibility of the budget sustainability and ensures that the financial stimulus supports economic growth. While the definition of the fiscal space is blurry, it points to the availability of budget resources for a specific purpose (World Bank, 2008). A formal definition of the fiscal space has been introduced by Heller (2005, p.32) defining the 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 the 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 (2007, p.2) 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. UNDP does not justify prioritizing fiscal targets ahead of the development objectives while defining the concept of fiscal space. They put emphasis on the mobilization of resources to secure enabling governance, institutional and economic environment for effective policy actions (Roy et al. 2006). In 2016, the International Monetary Fund proposed a uniform definition of the fiscal space, to allow a systematic assessment of fiscal policies across the country. 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: the Global Financial Crisis 2008-2010, the European Sovereign Crisis 2011-2013, the Pandemic of Covid-19 2020-2021 and the Energy and Food Price Crisis 2022-2023, many economists analyzed the relationship between the fiscal space and the size of the fiscal stimulus provided. The economies that entered the Global Financial Crisis with ample fiscal space took more aggressive fiscal stimulus (Romer and 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 passed into 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 high debt to GDP ratio suffered long-lasting economic losses (Jorda et al. 2016). Romer and Romer (2019) explain that the limited response of the high-debt countries is driven by two aspects: the sovereign market access and the choices of domestic and international policymakers. Scared of not being able to repay their loans, investors refuse to lend to the high-debt countries, or push the sovereign yields to prohibitive levels. Also, due to the current rules or bailout conditionality, international organizations such as EU and IMF are not able to support the high-debt countries in crisis times, leaving them to respond with very limited funds.

Many countries entered the Pandemic Crisis with deteriorated fiscal stance due to the successive shocks of the Global Financial Crisis and the 2014 plunge in the commodity prices. The fiscal space of the developing countries has been generally more limited, especially in low-income ones who 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 the developed countries whose fiscal packages have been 700 times more valuable than those of the least developed countries (OECD, 2022).

Apeti et al. (2021) evaluate the effect of the pre-pandemic fiscal space on the size of the fiscal stimuli package in 125 developed and developing countries, using three indicators for the fiscal space: debt to GDP ratio, debt to taxes ratio and sovereign debt rating to capture countries access to finance. Results reveal a lack of association between the fiscal space captured thru the debt-to-GDP ratio and fiscal stimuli, even after controlling for a potential omitted-variable bias. The other two indicators of fiscal space are statistically significant, suggesting that the degree to which the public debt is backed up with tax revenues is significant predictor of the size of the fiscal stimuli; higher debt to taxes ratio is associated with lower fiscal stimuli. The credit rating is positively related to the fiscal stimuli; a one standard deviation increase of the rating increases the fiscal stimuli by three percentage points. Benmelech and Tzur-Illan (2020) find similar results, estimating positive or close to zero relationship between pre-pandemic debt to GDP ratio and fiscal stimuli in a set of 85 countries. According 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 crisis.

Bianchi et al. (2023) confirm that countercyclical fiscal policies are not common for countries with low credit rating. 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 by the available fiscal space among countries, ranging from 10 – 12 per cent of the 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 time. An ample fiscal stimulus can greatly reduce the costs of a macroeconomic crisis, while lack of fiscal space can greatly constrain stimulus and result in large income and job losses. Therefore, having fiscal room to maneuver is very valuable for crisis times.

3.2 METHODOLOGY AND DATA

The objective of the analysis is to understand if fiscal space in the WB6 before crisis struck played important role for the fiscal stimuli that governments used as weapons to combat the contraction of the economy caused by the crisis. To answer this research question, we operate with data for the six economies of the Western Balkans over the period 2003-2022. The advantage of using such a long time span is that we could produce more convincing estimates from a statistical point of view, but also we capture the consequences of the Global Financial Crisis 2008-2010, the European Sovereign Crisis 2011-2013, besides the latest crises – the Pandemic of Covid-19 in 2020-2021 and the Energy and Food Price Crisis 2022-2023 – which are the spotlight of our interest. A disadvantage is that such a long time span may capture other fiscal pressures that countries experiences, including those from political nature, but at the time being this is something we disregard, because the largest political and/or military events have subsided until the commencement of the period under observation.

There are two key issues to resolve at the methodological level. The first one is the definition of the fiscal stimulus, which is the phenomenon we would like to explain, i.e. would consist a dependent variable. Speaking strictly in terms of crisis spending, a fiscal stimulus could be understood as the packages of anti-crisis measures that governments deployed during various crisis. While this may be doable for the pandemic, for example through using the IMF's database of fiscal policy responses,[4] as is done e.g. in Apeti et al. (2021), it may be challenging for the capturing of the fiscal stimuli during various crises, first and foremost because there is no unified database which systematically collected data on such fiscal packages. Instead, we pursue an alternative approach.

We define the fiscal stimulus as the government spending in excess to the spending in a usual / normal-times year, which is reflected in the budget balance. A crisis year usually deepens the budget deficit in an extent reflecting the strength of the crisis in hitting the economy. We estimate the long-run trajectory of the budget deficit through Hodrick-Prescott filtering, hence assuming that certain budget balance is suitable to the structure and the current stage of development of the economy. Then, the difference between the actual value and the long-run value of the budget deficit (as percent of GDP) is considered to be the deployed fiscal stimulus, i.e. the government spending that could be robustly assigned to the crisis. For example, for the Covid-19 year of 2020, Table 3 reveals that the calculation leads to similar estimates to the actual realization of the anti-crisis measures. Moreover, the calculation properly finds that the two top 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).

