INTERNATIONAL MONETARY FUND

Labor Taxation in the Western Balkan: Looking Back and Forward

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WORKING PAPER

2022
DEC

IMF Working Paper

Fiscal Affairs Department

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December 2022

ABSTRACT: This paper examines how labor taxation (personal income taxes and social security contributions) in the Western Balkan contributes to labor market outcomes such as high informality and a significant gender gap in participation rates. We find that limited progressivity combined with high tax wedge on low incomes poses a major twin equity-efficiency challenge in the region, resulting in low redistributive capacity and inadequate incentives to enter the job market. Policy implications are discussed with a view to alleviating the excessively high tax wedges on low incomes, while improving progressivity of income taxation.

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I. Introduction

The taxation of labor is of significant policy interest for two primary reasons. First, labor taxes, which include personal income taxes (PITs) and social security contributions (SSCs) are important revenue sources. This is particularly true for advanced and transition economies. For example, Eurostat data shows that approximately half of government revenues in the European Union (EU) are raised through taxes on labor, corresponding to some 20 percent of GDP (European Commission 2021), which is well above the role that PITs alone play in revenue collections. Of course, because SSCs usually come with associated spending programs, they yield a less favorable net impact on the budget. Second, labor taxes, which uniquely exploit personal information on income, can have a substantial impact on economic outcomes through their redistributive implications and their behavioral influence on the functioning of the labor market.

Revenue mobilization, equity and efficiency, the key goals assigned to taxation, are paramount issues when it comes to how labor is taxed in the six Western Balkan countries (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia). The region's tax systems are characterized by high labor taxes that, combined with other structural rigidities, are likely to contribute to unsatisfactory economic outcomes: all countries suffer from high youth and female unemployment, low labor force participation and high levels of informality. Among the factors that have affected the persistent presence of high labor taxes in the region is a history of sizeable social security programs (although not larger than the EU average), with non-negligible legacy costs. As such, the Western Balkan can be seen as stylized examples of the situation of many countries around the world, which make them an interesting region to study. For example, while Latin American countries also have high levels of informality, their social security systems are not as substantial (IMF 2018a). Also, developing countries sometimes face high social security contributions on the formal economy, while not (yet) facing the same age and migration-related budget pressures.

With strong underlying spending pressures going forward due to demographic aging and high levels of emigration (Mehrez et al. 2016), Western Balkan countries face difficult tax policy choices. This paper proposes a survey analysis of the key issues raised by high labor taxes in the region and their implications for labor market outcomes in terms of both efficiency—what are the likely distortions caused by the tax system in the behavior of individuals and businesses? —and equity—how fair is taxation? Limited progressivity combined with high tax wedge on low incomes poses a major twin equity-efficiency challenge in the region, resulting in low redistributive capacity and inadequate incentives to enter the (formal) job market. The aim of the analysis is to distill some lessons and policy choices as to how labor taxes can be reformed to improve equity and reduce inefficiencies, while broadly keeping tax-to-GDP ratios and spending on social programs at their current levels.[1]

The paper is organized as follows. Section II presents a brief review of the literature on optimal taxation and the empirical literature on the elasticities of labor taxes. Section III explores the labor market outcomes in the Western Balkan region, including issues of informality. Section IV presents the evolution of tax revenue in the region, and explores a variety of tax system indicators, highlighting their link with labor market outcomes. Section V discusses policy lessons and implications. Section VI concludes.

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[1] Hence, the issue of the adequacy of current spending level is not discussed.

II. Brief Review of the Literature

The trade-off between equity and efficiency is at the core of the modern literature on labor income taxation.[2] On the one hand, governments wish to improve social welfare through a more equitable distribution of disposable income; on the other hand, redistributive taxes are negative incentives to work. On the equity side of the trade-off, a society's preference for redistribution, as captured by the social welfare function, has a key role in determining the optimal tax schedule. Here, it is acknowledged that the desire for less inequality is a country-specific consideration influenced by history, social choices, and institutions. On both sides of the trade-off, individual heterogeneity and limits to individual rationality, external constraints (e.g., on wage setting), as well as individuals' ability to respond to changes in the tax system (e.g., effort or tax avoidance) are also key factors determining the optimal tax structure.

An important distinction has been drawn between labor supply responses to taxation at the intensive—intensity of work on the job—, and extensive margins—participation into the labor force. The seminal study of Mirrlees (1971), the first to explicitly pose and resolve the equity-efficiency trade-off, addressed the intensive margin: how do workers already in employment adjust their work effort as a function of taxes? Diamond (1980) addressed the labor supply response at the extensive margin: how does taxation influence the decision to enter or leave the labor market?[3] The incentives and costs faced by low-skill individuals to join formal employment (loss of welfare benefits, job search costs, childcare, transportation costs, etc.), and how those can be modified by taxation, has subsequently been the focus of much of the literature. For example, in an important result, Saez (2001) showed that negative income taxes at the bottom of the earnings distribution (i.e., transfers) can optimally lower barriers to formal employment;[4] and that the equity-efficiency tradeoff may not be always binding at the extensive margin since lowering barriers to employment often also implies improving progressivity—which turns out to be the case in the Western Balkan, as we detail below. More generally, labor taxes generate income and substitution effects as they influence the share of the wage that workers take home, determining both a level of tax burden on workers and influencing their marginal choices. As such, they have the potential to influence the extensive and intensive margins.

A related point is that benefits and their linkages to taxes also influence labor supply. For labor supply purposes, the specific legal instrument causing the labor tax wedge (Box 1) is of little importance: PITs or SSCs.[5] What matters is the degree to which these taxes or contributions are (dis-) joined from possible (social security) benefits. For example, if benefit or spending entitlement are linked to a status of contributing, joining the labor force may have a value that would reduce the effective tax wedge at the extensive margin. Similarly, pension benefits with a strong contributions link can influence not only the extensive margin but also the intensive margin.

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[2] See Piketty and Saez (2013) for a lucid review.

[3] The alternative to working is not necessarily inactivity; it can, for instance, be emigration.

[4] The optimal schedule for the PIT usually involves marginal tax rates that follow a U-shape (Saez 2001; P. A. Diamond 1998; Benedek, Benítez, and Vellutini 2022). This pattern is derived from: a) lump-sum grants that ensure a minimum income level; b) high marginal tax rates at the bottom of the income distribution ensuring that the minimum guaranteed level of welfare is withdrawn rapidly as income rises; c) low marginal tax rates for middle income earners to encourage productivity among the largest share of the population; and d) rising marginal tax rates at the top of the income distribution to ensure progressivity.

[5] This paper focuses on the tax wedge, which is primarily driven by the PIT and SSCs. Non-tax allowances such as hot meals, vacation and transportation allowances can also influence the incentives to enter the formal job market.

A key lesson is therefore that optimal taxation critically depends on the elasticity of labor supply with respect to the tax wedge, both at the intensive and extensive margin—a largely observational question. However, labor supply elasticities, which typically vary as a function of income, are hard to evaluate empirically.[6] At the conceptual level, there is a key distinction between short-term and long-term labor supply elasticities. While the latter are the most interesting for distributive and efficiency effects, the former are the closest to what can be observed in the real world. At the practical level, severe data limitations hinder analysis. While self-reported earnings in surveys suffer from a variety of biases (particularly at the extremes of the earnings distribution), administrative data is also imperfect. For example, tax administration data is impacted both by legal tax minimization strategies (e.g., reclassification of income, earnings splitting) and tax evasion (e.g., under-reporting of work and earnings).

Box 1. The Labor Tax Wedge

The plot below summarizes how the labor tax wedge—the difference between total labor cost w_1 and the take-home net pay w_2—affects labor markets. Total labor cost w_1 is the sum of the gross wage plus employer's SSCs. The take-home net pay w_2 is the gross wage minus PIT liabilities and employee's SSCs. Ceteris paribus, it can be seen how variations in the labor tax wedge affect employment incentives for both employees (labor supply) and employers (labor demand) and determines the new equilibrium level of employment q^*. The tax wedge is usually expressed as a percentage of w_1.

The slopes of the curves represent supply and demand elasticities with respect to wages, and therefore the tax wedge. For example, a less inclined supply curve implies a higher labor supply elasticity (where the behavior of employees is more sensitive to the take-home pay w_2), in turn implying that a given labor tax wedge would have a larger effect on employment.
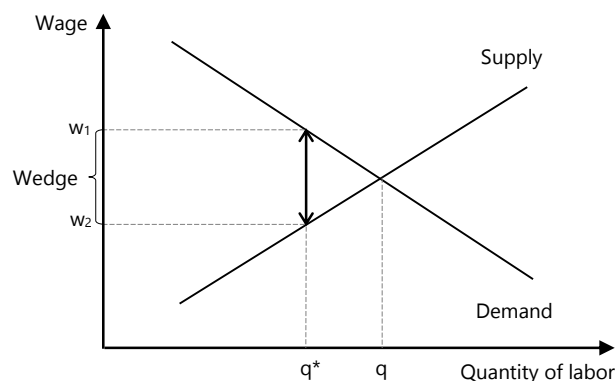
The results of the cross-sectional empirical literature reflect these considerations and show relatively low overall elasticities, with variations across time and estimation methods. Cross-sectional labor supply estimates for the primary worker in the household put the labor supply elasticity at around 0 to -0.1 in an international context (Luksic 2020)[7]. Modest consensus reached in the literature, establishing that own-wage elasticities are largest for married women and smaller for men (Bargain and Peichl 2016). The literature generally shows that the macro elasticities are larger than the micro elasticities. For secondary workers, the figures are usually

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[6] See Chetty et al. (2011) for a review.

[7] Kleven (2014) notes that one of the reasons for the previous findings of the positive relationship between employment and the net-of-tax rates across countries is specific sample selections (of countries and years).

somewhat higher—however, with a downward trend over time as the labor market position of women has evolved (Pencavel 1986; Blau and Kahn 2007).

More refined approaches have been devised, with a special focus on population subgroups. One of the key weaknesses of the cross-sectional analysis is the underlying omitted variable bias. Real work policy experiments and natural experiments can help resolve this. In a natural experiment, researchers use the existence of a real-world difference in (tax) treatment in otherwise comparable populations to infer the effect of tax policy. This literature confirms the overall weak responses, with stronger extensive margin responses than intensive margin responses. However, for some subgroups such as some categories of low-income workers, responses can be large (Eissa and Liebman 1996). Interestingly for the Western Balkan region, responses at the extensive margin are stronger in European countries with lower labor market participation (Bargain and Doorley 2011; Žarković Rakić, Ranđelović, and Vladisavljević 2016).

III. The Context of Labor Taxation in the Western Balkan: Labor Market Outcomes

This section summarizes labor market outcomes in the Western Balkan based on results of the various countries' labor force survey data.

