WP/17/194

IMF Working Paper

Western Balkans: Increasing Women's Role in the Economy

by Ruben Atoyan and Jesmin Rahman

INTERNATIONAL MONETARY FUND

IMF Working Paper

European Department

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August 2017

Abstract

The Western Balkan countries have some of the lowest female labor force participation and employment rates across Europe. Almost two-thirds of working age women in the region are either inactive or unemployed: a huge bite into human capital for a region that endures high emigration and faces declining working age population. The paper uses both macro- and micro-level data to explore what explains low participation and employment rates among women in the region. Our findings show that improving educational attainment, having a more balanced family leave policy, and reducing tax wedge help improve participation of women in the labor force. However, these measures are not enough to notably improve employability of women, which require stronger growth supported by robust institutions.

JEL Classification Numbers: E2, H2, H3, J2, J6, O1

Keywords: Labor force participation, gender gaps, labor markets, female employment, emigration, tax wedge.

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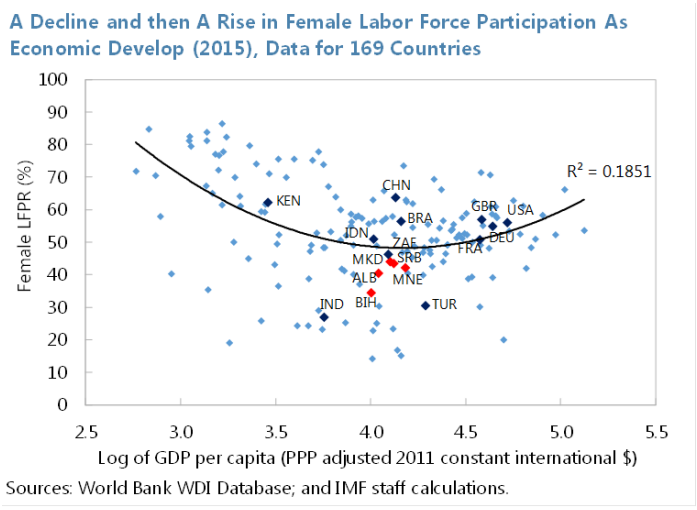
I. MOTIVATION[1]

Countries in the Western Balkan region have some of the lowest female labor force participation rates in Europe. At around 45 percent, female labor force participation rate is, on average, around 7 percentage points lower than in the European Union (EU) with little improvement in the last decade (Figure 1). While there are heterogeneities across countries, all countries in the Western Balkans (WB) have a lower female participation rate than the EU average. Participation is particularly low in Kosovo and Bosnia and Herzegovina, where a large majority of working age women stay inactive. Not surprisingly, the gender gap in participation in the WB relative to the EU has persisted even showing some worsening over time as countries in the EU experienced steady progress.

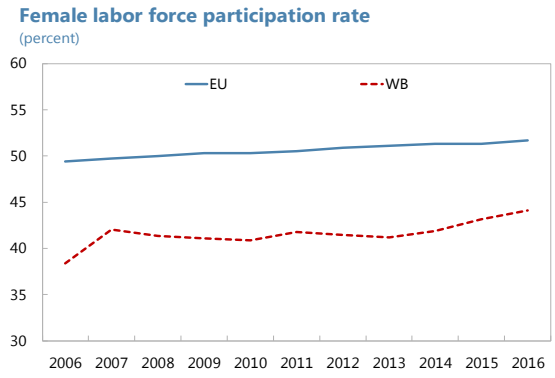
Employment rates for women are also low compared to the EU. For female employment, the WB have held roughly a 14 percentage points gap relative to the EU during the last decade (Figure 1). All countries in the WB show a lower female employment rate than the EU average, with Kosovo and Bosnia and Herzegovina as low as one quarter or half the EU average. The employment gap relative to the EU is mostly due to low participation of women in the labor force, but also partly due to higher unemployment in the WB that affects both men and women. Almost two-thirds of women in the WB are either outside the labor force or are unemployed.