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4 https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19

Table 3 – 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: *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 important methodological issue is to measure the abstract concept of the fiscal space. We use three measures for the fiscal space as follows. Ghosh et al. (2013) examine the negative correlation between the public debt (in percent of GDP) and the fiscal space, i.e. the higher the public debt, the lower the fiscal space. Apeti et al. (2021) and Kose et al. 2017, based on Bohn's (2008) pointing out of importance of primary surpluses for debt sustainability, propose to use the public debt as a ratio of taxes, as a way to understand how the public debt is accommodated by fiscal revenues. Finally, Minea and Villeeu (2009, 2012) emphasize the importance of the debt burden, i.e. the cost of the debt in the budget constraint accountancy, due to the crowding-out effects, including because of Blanchard's (2019) remark that it has the ability to account for the potential risk premium, which may suggest a growing risk to the sustainability of debt, consequently reducing fiscal space. Hence, the third and the fourth measures of fiscal space we use is the interest expenses as percent of GDP and the foreign currency long-term sovereign debt ratings from Kose et al. (2017) to capture countries' ability to access finance on international markets. We take the fiscal space, i.e. all four indicators of it: public debt-to-GDP, public debt-to-taxes, interest-to-GDP and sovereign debt ratings—with a one-year lag to reflect the notion that sufficient fiscal space today secures that a crisis tomorrow is navigated more easily.

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

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

Whereby $Fiscal\_stimulus_{i,t}$ is the budget deficit (defined as positive values) in excess to normal-year budget balance, for country i in time t, as percent of GDP; and respectively for the $Fiscal\_space_{i,t-1}$, defined through, one-by-one: the public debt as percent of GDP, as percent of tax revenue, interest expenses as percent of GDP and the sovereign debt ratings (index ranging from 1 to 21) for country i in 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 the control variables is based on the notion of what may imply spending more or less during a crisis in general; we source some guidance from Aizenman and Jinjarak (2010). We take the GDP per capita (in logs) to account for the level of development of the economy; population density (in logs) to account for crisis' strain on healthcare, infrastructure and employment challenges; inflation

to reflect the need for government support when the living standard is eroded; and an index of democracy to capture potential political budget cycles and transparency in the crisis management, as in Apeti et al. (2021), here derived from the average of the Freedom House's political rights and civil liberties indices. To this set of control variables, we add three variables which may be more tightly correlated with the three largest crises over the observed period: exports (in logs) as the main channel during the Global Financial and European Sovereign Crises 2008-13, case fatality rate to reflect the strength of the pandemic of Covid-19 in 2020, and the global prices of wheat and oil to reflect the strength 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 favorable 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's Government Finance Statistics, World Bank's World Development Indicators, Kose et al.'s Database of Fiscal Space, Freedom House Dataset on Political Rights and Civil Liberties (https://freedomhouse.org/), IEEE (https://www.ieee.org/), World Bank Commodity Price Data – The Pink Sheet (https://www.worldbank.org/en/research/commodity-markets). Variables descriptions and descriptive statistics is provided in Appendix 1.

The key challenge in estimating (1) is the simultaneity between the fiscal space and the fiscal stimulus, as higher desired fiscal stimulus requires higher fiscal space to be spared by the policymakers, and vice versa: the higher the fiscal space available, the more intense its deployment when needed. However, this source of endogeneity is constrained in several ways. First, the fiscal stimulus– which is an excess of public spending compared to a 'normal' amount – is unlikely to shape the build-up of the fiscal space because it was unexpected. We deal with crises which are unexpected events and, at least for the small and open economies we treat here, fully exogenous. Second, as in Apeti et al. (2021), we take the fiscal space a year back, primarily to be able to account for the role of an accumulated fiscal space in the past for the possibility to act today. Third, we use a battery of explanatory variables to tackle a possible omitted-variable bias, part of which are directly related to the crises' fiscal stimuli such as the export dynamics slowdown during the Global Financial Crisis, the infection fatality upwelling during the pandemic and the surge of the commodity prices of wheat and oil during the Energy and Food Price Crisis.

We still cannot be fully comfortable that a simple FE estimator will reveal a causal effect of the fiscal space onto the fiscal stimulus. Namely, with frequent crises, authorities become more aware that fiscal buffers should be timely built, while reports and conditionalities of the international financial institutions are fond of calls for their accumulation in good times to serve bad times. Hence, anticipation of increased fiscal spending in the future is likely to impact the building of the fiscal space today. This is the prime remaining source of endogeneity in our key relationship in equation (1). Hence, besides producing FE estimates, we make use of a standard IV-2SLS estimator and the Arellano-Bover (1995) System Generalized Method of Moments (GMM) estimator, the latter also addressing the endogeneity concerns arising from potential correlations between the individual-specific effects and the lagged dependent variable. Lagged values of the endogenous variables are used as instruments and their validity tested through a battery of tests. By instrumenting the endogenous regressors with their lagged values, the Arellano-Bover estimator helps to overcome the simultaneity bias present in dynamic panel models. It is particularly useful in addressing the potential endogeneity of explanatory variables in the context of unobserved individual heterogeneity, making it a valuable tool in analyzing the dynamics of economic and social phenomena across different units over time.

3.3 RESULTS AND DISCUSSION

Our baseline results are presented in Table 4. They are organized so that columns (1)-(4) refer to FE estimates, columns (5)-(8) to the IV-2SLS estimates, while columns (9)-(12) to the system-GMM estimates. In each set of columns, the first reveals the results when the public debt to GDP is used as a measure of the fiscal space, the second when the public debt in tax revenues is used, the third when interest expenses in GDP are used, while the last when the foreign currency sovereign debt ratings are used. Toward the bottom of the table, we report a set of tests for the validity of instruments; almost all of them suggest that the instruments we use are valid.

Results suggest that a higher public debt as percent of GDP, hence a smaller fiscal space, causes a reduction in the fiscal stimulus potential. Namely, a one percentage point (p.p.) increase in the public debt in GDP is associated with a reduction in the fiscal stimulus ranging from 0.02 to 0.06 p.p. of GDP, the higher coefficients being tilted towards the IV-based estimated. Similarly, a higher public debt as percent of tax revenues causes a reduction in the fiscal stimulus potential, with a coefficient ranging from 0.004 to 0.015 p.p. of GDP. At first sight these coefficients may look small, since they indicate that, for example, a country that had a 10 p.p. lower public debt in GDP before the pandemic, was able to deploy a higher fiscal stimulus package, in the upper bound by 0.6 p.p. of GDP. It may be a reflection of the notion that in the WB6, the pre-Covid-19 public debt was moderate in almost all countries, averaging 48 percent of GDP, hence being perceived as sufficient to provide an adequate fiscal space for cushioning crisis effects.