A first fact is that labor issues at the extensive margin are of critical importance, echoing the findings from the literature above. Figure 1 illustrates that the region is characterized by low labor force participation rates by international standards—standing at some 10 percentage points lower than the OECD and EU-27 averages and almost 20 percentage points lower than better performers.

Figure 1. Labor Force Participation Rates, 2019

(15-64 years old, % in same age group)
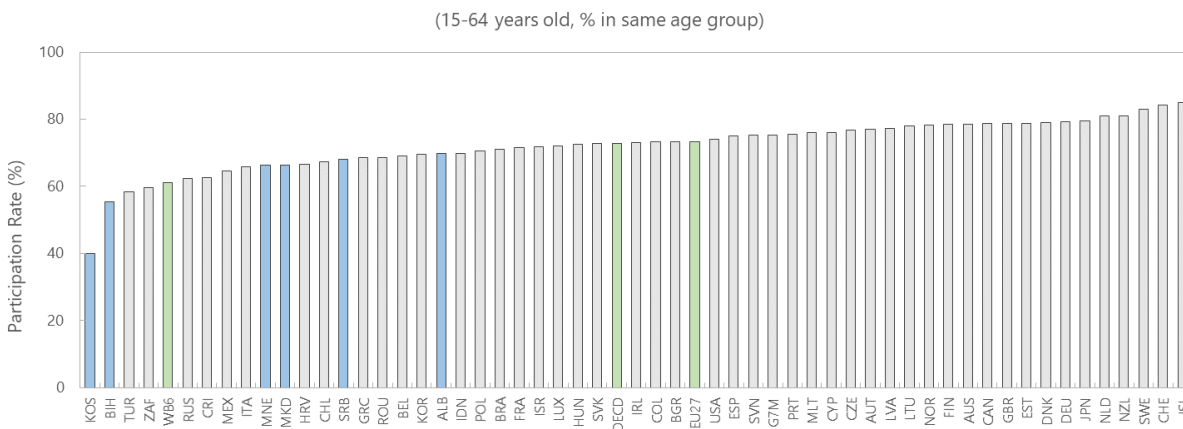
Sources: Eurostat, OECD, National Labor Force Surveys for Western Balkan Countries, and authors' calculations.
Notes: Labor force participation rate defined as the sum of all persons of working age who are formally employed and those who are declared unemployed divided by the working age population.

Since 2010, the regional labor force participation average has broadly remained unchanged at 60 percent—with only Montenegro and Serbia facing an upward trend (Table 1). Expressed differently, approximately 40 percent of the working-age population in the region are economically inactive—and reaching 60 percent in

Kosovo. As we discuss below, reasons may be multiple and require more detailed analysis of the various socio-demographic subgroups. While this situation may be partly explained by country-specific effects related to transition toward more integration into the market economy, a post-conflict environment or the impact of outward migration,[8] tax policy is a critical feature of the economic environment in the region.

Table 1. Labor Force Participation Rates, 2010-2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Western Balkan			**57**	**57**	**58**	**58**	**59**	**60**	**60**	**61**
Albania	62	69	65	60	62	64	66	67	68	70
Bosnia and Herzegovina	54	54	54	53	54	55	54	55	54	55
Montenegro	59	57	59	59	62	63	63	63	65	67
North Macedonia	64	64	64	65	65	65	65	65	65	66
Serbia	60	61	62	63	63	64	66	67	68	68
Kosovo			38	42	42	38	40	44	42	40

Sources: National Labor Force Surveys for Western Balkan Countries, and authors' calculations
Notes: Data for the Western Balkan is calculated as a simple average of the six countries.

We refine labor market indicators along several socio-demographic dimensions (age, gender, and education level) to improve the understanding of how different subgroups of the population are faring, and how, in turn, this may inform tax policy decisions. Figures 2 provides this analysis for the employment, unemployment and inactivity rates broken down by age and gender. In terms of age patterns, the data show that young and prime age workers aged 15-54 display the biggest deviations from other European countries with all age groups displaying substantial unused labor capacity—though likely for different reasons in the various subgroups.[9] At older ages, labor force participation, employment and unemployment rates decline in all countries with early retirement and retirement playing a substantial role through final withdrawals from the labor force. Overall, female employment rates are substantially lower than those of their male counterparts in each respective country, and those of women in comparator countries. The situation is particularly striking for Bosnia and Herzegovina and Kosovo, where female inactivity and unemployment rates are extremely high.

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[8] Ivlevs (2016) argues that remittances can lead to lower employment through increases of reservation wages, but also to more informality.

[9] At younger ages, an increase in full-time schooling often leads to a decrease in labor force participation while students build up their human capital. This mechanically lowers the denominator of the unemployment rate, hence *ceteris paribus* increasing the unemployment rate.

Figure 2. Labor Market Indicators by Age and Gender, 2019

Employment Rate
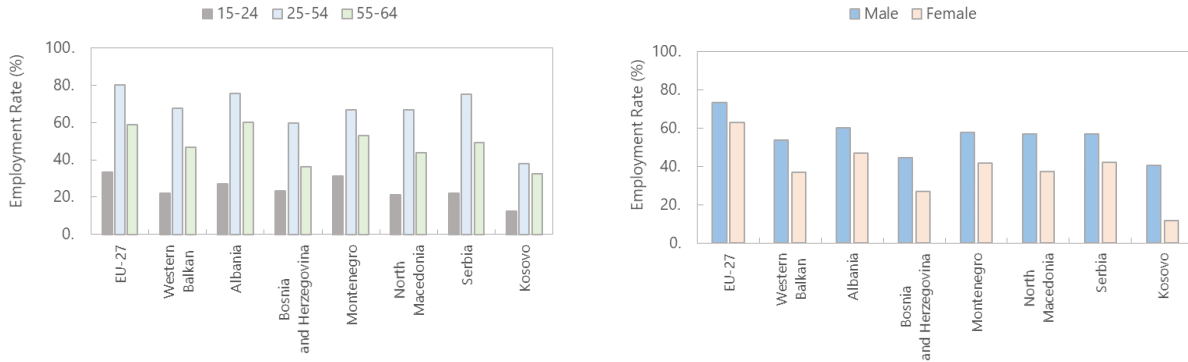
Unemployment Rate
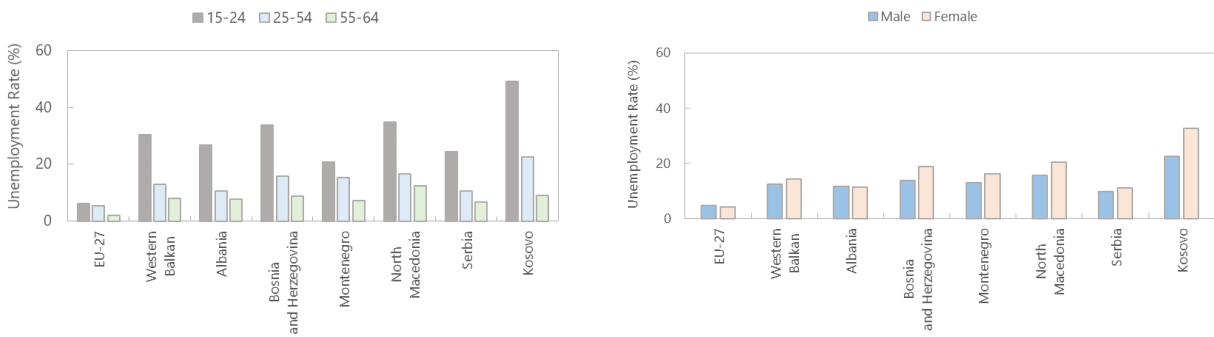
Inactivity Rate
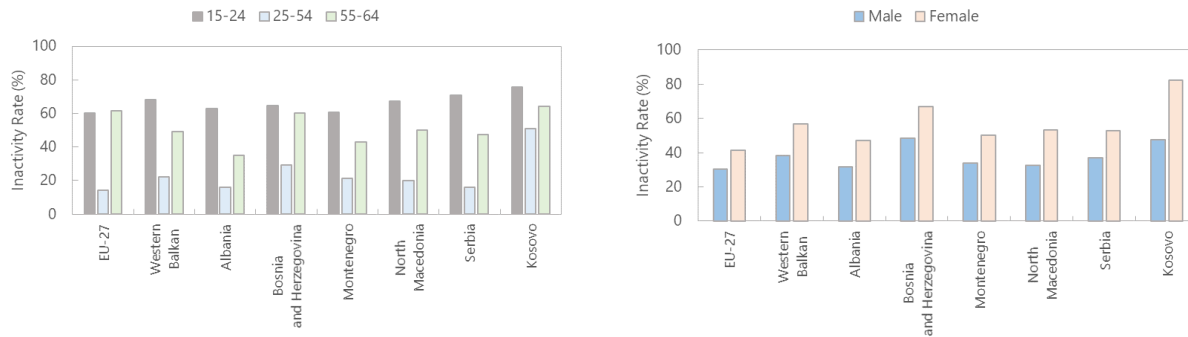
Sources: Eurostat, National Labor Force Surveys for Western Balkan Countries, and authors' calculations.

Gender differences are also marked with respect to education (Figure 3). The often encountered (positive) education gradient in terms of employment rates is generally observable for both men and women—employment rates are highly correlated with education levels. However, employment levels of low-educated women are substantially lower than those for men, suggesting potentially higher labor informality with low-educated women, except for Albania. Furthermore, the responsibility to provide childcare is placed on women with caregiving negatively impacting women's participation in the Western Balkan labor market due to three

main factors (World Bank 2018). First, social norms around family, childcare, and gender—with mothers considered as the primary bearers of childcare responsibilities—result in prioritization of childcare over employment prospects, and lead to interruptions in labor force participation for women; second, lack of affordable quality care services; and third, conditions at the workplaces that are unfitting for women with care responsibilities. These childcare responsibilities, combined with various cultural factors and public policies (for example family leave), can disincentivize women from working or being employed. All this suggests that gender is likely to be an important dimension of labor taxation analysis in the region.