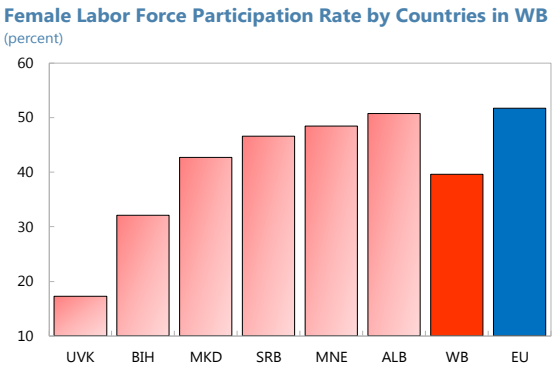
The literature identifies economic advancement as the major driver of higher participation of women in the labor market but finds evidence of a U-shaped relationship (Goldin, 1995; Mammen and Paxson, 2000). Female labor force participation rates in poor countries are high with women often working in family enterprises or the informal sector. With economic development, they are initially pushed out of the labor market due to both social barriers and competition from men, but continued improvement in education eventually brings women back into the labor force as paid employees. A cross-country comparison shows that female labor force participation in the WB fits this pattern, although participation is somewhat lower than their middle-income peers.

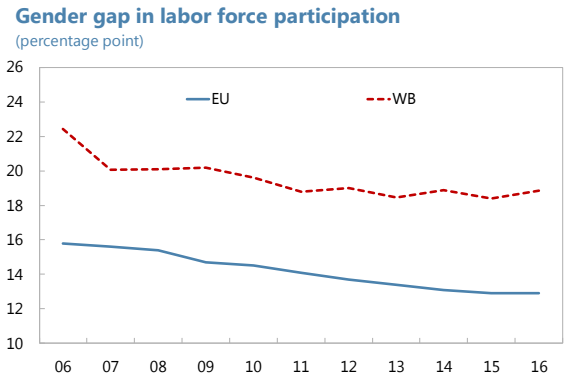


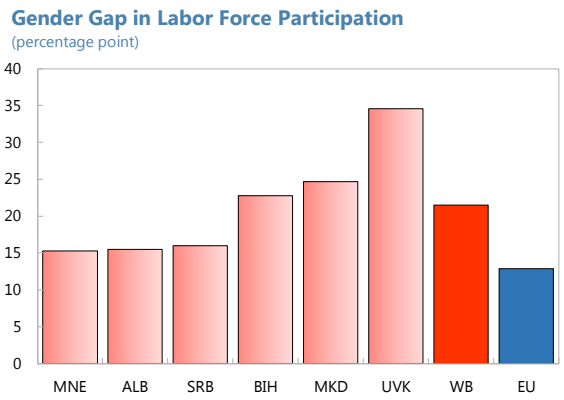
[1] We are grateful for valuable contributions from Marija Polak for the processing of labor force survey data for various Western Balkan countries and Jubum Na for his contributions to regression analysis. Jingzhou Meng provided excellent research assistance. We are thankful for the useful comments from Christian Henn, Jörg Decressin, Romain Duval, Alvar Kangur, Ismail Kareem, Lisa Kolovich, Faezeh Raei, Antonio Spilimbergo, Daria Zakharova and Western Balkan country teams. All remaining errors are ours.

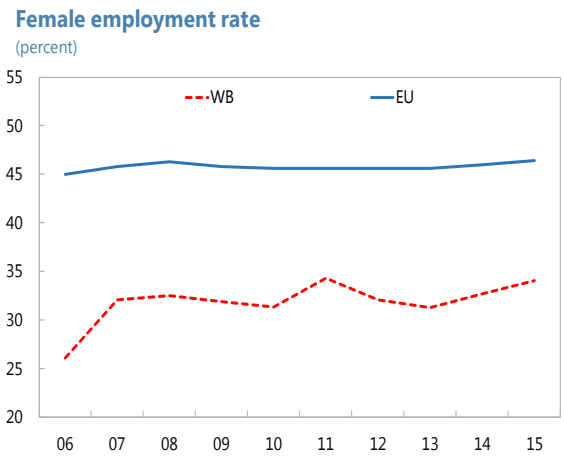
Figure 1. Labor Force Participation and Employment Rates, Western Balkans and the EU