The interest expenses in GDP are consistently insignificant despite properly negatively signed, while the sovereign rating only reveals significance in the system-GMM estimates and suggests that countries with better rating were able to provide more fiscal stimulus during crisis years.

The control variables used have varied importance. The level of economic development is not significant, while inflation is to some extent. Higher inflation is associated with a smaller fiscal stimulus, which is likely capturing the nominal effect that higher inflation exerts on fiscal revenues, hence dampening the need to expand the budget deficit for the purpose of counteracting measures. Similarly, higher exports are related to a smaller fiscal stimulus, which reveals that when export has been on the rise, the year has been good enough to require smaller or no fiscal stimulus, as well as that fiscal revenues stemming from higher international trade (as in WB6, higher export is strongly connected with higher imports) have been on the rise. Infection fatality rate relates with higher fiscal stimulus, which is a clear case during the pandemic of Covid-19 when measures to finance the health sector expanded. Analogously, higher international wheat price, whose surge has been particularly seen in 2022, is linked to a higher fiscal stimulus, since under conditions of soaring prices overall, government opted to shield the real value of the consumption basket by offering some anti-crisis packages.

Overall, nevertheless, these results suggest that WB6, who have had some fiscal space before the Global Financial Crisis of 2008 and particularly before the Pandemic Crisis of 2020, were confined – to a reasonable extent – by such space in the design and deployment of the fiscal stimulus amid the subsequent crisis. Hence, since the fiscal space was to a large extent used during and post-pandemic, results suggest that during the ongoing Energy and Food Price Crisis, the fiscal stimulus has been highly constrained by the exhausted fiscal space, or alternatively said, if countries opted for more generous packages during the current crisis, that significantly impaired the fiscal sustainability, more than it did during the previous crises. Such a result is highly consistent with previous evidence on the importance of the fiscal space for governments' policy during crisis (see e.g. Aizenman and Jinjarak, 2010; Jordà et al., 2016; Romer and Romer, 2019; Apeti et al. 2021).

Table 4 – Results for the effect of fiscal space on fiscal stimulus in 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 tax revenues	Public debt as % of GDP	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 country	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: Authors' calculations. *, ** and *** signify a statistical significance at the 10%, 5% and 1% level, respectively. Robust standard errors provided in parentheses*

*The variable is not available for Kosovo.

4. COUNTRY FOCUS: THE FISCAL BURDEN OF ELECTRICITY SUBSIDIES FOR HOUSEHOLDS IN NORTH MACEDONIA AND THEIR IMPACT ON CRITICAL GOVERNMENT SPENDING

4.1 CONTEXT AND LITERATURE REVIEW

Most European countries were unprepared for the historic volatility in energy prices which started soaring toward the end of 2021 and, particularly, during 2022. In order to safeguard stability, most governments in the EU member states announced energy support packages in the amount of 2.4 percent of GDP for 2022 and 2023, with about half of the cost coming from untargeted, price suppressing policies (Arregui et al, 2022). The situation has been similar in the WB6 region, with two-thirds of the cost consisting of untargeted measures (see Table 1). The most common form of untargeted support during this period were undoubtedly the subsidies provided to the energy sector.

In North Macedonia, international food prices were transmitted on the domestic market, most significantly during 2022, and less so during the first half of 2023 (Finance Think, 2023). However, the pass-through of energy prices was almost fully impeded on the regulated market for households and small business consumers, as the government started heavily subsidizing the electricity prices. Actually, electricity subsidies constituted the largest financial support of the government anti-crisis packages. Near the end of 2021, the Macedonian government declared an 'emergency crisis' in the energy sector, through which it was able to transfer urgent financial support to ESM, the electricity-producing state-owned company. The proclamation of the Energy Crisis allowed for ESM to sell electricity to the universal supplier at below-market price, thus subsidizing the electricity bills of approximately 611.000 households and 68.000 small business consumers in the country. That way, ESM supplied 100% of the demand for electricity on the regulated market (IMF, 2024b). As per OECD (2013), when a subsidy is provided through a price mechanism, it can reflect lower transparency, however this was softened through spelling out the average subsidy in each electricity bill.

Other price-impeding measures which were introduced included lowering of the VAT rate for household electricity from 18 percent to 5 percent in July 2021 and eliminating the VAT rate for import of electricity and natural gas. By July 2023, the VAT on electricity returned to the general rate of 18 percent, though. Additionally, excises

and VAT rates were lowered for fuel products and derivatives, which could have an indirect effect on electricity prices. Targeted measures for vulnerable households were in place much before the Energy Crisis. In the past decade, energy allowances were extended to recipients of the guaranteed minimum assistance for half of the year (during the heating season). In 2022, this was supplemented by a similar energy allowance, administered for various poor and vulnerable groups by the Ministry of Economy.

Moreover, near the end of 2022, the Government subsidized the electricity price of public and private enterprises, including public schools, water supply plants and food production companies. The companies who did not fall in the category 'small business consumer' have been purchasing electricity on the open market and they did not receive any support, hence faced a large price shock. The recent study of Petreski (2023) showed that this was the most significant burden for the large companies in North Macedonia during the food and energy price crisis. It, however, incentivized activities for higher resilience through new investments in renewables and energy efficiency among companies which are supplied with electricity on the open market.

The capped price of electricity for households and small business consumers impacted the fiscal stance of the state budget. From the public announcements published by the Macedonian government, it can be estimated that during 2021 and 2022 it transferred funds to ESM in the total amount of €240 million (approx. 2 percent of GDP). The subsidizing continued in 2023, and with the help of a €100 million loan taken out that year for ESM. The subsidizing is planned to continue also in 2024, with an announced support for electricity subsidies reaching €35 million. Hence, the total estimated cost of the electricity price subsidizing so far could be established at about 3.1 percent of GDP.