Figure 3. Employment Rate by Education Level and by Gender, 2019

Male   **Female**
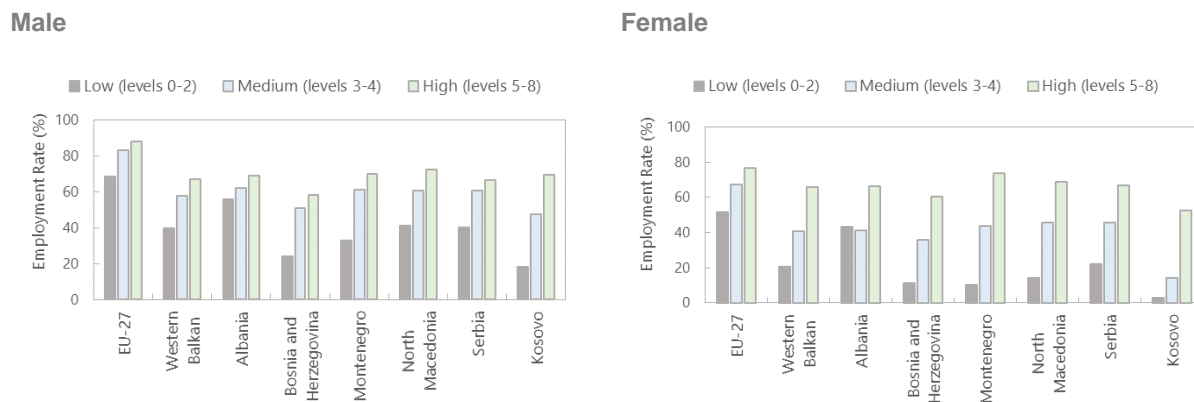
Sources: Eurostat, National Labor Force Surveys for Western Balkan Countries, World Bank (2020), and authors' calculations.

Notes: The educational structure refers to the International Standard Classification of Education (ISCED), 2011: levels 0-2: early childhood education and primary education; levels 3-4: lower secondary education and upper secondary education and post-secondary non-tertiary education; levels 5-8: short-cycle tertiary education, bachelor or equivalent, master or equivalent, doctoral or equivalent (World Bank 2020)

Figure 4 provides further insights into the composition of the employed population. First, the share of self-employed among the employed is large, highlighting the importance of not only considering the environment and outcomes for employees but also for self-employed who often face specific social protection environments, tax systems and regulatory settings[10]—an issue that has direct bearing on tax policy design. Second, the share of reported part-time workers in the Western Balkan is particularly low and, in some cases, close to non-existent—with the noticeable exception of Albania where part-time work is more common. The very limited role of part-time work is uncommon when comparing to EU-28 where part-time work arrangements are increasingly common for women—and men—as a means of facilitating work-life balance. For example, a recent study on the new forms of employment in the Western Balkans, found that while atypical work (that often involves part-time work), including platform work, is on the upswing in the Western Balkans, lack of monitoring, enforcement, and suitable regulations leads to a substantial amount of informality and undeclared income (European Training Foundation 2022). In the Netherlands, for example, the share of part-time workers exceeds half of the employed population, with even larger figures for females.[11] It is tempting to conclude that this could suggest that the influence of labor taxation in the Western Balkan at the intensive margin is likely not too important; but

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[10] As for OECD countries, self-employment shares are strongly increasing as a function of age. See OECD (2017).

[11] See Aliaj et al. (2016) for an analysis of hours of work trends in four Western European countries.

it could also mean that precisely because of taxation, intensive margin dynamics in the formal sector are absent, and that what we observe in the data is primarily the influence of taxation on the extensive margin.

Figure 4. Characteristics of the Employed Population, 2019
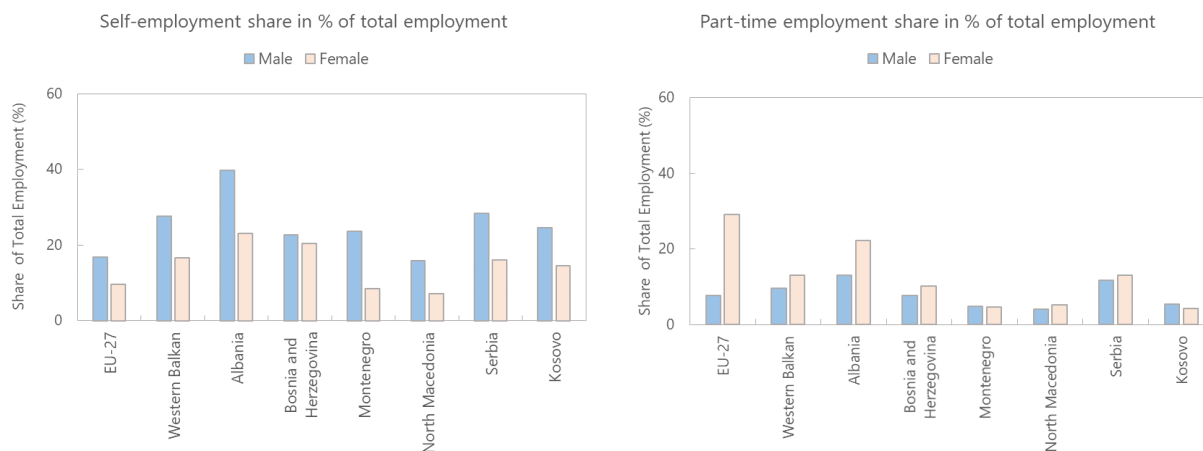
Sources: Eurostat, National Labor Force Surveys for Western Balkan Countries, and authors' calculations.

The role of informal employment—without a formal labor contract and PIT and SSC payments-- is another important dimension in an environment of binary work decisions and the large presence of self-employment. Though reasons for the observed patterns might be multiple, including different social preferences and again the economic and political transitions, they often hint at more rigidities on the labor market and incentive issues regarding the establishment of formal employment relationships. [12]

Data from Albania, North Macedonia and Serbia summarized in Figure 5 document the importance of informal employment. Informality is more prevalent in Albania than in North Macedonia or Serbia with close to 50 percent of work relationships being informal, versus some 20 percent on average reported for the other two countries. Strong differences exist by socio-demographic group: generally, both young cohort and older cohorts of workers are more likely to have informal employment relationships—with prime-age male workers being least likely to be in an informal work relation (as shown in the left panel of Figure 5). Compounded with already low employment rates to start with, these findings point to a very low coverage of workers either by the PIT or SSC systems.[13]

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[12] Non-tax factors, including labor codes, collective agreements and tripartite bargaining procedures between labor unions, employer unions and government, hiring and firing procedures, may also impact the labor market outcomes in the Western Balkan countries.

[13] Some form of taxation may still be levied on such incomes either directly in the case of labor income relabeled as capital income or indirectly through VAT.

Figure 5. Share of Informal Employment by Age and by Gender, 2019[14]
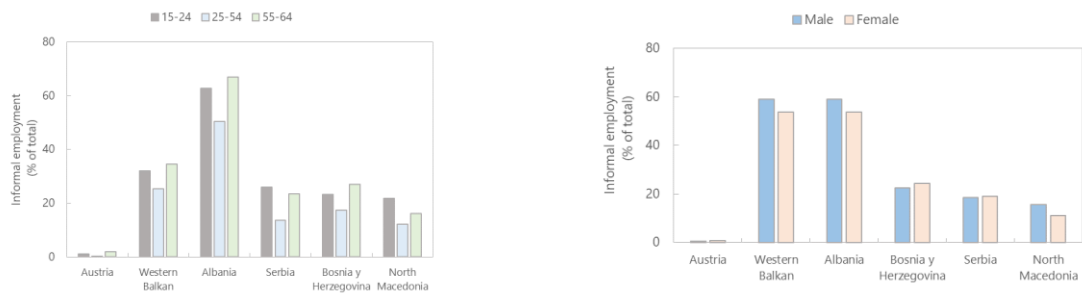
Sources: ILOSTAT, and authors' calculations.
Notes: Western Balkan average excludes Kosovo and Montenegro. Austria is used as a comparator for lack of consistent data on all EU27 countries.

Summing up the empirical evidence in this section, three key findings stand out. First, low employment rates, with little room for hours of work adjustments, are consistent with detrimental incentives provided by the tax system at the extensive margin—and these are probably easier to observe in the data than are the implication of taxation on the intensive margin. Second, the employment rates are especially low for women, younger as well as older workers, pointing to the need for specific considerations for these groups. Third, informality is an empirically highly relevant problem. A substantial fraction of those individuals that are employed are so in an informal manner, hence limiting the government's ability to raise revenue (with the caveat that many informal workers earn an income that would be below the PIT liability threshold) —and again pointing to the critical importance of incentives to enter or leave the formal employment market.

IV. Incentives Implications of Labor Taxation

A. Labor Taxation in the Region's Tax Policy Mix

During 2008-2020, the tax rates and tax bases have changed several times. The general trend has been to increase the rates on consumption taxation (VAT), while the CIT and PIT rates have remained mostly stable over the period (Figure 6, and Box 2 for more recent developments). VAT rates range from 17 percent in Bosnia and Herzegovina to 21 percent in Montenegro, with recent increases in the latter and in Serbia (to 20 percent).

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[14] Because of the nature of the informal employment (unreported and undeclared), these estimates are imprecise and should be interpreted with caution.

Figure 6. Personal, Corporate, and Value Added Tax Rates, 2000-2020

Personal Income Tax Rate (PIT)
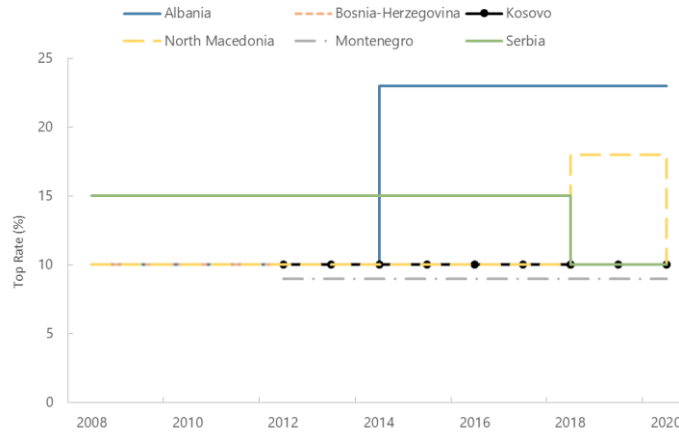
Corporate Income Tax Rate (CIT)
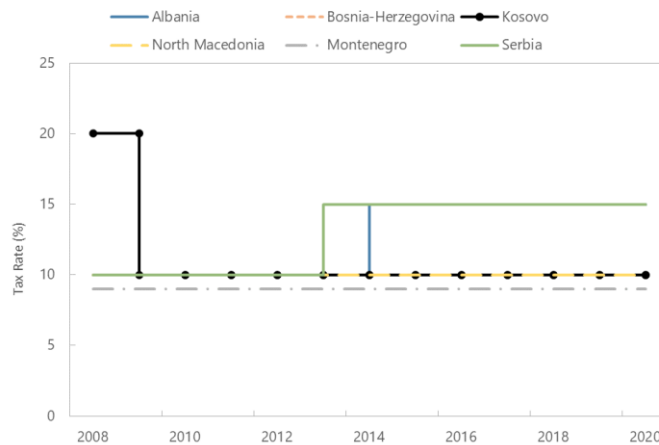
Value Added Tax Rate (VAT)
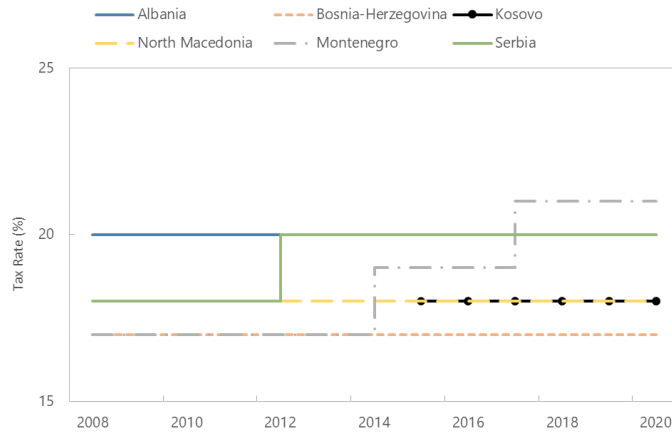
Sources: National ministries of finance, and authors' calculations.