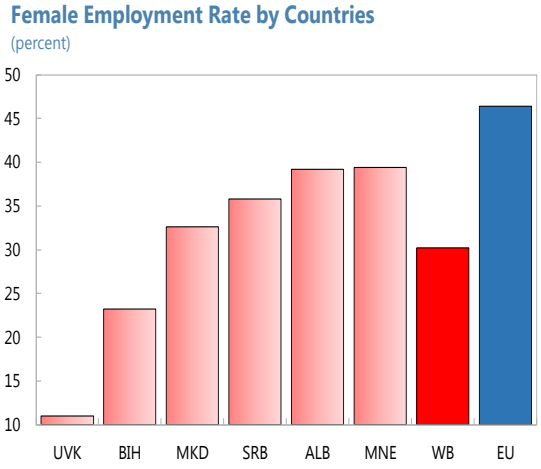












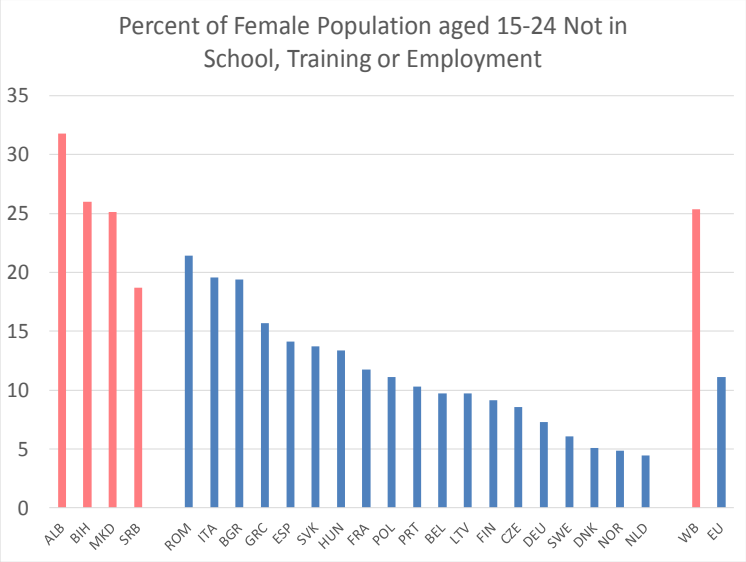
Note: Kosovo is excluded from WB average.
Sources: ILO, Eurostat and authors' calculations.

Low female labor force participation and employment rates cast a shadow on the convergence prospects of the WB. Compared to emerging European countries that are members of the EU, income convergence to advanced Europe has been much slower in the WB countries reflecting a late start in transition, slower progress in structural reforms and emigration of skilled labor. Looking forward, the region is set to experience a decline in its working age population which further dampens convergence prospects. There is now a well-documented literature that shows that raising participation of women to the levels of men can significantly boost income per capita particularly in middle income countries (see Elborgh-Woytek and others, 2013 for a literature survey). Making optimal use of available human capital is imperative not only to improve convergence prospects but also to mitigate the fiscal burden from higher pension and health spending of an aging population.

This paper aims to explore factors contributing to low participation and employment of women in the region and policies to remedy that. We use both macro- and micro-level data in our investigation. The next section presents some stylized facts on inactive and employed female working age population in the region. The subsequent two sections present empirical findings at the macro and micro level respectively. Section V presents conclusions.

II. Female Labor Force Participation and Employment in Western Balkans: Stylized Facts[2]

Women constitute roughly sixty percent of all inactive working age population in the region (Figure 2). Inactivity rates of women are higher than those of men across all age groups. While inactivity rates are lower for prime age (25-54) female population, there is still a sizable and persistent gender gap in this group. Low statutory retirement age for women (60 years in most WBs) and even lower effective retirement age is a contributor to high inactivity rates among older women.