Explicit fossil fuel subsidies generally reflect the real fiscal cost from the government budget or losses/reduced profits of state-owned companies, which on a global level were twice as large in 2022 (1.3 percent of GDP) compared to 2020 (0.6 percent of GDP) (Black et al, 2023). On the other hand, indirect fiscal implications of these subsidies can be the foregone VAT and excise revenue. Apart from the significant fiscal cost of fossil fuel subsidies, they can implicitly cause negative externalities, such as higher pollution, lower energy-saving behavior, as well as postponement of actions for green transition (Black et al. 2023). There is a lack of public trust that the governments are able to compensate low- and middle-income households, in case of a subsidy reform (IMF, 2023). According to Ari et al. (2022, p.18), "price-suppressing measures are politically difficult to withdraw and generate adverse spillovers, since preventing demand adjustments keeps global energy prices high, prolonging the burden on energy-importing, lower-income economies". Continued caps or freezes of energy prices can lengthen periods of high inflation, as prices can rise again once the measures have been removed (Arregui et al. 2022). According to Plante (2014), energy subsidies can reduce aggregate welfare, where losses are smaller for subsidies under 1 percent of GDP, but grow quickly as subsidies become more costly. The welfare losses are mostly due to the distortions in relative prices from the subsidy, rather than the method of financing the subsidy. It is argued that "while removing the subsidy forces households to pay higher fuel prices it also implies lower taxes and reduced deadweight losses in the economy" (Plante, 2014, p.3). Black et al. (2023) also calculate the implicit costs of fossil fuel subsidies, such as foregone tax revenue and environmental costs. Their findings indicate that that full reforms in fuel prices can lead to improved net economic welfare benefits of 3.6 percent of global GDP (environmental benefits of 5.2 percent of GDP minus the economic welfare costs of 1.6 percent of GDP). In the case of partial fuel price reform, the gains are still positive, with a net welfare benefit of 2.7 percent of GDP. Ebeke and Ngouana (2015) have estimated the crowding-out effect of energy subsidies on public social spending. They found that a 1 p.p. increase of energy subsidies as percent of GDP, can decrease social spending on education and health by 0.6 p.p. as percent of GDP. They also note that this effect is stronger in the presence of weak domestic institutions, political ineffectiveness and narrow fiscal space. This is in line with the findings of Black et al. (2023), that gains to local health are linear.

4.2 THE PRICE-GAP APPROACH FOR ESTIMATING ELECTRICITY SUBSIDIES AND UNDERLYING DATA

In this segment of the study, our focus is solely on estimating the electricity subsidies for households. The exact value of electricity subsidies in North Macedonia is not clearly stated in the state budget, but rather, it can only be inferred from the transfers made to ESM or the loans taken out to support the stability of this public enterprise through securing continuous provision of the subsidies.

Insights on methods for energy subsidy estimation were gathered from OECD (2013). The most common method used for calculating electricity subsidies is the price-gap approach, taking the difference between the wholesale and final consumer price and multiplying it by the final electricity consumption:

**Subsidy = (Wholesale/Reference price – End-user price) x Units consumed**

This method was selected as a result of its widespread use in estimating energy subsidies (utilized by OECD, IEA and the World Bank) as well as its straightforward calculation process (OECD, 2013). Despite the lack of precision of this methodology, it can still give a broad overview of the fiscal burden. According to OECD (2013, p.32), "the price-gap approach is designed to capture the net effect of all subsidies that reduce final prices below those that would prevail in a competitive market." However, choosing the correct reference/wholesale price poses a limitation. Additionally, this approach does not account for estimating producer subsidies (OECD, 2013). For the purposes of this study, electricity prices of domestic market participants (non-households) were selected as the reference prices. Other methods for energy subsidy estimation include estimating the transfers made to producers and consumers and foregone tax revenue (in addition to price-gap estimates), also known as the Producer Support Estimate (PSE) and the Consumer Support Estimate (CSE), which are OECD indicators. However, this method requires access to data on budgetary transfers (OECD, 2013).

Figure 12 presents the difference in the electricity price for households and non-households, also known as the price gap. It reveals that most of WB6 and EU member states in Southeastern Europe implemented some form of electricity subsidies in 2022, as represented through the positive difference between higher non-household and lower household electricity price. Even in the EU-27, the difference moved from negative to positive in 2022,[5] while North Macedonia and Bulgaria experienced the largest price gaps. Whereas some countries might have had larger fiscal space to offer subsidies, WB6 particularly were significantly more burdened by the increased public spending to mitigate the shock in energy prices.

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5 The price gap of electricity prices among the EU is not very informative, since member states vary widely regarding the regulation of household and non-household prices, with some countries having more liberalized prices for households, whereas others regulate industry prices as well. Additionally, the price-gap estimate is based on energy and supply prices, and therefore does not take into account tax relief measures.