Notes: Statutory tax rates. VAT rate is the standard rate, no reduced rates are shown. PIT rate is the top marginal rate, excluding surtaxes.

Box 2. Recent Developments in Labor Taxation in the Western Balkans

Under the April 2022 Social Resistance Package, Albania introduced some changes to personal income taxation:

- The zero-tax bracket was increased to all salaries of up to ALL40,000.
- For salaries between ALL 40,000 – ALL 50,000 (approx. EUR 400), half of any amount above ALL 30,000 (approx. EUR 240) are subject to 13 percent tax rate.
- For salaries above ALL 50,000, the high end of the income bracket taxable at 13 percent was raised to ALL 200,000 (approx. EUR 1,600), with 23 percent tax rate applying afterwards.
- The minimum salary for the purposes of social security and health insurance contributions has been raised from ALL 30,000 to ALL 32,000, with maximum now capped at ALL 141,134.

In 2022 Montenegro has adopted a new reform program—Europe Now—aimed at increasing employment and living standards, reducing labor market informality, and improving the business environment. The program introduces several changes to labor taxation:

- An increase of the net minimum wage from EUR250 to EUR450 per month.
- The elimination of the flat rate employee (8.5 percent) and employer (2.3 percent) health contributions.
- Flat PIT regime with no allowance was replaced with a new progressive personal income taxation, with a tax-free allowance (zero tax bracket) of EUR700 per month, a rate of 9 percent on earnings of EUR700-1,000 and a 15 percent rate on earnings above EUR1,000.

Furthermore, Europe Now introduces a progressive CIT taxation with 9 percent on profits below EUR 100,000; 12 percent on profits between 100,001-1,500,000; and 15 percent on profits above EUR15 million.

In North Macedonia the application of the progressive tax rate system has been suspended for the period January 1, 2020, to December 31, 2022. During this period a flat tax rate of 10 percent has been applied, with no tax-free allowance.

Other countries in the region have also been considering reforms to reduce the labor tax wedge and increase tax progressivity. Reforms in Serbia have focused on reducing the labor tax wedge and bringing the IT sector employees into the formal economy. BiH governments have been discussing options to reduce the labor tax wedge, and expand the taxable base by including non-taxable allowances, especially in Federation of BiH. Kosovo has been considering reforms to increase progressivity in labor taxation.

These changes have not modified the revenue structure in the six Western Balkan countries, which reflects a tax mix heavily tilted towards SSCs and consumption taxation. Following the EU categorization of taxes according to capital, labor and consumption,[15] three key observations can be derived (Figure 7). First, all countries have very low taxes on capital (with only about 2 percent of GDP raised annually since 2010). Second, consumption taxes play a larger role than labor taxes in all countries of the region, which contrasts sharply with most other European countries. Third, taxes on labor have been stable over time, though at very different levels across the region. The main revenue generator of labor taxes are SSCs, raising between 2.5 percent of GDP in Kosovo and 15.8 percent of GDP in Bosnia and Herzegovina. PITs raise between 1.8 percent of GDP in Bosnia and Herzegovina and 3.3 percent of GDP in Montenegro (based on 2020 data).

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[15] Consumption taxes include value-added taxes, excises, and taxes on international trade. Labor taxes include personal income taxes and social security contributions. For Kosovo and North Macedonia, figures include mandatory second pillar pension contributions to private defined-contribution funds. Capital taxes include taxes on profits. Under Eurostat methodology, which classifies non-wage PIT revenue as taxes on capital, taxes on capital in the Western Balkan could be higher by 1 percentage point of GDP, and on labor lower by the same amount.

SSCs dominate in terms of revenue (and therefore their impact on labor market participation). About 75 percent of the revenue from taxation of individuals stems from SSCs with Kosovo and Bosnia and Herzegovina being the two outliers having 55 and 90 percent, respectively.

Figure 7. Tax Revenue Composition by Economic Function, 2004-2020

Taxes on labor
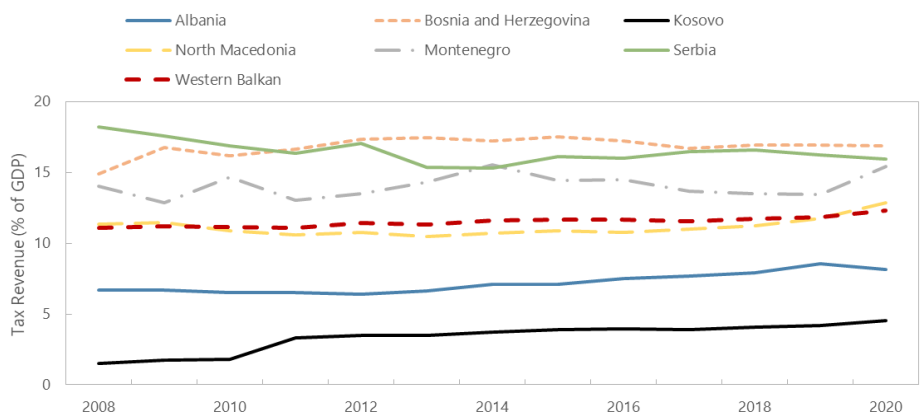
Taxes on capital
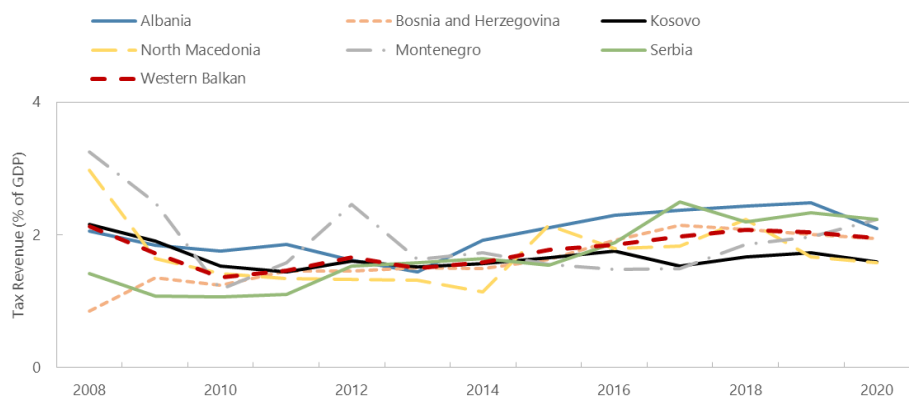
Taxes on consumption
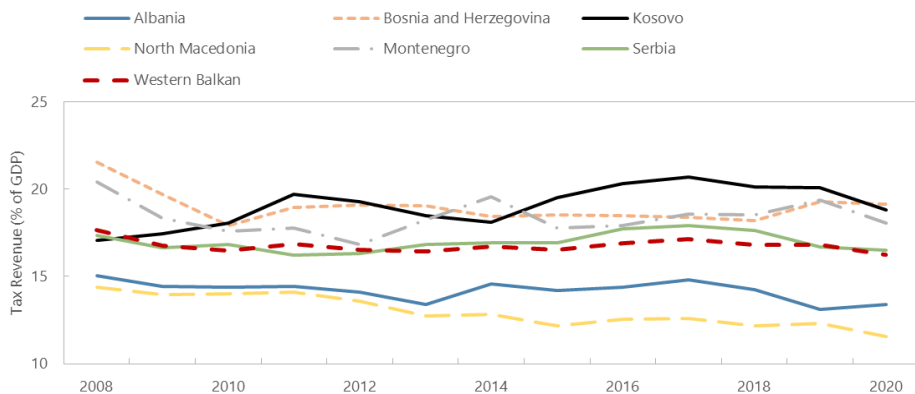
Sources: Eurostat, national ministries of finance, and authors' calculations.

B. Key Features of Labor Taxation

In addition to their low levels of collection, PITs in Western Balkan countries are characterized by low statutory and effective progressivity (Figure 8). All countries, except Serbia, rely on a dual-income tax approach, with relatively low flat rates on capital income and one (Bosnia and Herzegovina,[16] Montenegro), two (Albania, North Macedonia, Serbia), or three (Kosovo) rates on labor income (Figure 8). Personal income taxation in Serbia, while predominantly schedular by design, in practice is levied at a flat monthly rate with additional two annual surcharge brackets. All countries except Montenegro have a standard allowance.[17] Taxes are levied at an individual level irrespective of family composition. Additional family allowances are provided in Bosnia and Herzegovina, and in Serbia only against the tax base of the annual surcharge.[18] PITs are levied on gross wages; and in Bosnia and Herzegovina employee SSCs are also deductible. Finally, as shown in Figure 9, the SSC rates for pensions dominate, followed by health insurance.