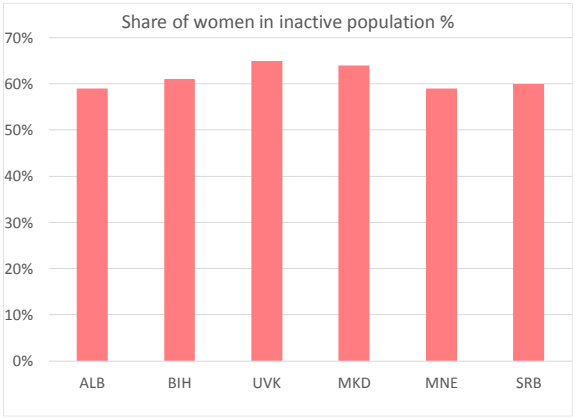
Seventy percent of women in the region aged 55-64 are outside the labor force. Inactivity is also very high among 15-24 years old female population. No doubt the pursuit of education is a factor, but weak education-to-work transition is also at play as shown by the very high

[2] The analysis in this section is based on labor force surveys which cover both formal and informal employment and activity. It needs to be recognized, however, that the large size of informal economy in the WB may have significant implications for women's participation in the labor market. Data limitations prevent us from exploring this issue explicitly.

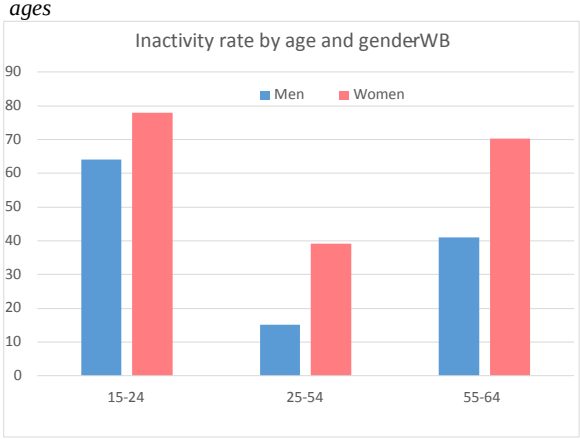
share of female population in this age group who are neither employed nor at school. Rural women are more inactive in WB than urban women.

Figure 2. Western Balkans: Inactivity Among Women

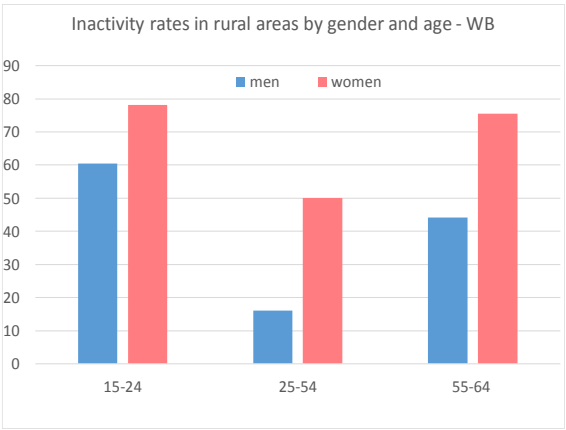
Most inactive population in the region are women…



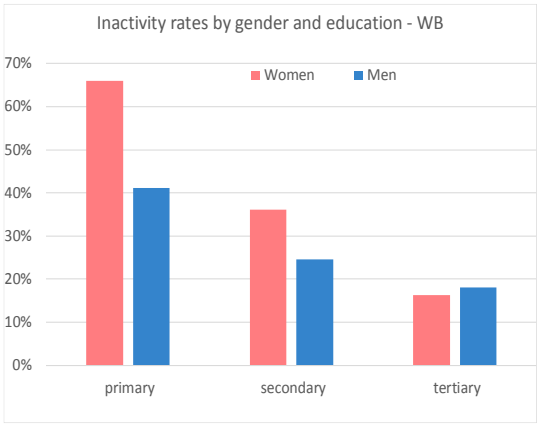
Female activity rates are lower than that of male across all ages