Figure 12 - Price gap of non-household and household electricity prices (all bands) for selected countries in Europe (2019 - 2022)
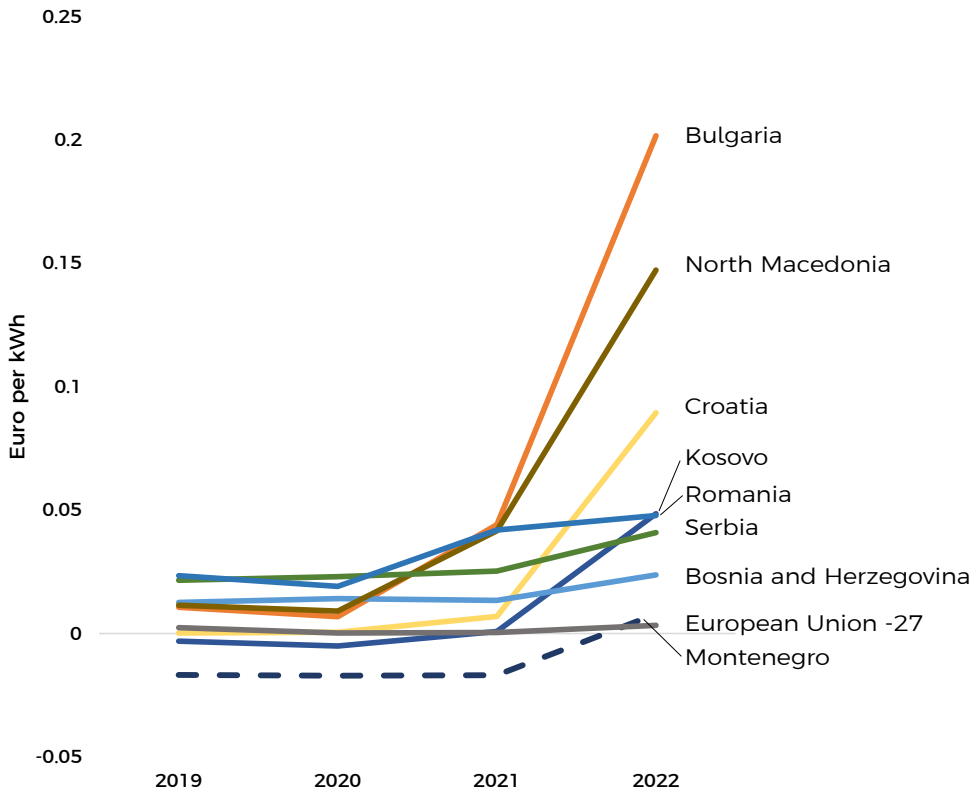
Source: Author's calculations based on Eurostat Data.
Note: A positive difference between higher non-household and lower household electricity price implies stronger shielding of households through electricity subsidies and vice versa for the negative difference.

For the case of North Macedonia, we estimate electricity subsidies obtained by the difference in the average electricity prices of non-households and households. The data on electricity prices was gathered from the State Statistical Office[6] and it includes the procurement or import price, supply and network charges, costs for organizing and managing the electricity market, and other costs, excluding VAT. The units consumed are presented through the final electricity consumption of households in North Macedonia. Since price adjustments are made biannually, this can mute the price signal in periods of high volatility. In response to the Energy Crisis, the electricity price methodology changed in July 2022, with the introduction of a block tariff system, where households were divided into four blocks depending on their electricity expenditure on a monthly basis. The newly introduced tariffs are as follows:

Table 5 – Block tariff system introduced in July 2022 for electricity on the regulated market

Tariff	Usage of electricity
Block 1	from 0 kWh to 210 kWh
Block 2	from 211 kWh to 630 kWh
Block 3	from 631 kWh to 1050 kWh
Block 4	from 1051 kWh and above

*Source: Energy and water services regulatory commission of North Macedonia*

Block tariffs are a slightly better energy policy than linear subsidies, since they can incentivize consumers to lower electricity consumption in order to stay in a certain block. This reduces the regressive effect of electricity subsidies, with a somewhat higher price burden now placed on larger household consumers. Therefore, users who consume less receive higher subsidies than users who consume more (Arregui et al, 2022, p. 13).

The electrical energy market was liberalized through the 2018 Energy Law, which explains the small price gap between non-household and household prices in the previous periods (Figure 13). After the adoption of the Energy Law, most households, however, remained on the regulated market. The limited number of households and small businesses that had initially moved to the liberalized market eventually reverted to the regulated market as the Energy Crisis emerged (IMF, 2024b). Figure 13 presents the average electricity prices for households and non-households, based on the estimations within our price-gap approach. It reveals that in the second half of 2021, non-household prices started to rise sharply, whereas household prices increased only slightly, thus severely increasing the price-gap between the two groups. It would be interesting to compare the results with another reference price taken as the wholesale price, ex. the HUPX market price, which could potentially show even larger explicit subsidies for households.

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6 The methodology changed in 2017, with the introduction of new Regulation (EU) 2016/1952 of the European Parliament and of the Council of 26 October 2016 on European statistics on natural gas and electricity prices and repealing Directive 2008/92/EC.

Figure 13 - Difference in average biannual non-household and household electricity prices in North Macedonia
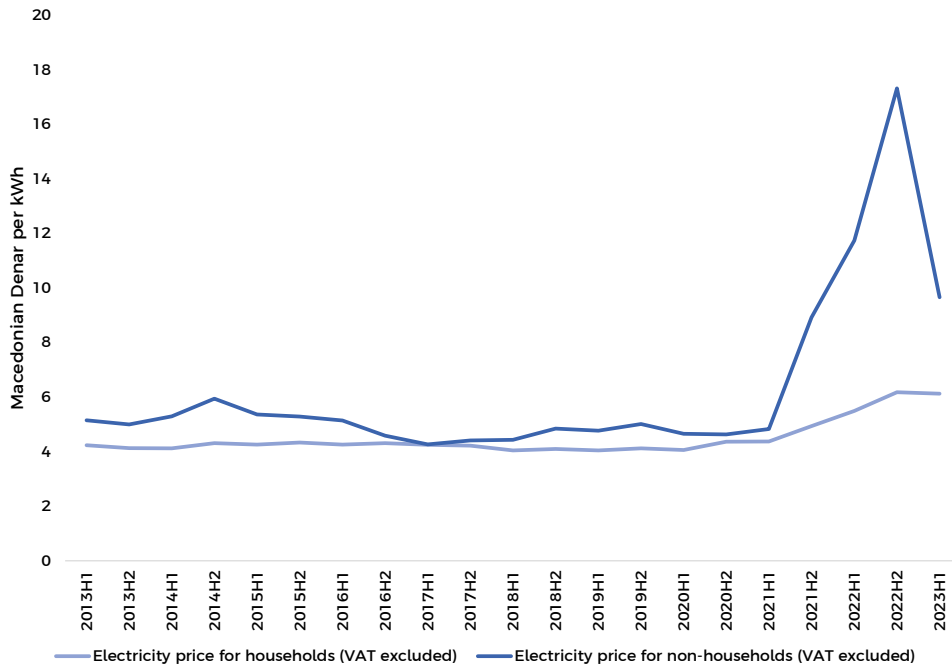
Source: Author's calculation based on data from SSO.