Figure 8. PIT Marginal Rates, 2021
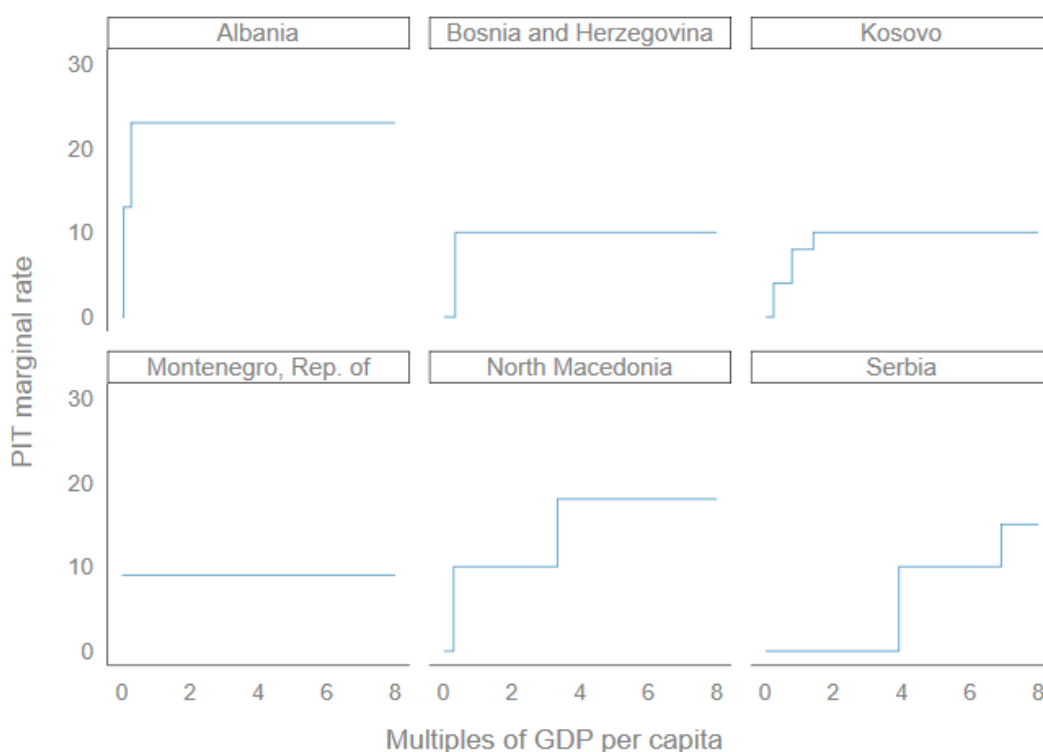
Sources: IBFD, and authors' calculations.
Note: Standard allowances are reflected for Bosnia and Herzegovina, North Macedonia and Serbia.

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[16] In Bosnia and Herzegovina, personal taxation is at the sub-central level (the Federation of Bosnia and Herzegovina – FBiH -- and the Republika Srpska - RS) but the (flat) rate is identical.

[17] Montenegro reinstated personal allowance from January 2022.

[18] In Bosnia and Herzegovina and Kosovo veterans also benefits from PIT exemptions on war pensions.

Figure 9. SSC Rates on Gross Wages - Combined Employee-Employer, 2021
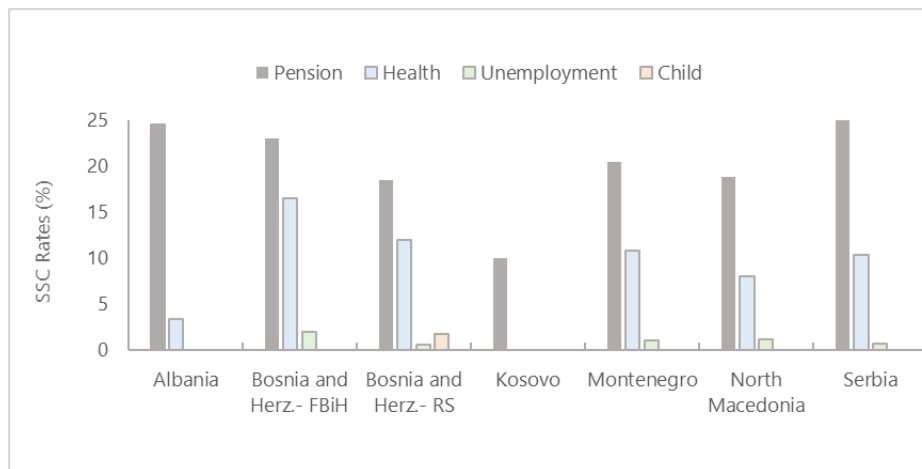
Sources: IBFD, and authors' calculations.

C. Progressivity and Redistributive Capacity

In international comparisons, it is the composition of the tax wedge (given the prominence of SSCs) and the limited progressivity that stand out. Figure 10 presents the tax wedges for hypothetical workers earning a given multiple of average wage, following a well-known OECD methodology.[19] The limited progressivity originates in the rather flat nature of the PIT systems levied on wages at 67, 100 and 167 percent of the average wage. Even though all countries, except Montenegro, have either personal allowance, higher rates, or a surtax, these thresholds kick in either at very low or at very high-income levels, and have limited impact.

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[19] See OECD (2021).

Figure 10. Labor Tax Wedge by Income Level in Western Balkan and OECD Countries, 2019
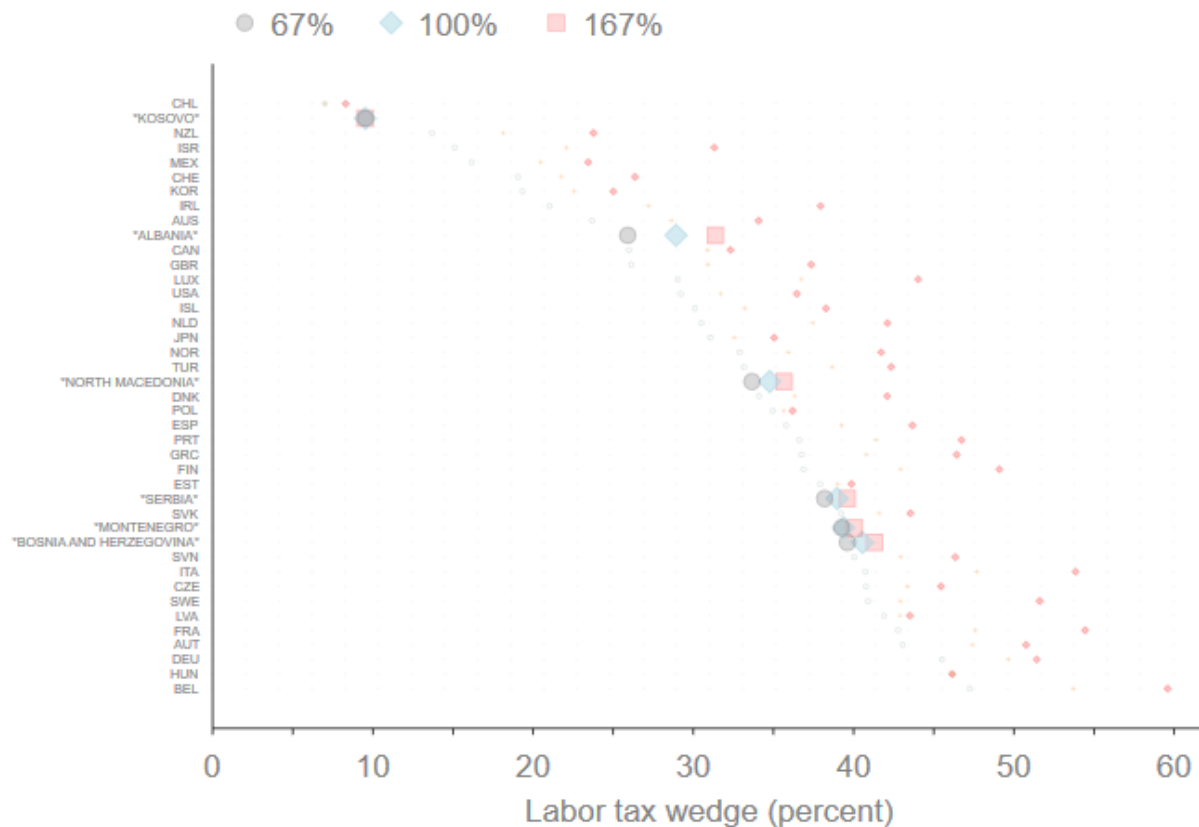
Sources: OECD, and authors' calculations.
Notes: Single person with 67%, 100% or 167% of average earnings, no child. The Bosnia Federation and Bosnia RS are treated jointly.

The limited progressivity of the labor tax system extends beyond an OECD-style typical worker analysis. Figure 11 uses broader indicators of progressivity and redistributive capacity (Box 3) and notes three features of the system. First, as reflected in the left-hand plot in Figure 11, countries in the Western Balkan display low degrees of distributive capacities of their PITs, largely because of both low levels of taxation through the PIT and limited progressivity in the marginal rate structure across a wide range of incomes, as well as low top rates.

Second, when extending the indicators to include SSCs (which is primarily relevant for wage income only), the overall values of redistributive capacity are markedly lower in all countries, indicating a regressive effect of SSCs—holding constant social security benefits.[20] This is reflected in the right-hand plot in Figure 11. It is driven largely by flat SSC rates and maximum wage incomes capping SSCs in Albania, North Macedonia, and Serbia (Table 2).

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[20] This is for a given period. A lifetime analysis involving future pension payments would be more complex.

Figure 11. PIT Redistributive Capacity, 2021
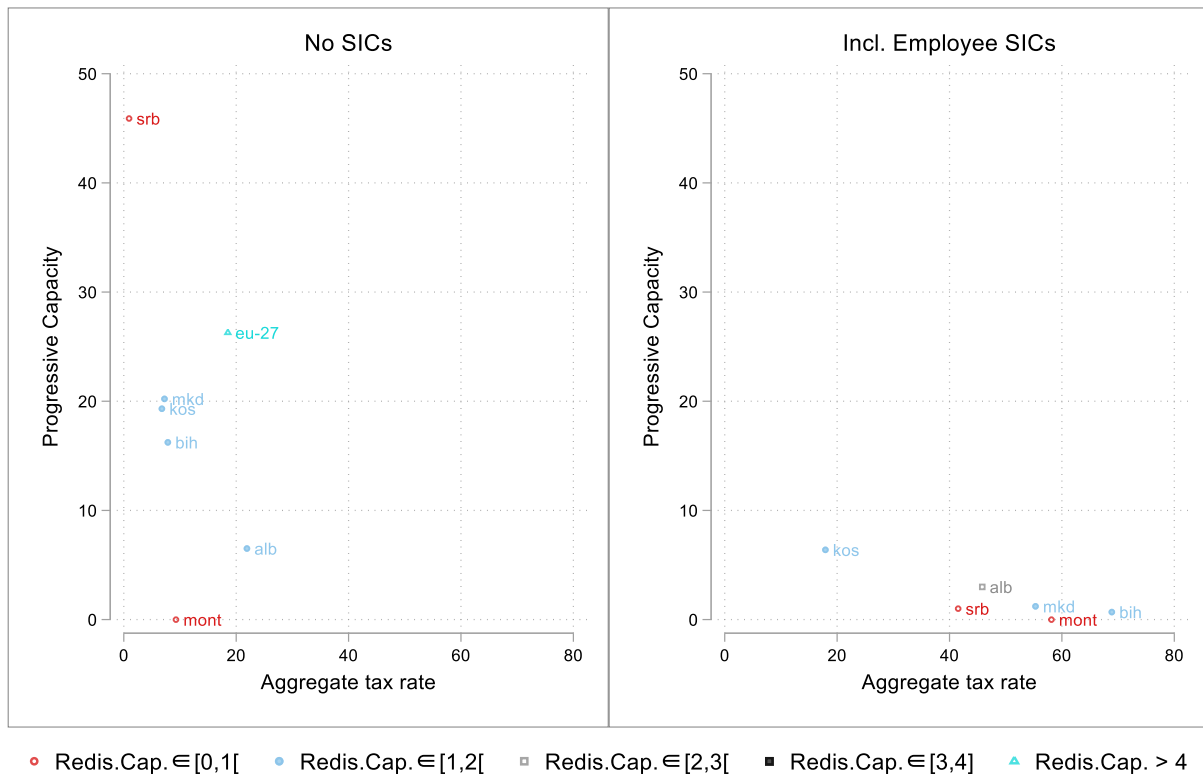
Sources: SWIID 9.2, World Revenue Longitudinal Database (IMF), IBFD, EY, and authors' calculations.