In line with Figure 13, the following Table 6 portrays the estimated values of electricity subsidies provided by the Macedonian government before the Energy Crisis and during the recent years through ESM. The values obtained from this calculation do not fully match the transfers made to ESM in the past three years, however they may give a more complete picture of the total costs of implementing such a measure: subsidies made toward the public enterprise by the government, the loans taken from international creditors, as well internal existing reserves of ESM. For example, in the critical year of 2022, the government transfer amounted to €222.7 million, while the estimated subsidy is nearly double, €416.8 million. Besides the above considerations, the calculation for 2022 may be an overestimate also due to the fact that most households belong to the first or second block of the newly-introduced four-tariff system (see Table 5).

Between 2013 and 2020, electricity subsidies ranged between 0.1 and 2.5 percent of the total government expenditure, or between 0.05 and 0.8 percent of GDP, with an absolute and relative rise in the period thereafter. The peak subsidy amount was reached, expectedly, in 2022 with an expense reaching 3.2 percent of GDP or 9.2 percent of government expenditures. In the first half of 2023 more significant lowering of costs is noticeable.

Table 6 – Electricity subsidies in North Macedonia based on the price-gap approach

Year	Electricity subsidies (million EUR)	Electricity subsidies (% of GDP)	Electricity subsidies (% of government expenditures)
2013	44.5	0.5%	1.7%
2014	68.7	0.8%	2.5%
2015	55.7	0.6%	1.9%
2016	29.3	0.3%	1.0%
2017	4.7	0.05%	0.1%
2018	28.9	0.3%	0.9%
2019	39.5	0.4%	1.1%
2020	23.4	0.2%	0.6%
2021	111.5	1.0%	2.7%
2022	416.8	3.2%	9.2%
2023H1	94.8	1.4%	3.6%

Source: Author's calculation based on data from SSO and IMF.

It should be noted that while the above estimates are for households only, one part of electricity subsidies can also be attributed to small business consumers, which are not included in our estimation. Moreover, some support in the form of energy subsidies was additionally offered to companies. Including the foregone revenue from decreasing the VAT and removing VAT charges for import of electricity, it's likely that the overall amount of electricity subsidies is higher. Nevertheless, signs of lowered electricity subsidies are noticeable in 2024, with changes in the block tariff rates, and the reduced budgetary support for the subsidies. Starting from January 2024, ESM's share of mandatory supply to the regulated market was lowered from 100% to 95%. Moreover, ESM increased the electricity price charged for the regulated market and for covering of distribution losses. The expected fiscal consolidation gains from these changes is 0.5 percent of GDP in 2024 (IMF, 2024a). The lessons learned from the Energy Crisis have contributed towards higher investments in energy production, making North Macedonia more resilient to future energy shocks.

4.3 MODEL AND RESULTS

The further objective of this section is to estimate the effect of electricity subsidies on segments of government spending including for public health, education, social and capital expenditures. Since the yearly data sample for electricity subsidies is small (spanning the period from 2013 to 2022), we are limited in the application of more advanced economic modelling, however simple calculations could provide sufficient insights at present.

We run simple ordinary least squares (OLS) estimations using the electricity subsidies as percent of GDP from the previous section and data on public expenditure as percent of GDP. The data for the latter is collected from the yearly financial statements of the Macedonian Government available at the Ministry of Finance website (https://finance.gov.mk/).

The formulated equations can be separated in three categories:

   i)   Evaluating the straightforward relationship between electricity subsidies and different categories of government spending (social spending, public health, public education and capital expenditure):

$$government\_spending_t = \beta_0 + \beta_1 electricity\_subsidies_t + \varepsilon_t \qquad (2)$$

   ii)   Including the trend component in the simple regression, to better isolate the effect it has on government expenditures (supposing they portray a continuous positive trend over the years):

$$government\_spending_t = \beta_0 + \beta_1 electricity\_subsidies_t + \beta_2 Trend\_component + \varepsilon_t \qquad (3)$$

   iii)   Incorporating a dynamic component by including the government spending from the previous year, to account for the persistence or carryover effects from the past, which may be relevant for the categories of spending we work with:

$$government\_spending_t = \beta_0 + \beta_1 electricity\_subsidies_t + \beta_2 Trend\_component + \beta_3 government\_spending_{t-1} + \varepsilon_t \qquad (4)$$

As mentioned, due to the very short series, we are bound to include in equations (2)-(4) other explanatory variables, which would help us understand their role in shaping the potential relationship between subsidies on electricity and government spending. Yet, this remains an area for future research.

In our case, four different dependent variables are used in place of *government_spending*, and those are: public health spending, public education spending, social spending as well as capital spending. These segments of governmental spending were chosen as components of the public budget which can contribute towards economic and social development, and can also be crowded-out as a result of increased electricity subsidies for all citizens. *Electricity_subsidies* signifies the estimates of pre-tax subsidies based on the price-gap approach depicted in the previous sub-section. All variables are expressed relative to GDP.

We are interested in the β_1 coefficient, expecting a negative relationship between electricity subsidies and government expenditure variables, i.e. implying that higher electricity subsidies crowded-out the spending on the economic-social categories in the budget. The β_2 coefficient in equations 3 and 4 is useful for isolating the trend component, with an expected positive sign.