Notes: 1) Each country is classified in a redistributive capacity interval, showing the respective contributions of progressive capacities and aggregate tax rates (see Box 3). 2) For Bosnia and Herzegovina, only the Bosnia Federation (BiH) is reported. Results for Bosnia RS are very close.

<div style="border: 1px solid black; padding: 10px;">

Box 3. Measures of Progressive and Redistributive Capacities

The standard measurement of the redistributive effect of taxation, as developed by Musgrave and Thin (1948) and Reynolds and Smolensky (1977), is the difference between the Gini coefficients of respectively pre- and post-tax income. In the same spirit, the progressivity index proposed by Kakwani (1977) is defined as the difference between the Gini coefficients of respectively pre-tax income and the tax liabilities—the more the tax liability is concentrated on higher incomes, the more progressive is the PIT.

A critical contribution of Kakwani was to decompose the total redistributive effects of taxation into its progressivity and its "size", measured as the ratio of total tax liabilities over total pre-tax income (referred to as the aggregate tax rate). The intuition behind this decomposition is that progressivity is a necessary but not a sufficient condition of redistribution. For example, a PIT generating a total revenue of 0.001 percent of GDP can be made extremely progressive—that is, strongly concentrated on high incomes—but would still achieve little income redistribution, simply because it is too small.

Like the Reynolds-Smolensky index, a limitation of the Kakwani index (and the related decomposition) is that it is a function of the pre-tax distribution, therefore confusing the measurement of the intrinsic progressivity of each tax regime with any given initial conditions in the economy. The literature has proposed procedures that make redistribution indices comparable across countries and years, controlling for differences in pre-tax distributions. The analysis in this paper uses a methodology that "transplants" tax regimes to be compared into a common base with an identical pre-tax distribution (Dardanoni and Lambert 2002). The indices thus computed are the intrinsic progressive and redistributive *capacities* of the PIT in each country, corrected for pre-tax distributions. The calculations use simulated microdata based on Gini coefficients of pre-tax income (Benítez and Vellutini 2021).

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D. Incentives at the Extensive Margin

A high tax wedge on labor generally exerts significant adverse labor market incentives. It generally discourages formal market labor supply (and related investment in human capital) and/or labor demand and contributes to involuntary unemployment and inactivity. Minimum contributions, which apply in four countries out of six (Table 2), may similarly reduce incentives for labor force participations or formal hiring, particularly for low-income workers. While minimum contributions serve as an anti-abuse mechanism to ensure that employees and employers do not have an incentive to under-declare earnings, they can be highly regressive and especially affect low-income part-time workers (such as women with childcare) and secondary household earners.

Table 2. Minimum and Maximum Contributions, 2021

	Minimum base for SSCs (employee)	Minimum base for SSCs (employer)	Maximum base for SSCs (employee)	Maximum base for SSCs (employer)
Albania	Minimum wage	Minimum wage	4 x min. wage	4 x min. wage
Bosnia and Herzegovina	-	-	-	-
Kosovo	-	Minimum wage	-	-
Montenegro	-	-	-	-
North Macedonia	50 % average wage	-	16 x average wage	-
Serbia	35 % average wage	-	7 x GDP per capita	7 x GDP per capita

Sources: IBFD, and authors' compilations.

Figure 12 provides a summary of these incentives in terms of the average tax wedge imposed on individuals, including the influence of minimum contributions. For Albania[21], North Macedonia, and Serbia, the regressivity of the tax wedge for low-income workers is clearly reflected and is mostly due to SSCs.

In addition, means-tested social benefits, which are not reflected in Figure 12, critically affect the incentives faced by low-income workers at the extensive margin. For Serbia and Montenegro, respectively, Koettl (2013; 2012) analyzed disincentives to formalization stemming not only from labor taxes but also from the withdrawal of benefits due to entering the formal labor market. They find a high effective tax rate (defined as including benefits, PIT, and SSC), surpassing 100 percent in both countries, implying a loss of net income for wages below 25 percent of the average wage. By and large, this is still true today.

An important message from Figure 12 is that even without accounting for means-tested benefits, the structure of the average tax wedge is likely to significantly disincentivize formal employment, particularly for low-skill workers and women. Adding to the limited redistributive capacity reported above, this also contributes to inequality.

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[21] For Albania, comparing Figure 12 with Figure 10, it is apparent that the spike in the tax wedge happens at low-income levels, below 67 percent of GDP per capita.

Figure 12. Average Tax Wedge for Full-Time Wage Earner

PIT and SSCs, Albania (2021)
- single, no children -

PIT and SSCs, Bosnia and Herzegovina: FBIH (2021)
- single, no children -

PIT and SSCs, Kosovo (2021)
- single, no children -

PIT and SSCs, North Macedonia (2021)
- single, no children -

PIT and SSCs, Montenegro (2021)
- single, no children -

PIT and SSCs, Serbia (2021)
- single, no children -
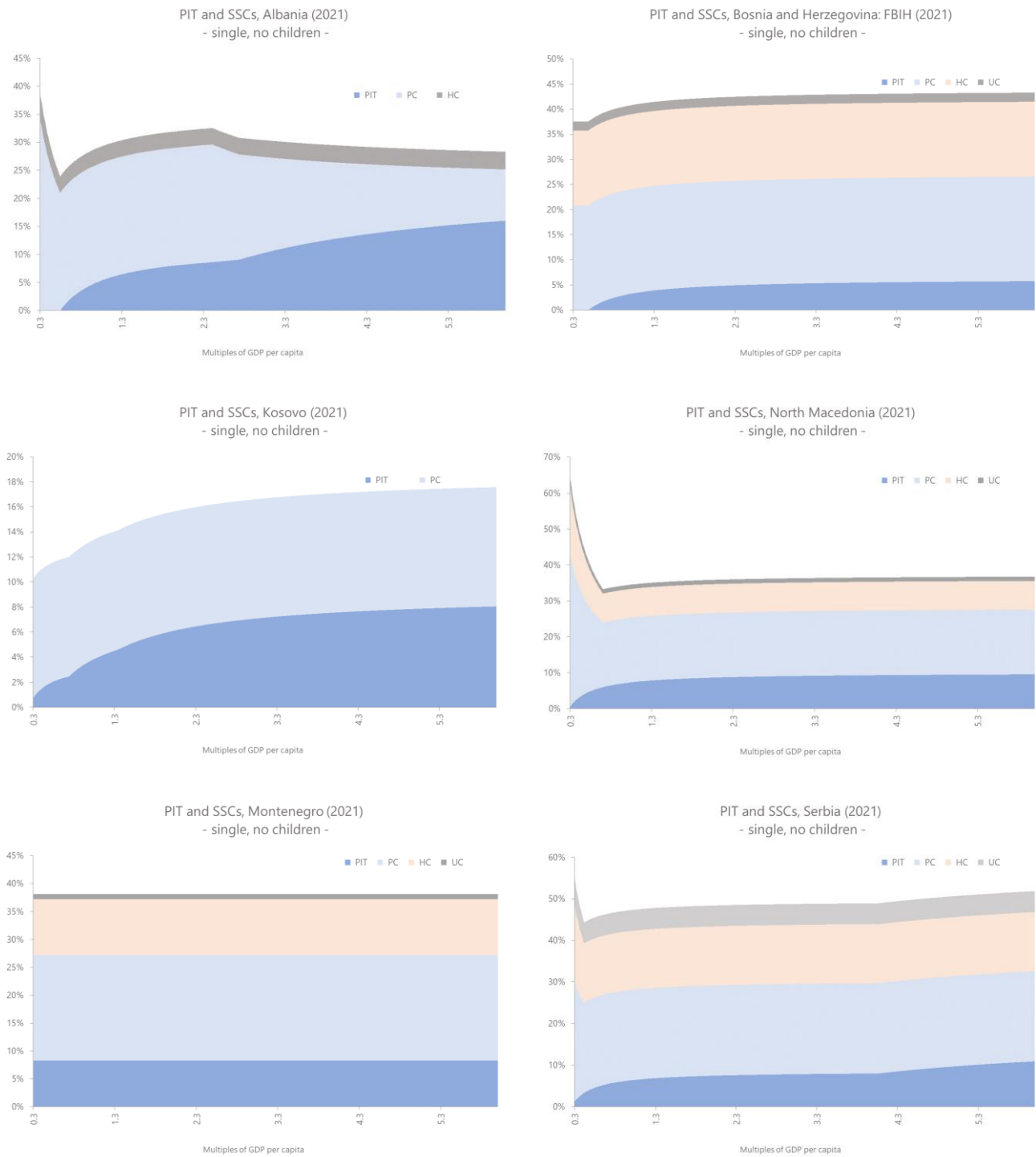
Sources: IBFD, OECD, and authors' calculations.

Notes: PC, HC, UC stand for pension, health, and unemployment contributions. PIT is levied at the individual level. Family allowances are offered only in Bosnia and Herzegovina and Serbia. For the other four countries, the charts would be identical for the main earner of a family with two children.

E. Incentives at the Intensive Margin

Exploring the influence of the PIT and SSCs on work incentives at the intensive margin, Figure 13 presents the marginal tax rates on additional work for a single full-time worker at different levels of earnings. Two scenarios are displayed: with the assumption of total perceived contribution-benefit linkages by taxpayers (red line)—where it is assumed that workers do not internalize SSCs as a cost; and an alternative assumption of employee (SSC e) and employers (SSC E) contributions being considered as not generating proportional benefits (green and blue line, respectively). Both series display often lumpy contributions at zero, and large discontinuities. These discontinuities indicate that the substantial effects of SSCs on marginal work and earnings incentives largely dominate those from the PIT—, under the assumption that SSCs are not perceived as generating proportional benefits. Albania, Montenegro, and Serbia also have a temporary drop in marginal tax wedge due to an upper limit on SSCs, which is not aligned with PIT brackets. Finally, under the assumption that at least part of SSCs are perceived as net costs by employees, marginal tax rates display strong regressivity in these three countries. In all countries, SSCs at least double the marginal tax rate, which, at the intensive margin, is likely to provide negative incentives to work more—and declare more income.