The results from the equations are presented in Table 7. If we compare the R-squared results between the models, it can be concluded that those which include the trend component, as well as trend component and lagged dependent variable, can best explain the variance of the various segments of governmental spending, suggesting that the persistence of the public expenditures categories we work with is quite high. Electricity subsidies are most significant precisely in those equations (columns 2, 8 and 11; and 3, 9 and 12). The results suggest that a 1 p.p. increase of electricity

subsidies relative to GDP are related to lower public health and social spending by 0.87 to 0.93 p.p.; and by 2.07 to 2.26 p.p. of GDP, respectively. While this does not imply a direct causation link between electricity subsidies and other categories of public spending, the correlation between these variables may allude to a crowding out effect in place. The coefficient on public spending on education, however, is insignificant.

This finding indicates a potential trade-off between government social and health spending and spending on electricity subsidies. Despite the simple set up of the model, the findings are in line with the findings of Plante (2014) and Ebeke and Ngouana (2015) that energy subsidies can contribute toward lowering of social welfare and can crowd out public social spending. Particularly, the coefficient on health is of similar magnitude in Ebeke and Ngouana (2015), who find a coefficient of 0.6 p.p. for health and education spending summed together (they do not make estimates for the social spending). Additionally, this also matches with the findings from Black et al. (2023) that welfare gains in local health are linear.

On the other hand, a positive relationship can be viewed between electricity subsidies and capital expenditures, with a 0.47 to 0.62 p.p. of GDP increase of capital spending related with of a 1 p.p. increase of electricity subsidies relative to GDP. At first sight, this finding is debatable with regards to what is portrayed as a 'capital expenditure' in the public budget. The Centre for Civic Communication (2023) has found that transfers made to ESM in 2022 were displayed under capital subsidies made toward public enterprises, which is a segment of the capital expenditure budget. On the other hand, it may be rooted in the fact that government undertook steps to boost own capital investment with focus on electricity production from renewable sources, hence the coefficient picking up the two parallel processes which do not happen because of each other, but both were prompted by the emergence and intensification of the energy price crisis.

Table 7 – Results for the role of electricity subsidies for segments of government expenditure

DEPENDENT VARIABLES	Public expenditure on health as % of GDP			Public expenditure on education as % of GDP		
	(1)	(2) Trend included	(3) Trend and lag included	(4)	(5) Trend included	(6) Trend and lag included
Electricity subsidies as % of GDP	0.287	-0.866**	-0.93*	0.017	0.0848	0.00194
	(0.819)	(0.355)	(0.445)	(0.072)	(0.0681)	(0.09)
Public expenditure as % of GDP (lagged)			-0.0932			0.466
			(0.401)			(0.459)
Trend component		0.00744***	0.00847*		-0.000437*	0.0000433
		(0.00108)	(0.00352)		(0.000207)	(0.000380)
Constant	0.0389***	0.0138**	0.0126	0.0376***	0.0391***	0.0195
	(0.00933)	(0.0051)	(0.00739)	(0.000820)	(0.000976)	(0.0184)
Observations	10	10	9	10	10	9
R-squared	0.0151	0.874	0.842	0.00694	0.394	0.332
	Public social spending as % of GDP			Capital expenditure as % of GDP		
	(7)	(8) Trend included	(9) Trend and lag included	(10)	(11) Trend included	(12) Trend and lag included
Electricity subsidies as % of GDP	0.48	-2.073**	-2.264*	0.317	0.466**	0.619*
	(1.812)	(0.78)	(1.013)	(0.178)	(0.18)	(0.268)
Public expenditure as % of GDP (lagged)			-0.124			-0.422
			(0.402)			(0.481)
Trend component		0.0165***	0.0193*		-0.000960	-0.00164
		(0.00237)	(0.00796)		(0.000546)	(0.00105)
Constant	0.178***	0.123***	0.132**	0.0274***	0.0306***	0.0451**
	(0.0206)	(0.0112)	(0.042)	(0.00203)	(0.00258)	(0.0168)
Observations	10	10	9	10	10	9
R-squared	0.00871	0.875	0.843	0.283	0.503	0.548

*Source: Authors' calculations. *, ** and *** signify a statistical significance at the 10%, 5% and 1% level, respectively. Robust standard errors provided in parentheses.*

5. CONCLUSION AND POLICY LESSONS

In this study, we aimed to assess the fiscal positions of Western Balkan 6 countries, which significantly tightened as a result of the recent multilayer-crisis events, most notably the fading Energy and Food Price Crisis. The challenges during these crisis periods included securing healthcare services, continued energy and food provision, lowering of inflation, safeguarding citizens and companies, and last but not least sustaining a stable fiscal balance. Apart from the detailed evaluation of fiscal policy, this study provides snippets into the energy sector, giving a summary of clean energy investments in the region, energy measures implemented by the WB6 governments and lastly, an estimation of electricity subsidies in the Country Chapter for North Macedonia and their effect on government spending.

Section 2 lays out a chronological overview of the fiscal stances of WB6 over the course of the last few years. By depicting the dynamic movements of public deficits and public debt levels, key points were drawn out about the pre-pandemic period, the Covid-19 Crisis as well as the most recent Energy and Food Price Crisis. Moderate public debt and fairly stable public deficits before the pandemic allowed for WB6 to offer generous fiscal support for the Pandemic crisis of 2020 and 2021. While signs of economic recovery were visible in 2021, the fiscal stances worsened once again with the unforeseen geo-political conflict between Russia and Ukraine which heightened the volatility of energy and food prices. To tackle this, WB6 offered energy subsidies and direct support to public and private energy enterprises, which further eroded the fiscal space. As the borrowing needs of WB6 rose, so did the interest rates.

WB6 should tread lightly in the near future, as interest payments are expected to increase. Fiscal consolidation will be crucial for the period ahead, encompassing both the revenue and expense side. When it comes to revenues, tax policy and tax-collection reforms will be necessary. On the spending side, prudent lowering of costs should be considered, especially for lowering or waning off untargeted fiscal support.