Figure 13. Marginal Tax Rates for Full-Time Wage Earner

Marginal tax rates on labor income, Albania (2021)
- single, no children -

Marginal tax rates on labor income, Bosnia and Herzegovina: Federation (2021)
- single, no children -

Marginal tax rates on labor income, Kosovo (2021)
- single, no children -

Marginal tax rates on labor income, North Macedonia (2021)
- single, no children -

Marginal tax rates on labor income, Montenegro (2021)
- single, no children -

Marginal tax rates on labor income, Serbia (2021)
- single, no children -

Sources: IBFD, OECD and authors' calculations.

F. SSCs and Design of Benefits

Focusing on the role of SSCs in the tax wedge, which as noted is critical in all six countries, the design of social insurance benefits needs to be considered. Three dimensions are important for the design of benefits: eligibility or coverage, level, and financing. The key distinguishing feature between SSCs and the PIT is that the payment of SSCs generally contributes to the buildup of associated benefit entitlements. There are three main programs: pensions, health care, and unemployment.[22]

In all 6 countries, pensions are generally linked to earnings: pension payments are related to individual contributions.[23] By contrast, health care provision is close to universal across the region, weakening the earnings-benefits link. For example, in Bosnia and Herzegovina, Montenegro, and Serbia, unemployed individuals without a right to unemployment benefits are registered with the Employment Funds and benefit from health care coverage. Technically, the State pays contributions on their behalf, artificially increasing the number of registered unemployed beyond those truly looking for a job. Kosovo, on the other hand, follows a model of healthcare delivery whereby the central government functions as the purchaser as well as the provider of health care services. In North Macedonia, all citizens and registered long-term residents are eligible to receive free compulsory State funded healthcare. Albania has a universal health care system based on both mandatory and voluntary contributions, supplemented by funding from the state budget. Importantly, health care benefits are identical for all, with only sick pay and maternity benefits depending on contribution status.

Unemployment programs are also earnings-linked in all six countries. As shown in Figure 9 and Figure 12, unemployment contributions are much smaller and affect incentives significantly less.

Also, as noted for the case of Serbia and Montenegro, benefits withdrawal at the lower end of the income distribution is a key design issue with direct impact on formalization at the extensive margin.

The key point for our purposes is that the high proportion of income-linked benefits, especially pensions, are a major factor complexifying any reforms of labor taxation in the region, as discussed below.

G. Self-employment

The share of labor provided through self-employment in the region is large by international standards, ranging, for respectively men and women, from 18 and 6 percent in North Macedonia to 42 and 26 percent in Albania (Figure 4).[24] This compares to 18 and 10 percent in the EU. Self-employment is particularly high and increasing in high-wage sectors, such as IT and regulated professional services, including because of tax regulations allowing certain categories of self-employed to pay lump-sum taxes and contributions up to very high-income thresholds (World Bank 2020). For example, in Kosovo, simplified presumptive regimes are available to regulated professional services such as medical doctors and lawyers even though this category of taxpayers typically does not need the lower compliance costs offered by such regimes.

Generally, with no third-party information source for return filing and no withholding mechanism for collection, self-employed regimes are even at more risk of informality and underreporting than other regimes. In addition,

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[22] Other programs also include child protection, additional health insurance.

[23] Western Balkan countries have been reforming pension systems in the direction of strengthening the link between individual contributions and future pension benefits.

[24] Albania draft Income Tax Law currently in public consultations may have implications on the treatment of self-employed professionals under the PIT regime.

maximum thresholds and lump-sum regimes for the self-employed in the region create discontinuities that contribute to disincentivize labor supply at the intensive margin (Table 3). In Albania, which has the largest share of self-employment, individuals are incentivized to minimize their tax burden by reorganizing themselves into self-employed small businesses and offer their (professional) services to larger businesses as contractors rather than come on the payroll as employees. In this way, an individual earning above ALL 8 million in annual net income (about 16 times GDP per capita) can face an effective income tax rate of 0 percent in self-employment under the Simplified Profit Tax, instead of 18.5 percent as an employee under the PIT. Similarly, Kosovo and North Macedonia have thresholds or lump-sum regimes that may either trap workers in a lower-than-optimal income range or provide inefficient tax shelters to otherwise well-organized professions.[25]

Table 3: Taxation of the Self-Employed, 2021

	Profit or Turnover Regime				Lump-Sum Regime
	Upper Threshold (x GDP per capita)	Tax and SSC Base	Tax Rate	SSCs	
Albania	16	Turnover	0 percent	23 percent*	No
Bosnia and Herz.	No	Profit	10 percent#	23 percent*	No
Kosovo	17	Turnover	3 to 9 percent	10 percent*	Yes
Montenegro	No	Profit	10 percent##	34.3 percent*	No
North Macedonia	No	Profit	PIT rates	28 percent*	Yes
Serbia	No	Profit	10 percent	36.5 percent*	No

Sources: IBFD, and authors' calculations.

Notes: * indicates combined employee and employer SSCs for wage earners; # is the standard CIT rate; and ## is the top PIT rate.

V. Policy Implications

Labor taxation in the Western Balkan faces twin equity and efficiency challenges. As reported, the redistributive capacity of labor taxation is low by international standards, affecting the equity of the system in each country of the region. This stems from the PIT's limited progressivity, and high and flat SSC rates. On efficiency, high tax wedges on low incomes provide incentives to stay out of formal employment; here, SSCs play an essential role. This critical feature of labor taxation in the region is consistent with observed low labor participation rates and a high degree of informality. It is also likely to contribute to the gender gap on labor participation—especially in Serbia, North Macedonia, and Albania—as women are often second earners who are influenced by a high tax wedge on low wages.

What are the policy implications of these challenges? On equity, PIT reforms to make tax schedules more progressive would be a straightforward policy orientation. In Kosovo, Bosnia and Herzegovina, and Montenegro, the top rate (10 percent) is too low to achieve any significant redistributive capacity. In North

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[25] Profit shifting by the self-employed between the PIT and the CIT is also influenced by the taxation of dividends. To avoid double taxation and reduce the scope for arbitrage between the PIT and the CIT, dividends can be taxed at a lower flat rate (Or a tax credit on the PIT can be granted based on the underlying CIT) so that, combined with the CIT, the tax rate is close to the top marginal PIT rate (Harding 2013; Benedek, Benítez, and Vellutini 2022).

Macedonia, with a higher top rate (18 percent), lowering rates on low-income workers (or, alternatively, increasing the standard allowance) would improve progressivity and would alleviate the tax wedge on low incomes. In Montenegro, introducing a standard allowance would enhance PIT progressivity and help to address the tax wedge at the extensive margin. Note that making the PIT more redistributive is inseparable from increasing its weight in the region's tax revenue mix, which would also strengthen resource mobilization.

An In-Work Tax Credit (IWTC)[26] could also incentivize employment formalization. An IWTC would help to alleviate the excessive effective tax rates faced by low-wage earners entering formal employment, as documented in Serbia and Montenegro (if benefit withdrawal is, correctly, factored in). The net fiscal cost of an IWTC can be made manageable as a function of its key characteristics (maximum credit, range of eligible income, etc.), especially if it is combined with an increase of the PIT's top rates.

Given their predominant role in the region (especially in Albania, North Macedonia, and Serbia), action on SSCs would be critical to address equity and efficiency concerns. First, contribution minima could be lowered or eliminated in countries where they are significant determinants of the tax wedge: Albania, North Macedonia, and Serbia. Importantly, this should also apply to the self-employed. Conversely, contribution maxima in Albania, North Macedonia, and Serbia, directly affect progressivity and should be reviewed.

Second, SSC rates on low-income earners could be reduced to, again, improve both the progressivity of labor taxation and provide better incentives to formalization— subject to implications on benefit regimes, as noted below. In addition to being quantitatively crucial to labor taxation reforms in the region, SSC reductions have often been preferred internationally to PIT changes as they are typically more concentrated on labor income, which may encompass elements of capital income (Box 4). However, an added complexity of SSC reductions is that they can target either employer or employee contributions. While reductions in employee SSCs will most likely influence labor supply decisions (OECD 2011), reducing employer SSCs would affect the labor demand behavior, which is in fact often viewed as the key constraint to formal employment, and could consequently be prioritized.

Also essential is the distinction between income-linked contributory benefits and benefits not linked to individual contributions. SSC reductions are more difficult to reform when they directly contribute to earnings-linked entitlements, as is typically the case for pension contributions—by far the largest SSC component in the region. For example, benefits from Kosovo's mandatory capitalized pension scheme are directly proportional to contributions. In this situation, it is advisable to consider SSC reductions in conjunction with more general reforms of the benefits in question.

Contributions that give rise to universal benefits (as opposed to income-linked entitlements), such as access to basic health care or minimum pension benefits, can be viewed as quasi-taxes and are not necessarily to be levied from labor income. Indirect tax instruments such as the VAT and environmental taxes could in part or in whole compensate for such SSC reductions. However, note that even for SSCs funding income-linked entitlements switching to other tax bases, if more complex, is entirely possible—as has often been

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[26] For a given worker, the value of a typical IWTC varies with employment with the objective of encouraging entry into formal employment: it quickly increases as employment income rises from zero; after reaching a maximum amount, it diminishes as income reaches higher levels. Examples of IWTC employment-contingent payments include those in the United States (the Earned Income Tax Credit), the United Kingdom (the Working Tax Credit, moving to the Universal Credit), Sweden (the Earned Income Tax Credit), Belgium (In-Work Benefit), France (the Prime d'Activité), Canada (Self-Sufficiency Program), and Ireland (the Family Income Supplement). Most IWTCs are contingent on earned income alone (US, Sweden, France) while some include labor hours as well as low earnings as a specific condition of entitlement. Note that a IWTC based on family income could reduce the female labor force participation rate (Eissa and Liebman 1996) – but this is a general feature of household-based (as opposed to individualized) PITs. All countries in the region have individual PITs and IWTCs should similarly be individualized.

implemented in the EU. The reduction in employers' SSCs implemented by several countries since the 2008 financial crisis was indeed commonly financed by an increase in the standard VAT rate to achieve a revenue-neutral or revenue-enhancing reform. For instance, in Germany, the rate of unemployment insurance (an income-linked entitlement) was reduced from 6.5 to 4.2 percent in 2007 and to 3 percent in 2009. The health insurance contribution rate was also reduced from 7.3 to 7 percent for employers, and from 8.2 to 7.9 percent for employees. The reductions in the SSCs were (over-) financed by a permanent increase in the standard VAT rate from 16 to 19 percent. In Hungary, the employer's SSC was reduced by 5 percentage points for incomes up to 2 times the minimum wage in 2009. The reduction was subsequently extended to all income in 2010. At the same time, the lump-sum health contribution—an example of minimum contribution—was abolished as of January 1, 2010. The Hungarian SSC reform was similarly financed by an increase in the standard VAT rate of five percentage point, together with increase in excises on petrol, diesel, alcohol and cigarettes (IMF 2018b).

Box 4. Experience with SSC Reductions

Reduction in employers' SSCs was the major policy instrument used by many EU countries to address immediate and severe unemployment in the aftermath of the 2008 financial crisis.

The preference for SSC reductions is explained by the fact that these apply only to employed labor, while PIT often applies to a broader definition of income that includes business activities. High labor costs are commonly perceived as a key structural problem in several EU countries, with reduced labor costs seen as a way to ease and accelerate the needed adjustment to increase employment (Keen and Mooij 2013). The focus on the employer's contribution—rather than the employee's, reflects a view that the relevant rigidity comes from contracts specified in terms of payment net of the employer's SSC. Since the financial crisis, 14 countries have introduced temporary reductions in employers' SSCs to increase labor demand. In 2010 alone, eight OECD countries reduced their social contribution rates for employers, with varying scope and level. For example, the reduction applies to all workers in Germany, Japan, and Mexico, while France, and the Czech Republic restricted the reduction to low-wage workers. In Portugal, the reduction is in respect of new only new employees only, while in France it applies to small firms only—up to 50 employees.

Adapted from IMF (2018b).

A related point is that financing SSC reductions through VAT increases may revive the familiar equity-efficiency tradeoff. As shown by Pestel and Sommer (2017) on German data, because VAT is inherently more regressive than labor taxation, efficiency gains (relaxing constraints at the extensive margin of the labor market) may be associated with equity losses (making the tax system less progressive). For this reason, progressivity in spending is important in countries that fund SSC reductions through non-labor taxation.

Tax regimes for the self-employed in the region also pose specific policy challenges. At the intensive margin, lump-sum regimes and upper thresholds may trap workers in low-income situations—or offer high-earners in regulated professions undue preferential tax treatment. Here, it is essential to ensure that these regimes deliver the lower compliance costs they are made for—without preferential treatment; that the transition towards standard regimes be as smooth as possible.

VI. Concluding Remarks

The lack of progressivity of labor taxation combined with a disproportionately high tax wedge on low incomes poses a twin equity-efficiency challenge in the Western Balkan. In large part, this challenge is the result of high SSCs applying uniformly to income—but excluding some individuals and enterprises; but it is also an outcome of the region's PITs not playing their expected role in income redistribution and revenue raising. Low rates of labor participation in all countries, particularly low-skill workers and women, are consistent with these high tax wedges. In Albania, North Macedonia and Serbia particularly, an excessive tax wedge on low incomes is also a key hurdle to employment formalization and inclusiveness, especially for women.

Correcting tax wedges on low-income earners can be achieved first and foremost by SSC reductions, including by partially shifting the funding of pensions and health programs to other tax bases, in particular capital and consumption. SSC reforms are, however, more complex than changes in the PIT. They affect the funding of the corresponding benefits, especially when those are income-linked—so any reform to SSCs could be perceived as a reduction in benefits, even where the link contribution-benefit is weak. More generally, spending policy at large, including transfers to unemployed workers, influences the progressivity and the incentives to formalization provided by the tax-transfer system. To the extent that Western Balkan countries find it difficult politically to reform taxation toward more progressivity in income taxation, spending policies become the center stage of how fiscal policy can redistribute income. However, spending policies will not resolve tax inefficiencies and informality in the labor market. Therefore, it is likely that countries in the region will need both tax and spending reforms.

Further work on labor taxation in the Western Balkan could be developed in the context of each country. Designing the right national reform strategy calls for a careful assessment of countries' objectives, time horizon, and available administrative capacity, as well as in-depth analytical work on the expected labor supply responses, redistributive capacity, and informality—all typically country-specific aspects.

References

Aliaj, Arjeta, Xavier Flawinne, Alain Jousten, Sergio Perelman, and Lin Shi. 2016. "Old-Age Employment and Hours of Work Trends: Empirical Analysis for Four European Countries." *IZA Journal of European Labor Studies* 5 (1).

Bargain, Olivier, and Karina Doorley. 2011. "Caught in the Trap? Welfare's Disincentive and the Labor Supply of Single Men." *Journal of Public Economics*, Special Issue: The Role of Firms in Tax Systems, 95 (9): 1096–1110.

Bargain, Olivier, and Andreas Peichl. 2016. "Own-Wage Labor Supply Elasticities: Variation across Time and Estimation Methods." *IZA Journal of Labor Economics* 5 (1): 10.

Benedek, Dora, Juan Carlos Benítez, and Charles Vellutini. 2022. "Progress of the Personal Income Tax in Emerging and Developing Countries." IMF Working Paper WP/22/20. International Monetary Fund.

Benítez, Juan Carlos, and Charles Vellutini. 2021. "Measuring the Redistributive Capacity of Tax Policies." IMF Working Paper WP/21/252. International Monetary Fund.

Blau, Francine D., and Lawrence M. Kahn. 2007. "The Gender Pay Gap: Have Women Gone as Far as They Can?" *Academy of Management Perspectives* 21 (1): 7–23.

Chetty, Raj, Adam Guren, Day Manoli, and Andrea Weber. 2011. "Are Micro and Macro Labor Supply Elasticities Consistent? A Review of Evidence on the Intensive and Extensive Margins." *American Economic Review* 101 (3): 471–75. https://doi.org/10.1257/aer.101.3.471.

Dardanoni, Valentino, and Peter J. Lambert. 2002. "Progressivity Comparisons." *Journal of Public Economics* 86 (1): 99–122.

Diamond, P. 1980. "Income Taxation with Fixed Hours of Work." *Journal of Public Economics*, Journal of Public Economics, 13 (1): 101–10.

Diamond, Peter A. 1998. "Optimal Income Taxation: An Example with a U-Shaped Pattern of Optimal Marginal Tax Rates." *The American Economic Review* 88 (1): 83–95.

Eissa, Nada, and Jeffrey B. Liebman. 1996. "Labor Supply Response to the Earned Income Tax Credit." *The Quarterly Journal of Economics* 111 (2): 605–37.

European Commission. 2021. "Taxation Trends in the European Union - 2021 Edition." Publications Office of the EU.

European Training Foundation. 2022. "The Present and Future of Work for Young People in the Western Balkans." June. https://www.etf.europa.eu/en/news-and-events/events/present-and-future-work-young-people-western-balkans.

Harding, Michelle. 2013. "Taxation of Dividend, Interest, and Capital Gain Income." OECD Taxation Working Papers. OECD.

IMF. 2018a. "Growing Pains: Is Latin America Prepared for Population Aging?" Departmental Paper Volume 2018 Issue 005. International Monetary Fund.

———. 2018b. "THE PEOPLE'S REPUBLIC OF CHINA - TECHNICAL ASSISTANCE REPORT—TAX POLICY AND EMPLOYMENT CREATION." International Monetary Fund.

Ivlevs, Artjoms. 2016. "Remittances and Informal Work." *International Journal of Manpower* 37 (7): 1172–90.

Kakwani, Nanak C. 1977. "Measurement of Tax Progressivity: An International Comparison." *The Economic Journal* 87 (345): 71–80.

Keen, Michael, and Ruud de Mooij. 2013. "11. 'Fiscal Devaluation' and Fiscal Consolidation: The VAT in Troubled Times." In *11. "Fiscal Devaluation" and Fiscal Consolidation: The VAT in Troubled Times*, 443–94. University of Chicago Press.

Kleven, Henrik Jacobsen. 2014. "How Can Scandinavians Tax So Much?" *Journal of Economic Perspectives* 28 (4): 77–98.

Koettl, Johannes. 2012. "Work Disincentives in Montenegro: Results from the 2011 OECD Tax and Benefit Model for Montenegro." Technical Note. World Bank.

———. 2013. "Does Formal Work Pay in Serbia? The Role of Labor Taxes and Social Benefit Design in Providing Disincentives for Formal Work." In *Poverty and Exclusion in the Western Balkans: New Directions in Measurement and Policy*, 133–54.

Luksic, Jan. 2020. "The Extensive Macro Labor Supply Elasticity: Integrating Taxes and Expenditures." *European Economic Review* 121 (January): 103325. https://doi.org/10.1016/j.euroecorev.2019.103325.

Mehrez, Gil, Ruben Atoyan, Anna Ilyina, Daria Zakharova, Nadeem Ilahi, Faezeh Raei, Lone Engbo Christiansen, et al. 2016. "Emigration and Its Economic Impact on Eastern Europe." IMF Staff Discussion Notes 2016/007. International Monetary Fund.

Mirrlees, J. A. 1971. "An Exploration in the Theory of Optimum Income Taxation." *The Review of Economic Studies* 38 (2): 175–208.

Musgrave, R. A., and Tun Thin. 1948. "Income Tax Progression, 1929-48." *Journal of Political Economy* 56 (6): 498–514.

OECD. 2011. "Taxation and Employment." OECD. https://www.oecd.org/tax/taxation-and-employment-9789264120808-en.htm.

———. 2017. "Entrepreneurship at a Glance."

———. 2021. "Taxing Wages 2021." OECD. https://www.oecd.org/tax/taxing-wages-20725124.htm.

Pencavel, John. 1986. "Chapter 1 Labor Supply of Men: A Survey." In *Handbook of Labor Economics*, 1:3–102. Elsevier.

Pestel, Nico, and Eric Sommer. 2017. "Shifting Taxes from Labor to Consumption: More Employment and More Inequality?" *Review of Income and Wealth* 63 (3): 542–63.

Piketty, Thomas, and Emmanuel Saez. 2013. "Chapter 7 - Optimal Labor Income Taxation." In *Handbook of Public Economics*, edited by Alan J. Auerbach, Raj Chetty, Martin Feldstein, and Emmanuel Saez, 5:391–474. Handbook of Public Economics, Vol. 5. Elsevier.

Reynolds, Morgan, and Eugene Smolensky. 1977. *Public Expenditures, Taxes, and the Distribution of Income: The United States, 1950, 1961, 1970*. Academic Press.

Saez, Emmanuel. 2001. "Using Elasticities to Derive Optimal Income Tax Rates." *Review of Economic Studies*, 25.

World Bank. 2018. "Promoting Women's Access to Economic Opportunities in the Western Balkans: Building the Evidence." The World Bank.

———. 2020. "Western Balkans Labor Market Trends: 2020." The World Bank.

Žarković Rakić, Jelena, Saša Ranđelović, and Marko Vladisavljević. 2016. "Labour Market Effects of Social Security Contributions Reform in Serbia." *Economic Annals* LXI (208): 73–91.

PUBLICATIONS