A positive highlight from the recent events is that WB6 have started to incorporate medium-term fiscal planning to become more resilient to future potential shocks and promote economic growth. Moreover, with the growing demand for green transition, recent Fiscal Strategies have included bigger development plans for energy reforms. The weaknesses of the energy sector have accentuated the need for further investments in this field, especially with regards to energy efficiency and transition to renewable sources of energy. This will be critical to prevent future shocks of this type as well as lower additional fiscal pressure.

In response to the consequences of various crises – recently the Global Financial Crisis, the European Sovereign Crisis, the Pandemic Crisis of Covid-19 and the Energy and Food Price Crisis – governments around the globe – as well as in the WB6, implemented fiscal stimuli. In Section 3, we investigated the role of the pre-crisis fiscal space for the fiscal stimulus provided during crisis, building on the large strand of literature pointing out the benefits of fiscal space for fiscal policy in times of crises. The novelty of this research has been at least twofold: 1) we expanded the measures utilized to capture the fiscal space to four: public debt to GDP, public debt to tax revenues, interest expense to GDP and the foreign currency sovereign debt ratings; and 2) we extensively treated the endogeneity between the fiscal space and the fiscal stimulus, through employing observables related to the various crises, as well as through employing two IV-based estimators.

In summary, the findings imply that WB6 nations, having possessed some fiscal space before the Global Financial Crisis of 2008 and notably prior to the Pandemic Crisis of 2020, encountered limitations—albeit to a reasonable extent—stemming

from such fiscal capacity in formulating and implementing fiscal stimulus measures amid subsequent crises. Given the substantial utilization of fiscal space during and post-pandemic, the results indicate that during the ongoing Energy and Food Price Crisis, the ability to implement fiscal stimulus has been considerably restricted due to the depleted fiscal space. Alternatively said, should countries opt for more generous financial packages amid the current crisis, it would substantially compromise fiscal sustainability to a greater extent than observed during previous crises.

The policy lesson stemming from this conclusion is that fiscal buffers should be built during non-crisis times, because they importantly determine the maneuvering space for the government when crisis strikes. This is particularly relevant when countries operate at lower levels of fiscal space, e.g. due to earlier government moves or crises when such fiscal space has been considerably used. This is the case for all WB6 during the Pandemic Crisis of 2020, who on average increased their public debt by 10 p.p. in GDP. This left these countries with tied hands for the adjacent shock onto energy and food prices, which originated from the unprovoked invasion of Russia over Ukraine in February 2022. It implied that fiscal stimuli during and subsequent to the ongoing Energy and Food Price Crisis have been constrained or that have posed a threat to the sustainability of the public finances.

Policymakers are thus encouraged to adopt forward-looking fiscal policies that balance the utilization of fiscal space during economic downturns with the imperative of maintaining resilience for unforeseen challenges. A robust way to better manage fiscal policies in this respect is the establishment of fiscal rules – pertinent to public debt and budget deficit – which will significantly help in renewal of the fiscal space as soon as possible. A positive highlight is that most WB6 have introduced some fiscal mechanisms such as medium-term fiscal planning and fiscal councils in select countries. Additionally, the results caution against overly generous fiscal packages during crises, emphasizing the potential adverse effects on fiscal sustainability, which could hamper future crisis response capabilities. Fiscal rules may be assistive in that respect as well, since anti-crises packages need to be strictly targeted to avoid deadweight losses of helping household and companies who have been either less hit during crisis or who could have borne the pressure robustly themselves.

A Country Focus part was dedicated in Section 4, providing a detailed overview of energy-related subsidies and their impact on fiscal stances in North Macedonia. In this segment, we analyzed the policy measures implemented by the Macedonian government to shield households and small business consumers during spikes in energy prices. Through the use of the price-gap approach, electricity subsidies for households were estimated. These subsidies posed a significant fiscal burden during the Energy Crisis, with an approximate cost of 3.2 percent of GDP or 9.2 percent of government expenditures in 2022. However, a phase-out process is noticeable in 2023. A simple quantitative estimation of the relationship between electricity subsidies and segments of government expenditure, including: public health, public education, social spending and capital spending, detects signs of a crowding-out effect between electricity subsidies and public health and social spending. More specifically, electricity subsidies relative to GDP are associated with a decrease in public expenditure allocated to public health and social spending by 0.87 to 0.93 p.p. and 2.07 to 2.26 p.p. of GDP, respectively. This finding is especially relevant, taking into consideration the narrow fiscal space that is present in North Macedonia, although fiscal consolidation processes are underway. Additionally, this brings into attention the current quality of services which are provided in public health and social services. Freeing up the budgetary space from excessive electricity subsidies, could leave room for investments in structural policy efforts for improved public services and targeted measures.

The policy discussion on energy subsidization and fiscal policy is complex. Firstly, it is politically difficult to fully eliminate electricity subsidies, since even small increases in electricity bills could throw many households into general and energy poverty. However, given narrow fiscal space and pledges for energy transition, continued and elevated support for electricity subsidies is not feasible. A cautious phasing-out plan

needs to be implemented, coupled with direct transfers to low- and middle-income households, in order to prevent the consequences of any sudden price shocks. A careful simulation analysis needs to be conducted to estimate the implications of subsidies' phase-out on households, including the impact it will have on their living costs.

Secondly, the subsidy policy is intertwined with the country's capacity for energy production and reliance on imports. Increased energy capacities and supply can contribute to better long-term resilience and predictability, among the many uncertainties that come in the future. This would entail diligent long-term planning and implementation of strategies for the advancement of the energy sector. According to the IMF (2024b), distribution losses take up a significant cost in the final consumer tariffs, and so larger incentives for efficiency and service quality need to be given to the distribution operator, as well. Thirdly, greater consideration should be given to the potential trade-off between electricity subsidies and segments of public spending such as public health and social expenditure. Having in mind that the subsidies offer temporary relief without long-term benefits, their reduction should be considered not only from a budgetary perspective, but also from the perspective of long-term economic and social development which can be achieved through higher investment in increased functionality, serviceability and improved infrastructure in the public sector.

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APPENDIX 1 – 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 a 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	Kose et al.'s Database of Fiscal Space
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