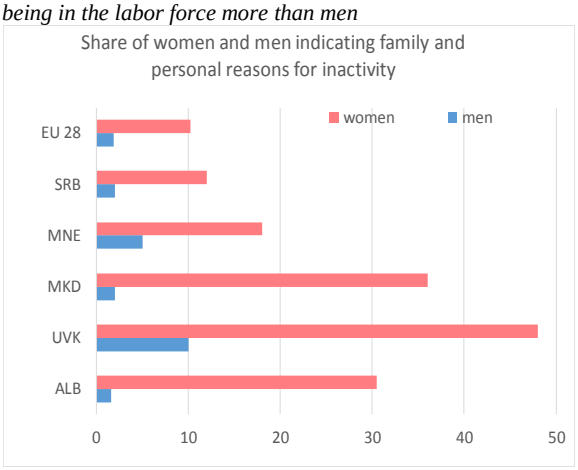
inactivity rates are higher among rural women



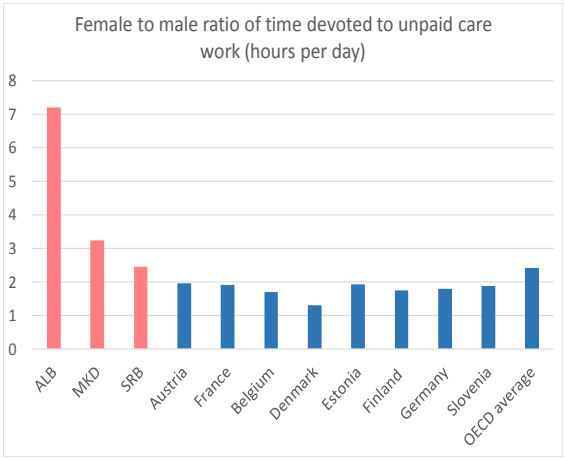
With higher education women become as active as men



Women tend to indicate family and personal reasons for not being in the labor force more than men



This reflects the disproportionately higher family burden on women

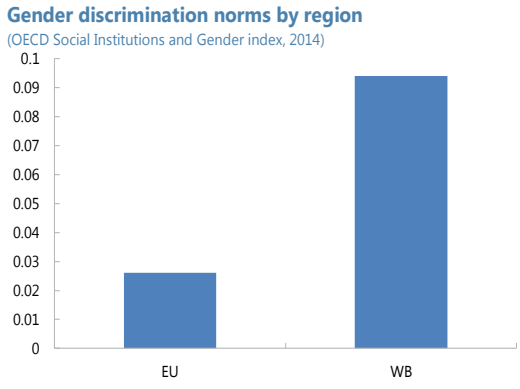


Sources: ILO, Latest Labor Force Surveys for Western Balkan countries, and OECD.

Inactivity among working age women declines significantly with educational attainment. For example, almost seven out of ten women with a primary education tend to

be inactive in the region. With a secondary education, this ratio improves to four in every ten women and the gender gap disappears for women with a tertiary education. Given that a significant share of working age women in the region have only a primary education, as high as 38 percent in Macedonia and Bosnia and Herzegovina, a lack of adequate skills and training seems to be a significant barrier to labor force participation.

However, there is still a large pool of women with higher than primary education who are inactive pointing to importance of other factors, such as family responsibilities. The share of inactive women who state family responsibilities and personal reasons as main factors for not being in the labor force runs as high as 50 percent in Kosovo (Figure 2). This is in sharp contrast to responses from men who mostly indicate education and early retirement (Macedonia) or illness (Serbia) as reasons for not being in the labor force. Moreover, tradition and culture in the region likely pose obstacles to women's economic development, restricting women's ability to access resources and resulting in women carrying a disproportionate burden of child and family care. But there are also economic factors.



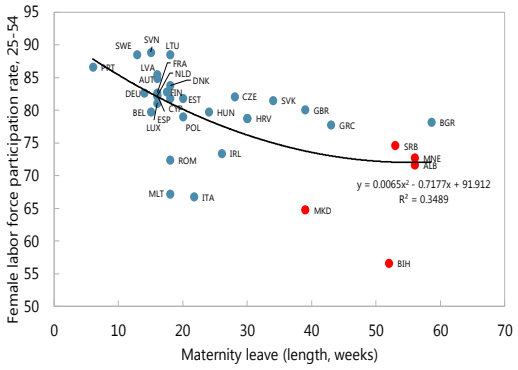
Source: OECD Gender, Institutions and Development Database, 2014

- ***Lack of affordable childcare services.*** Studies on OECD and EU countries highlight the importance of affordable childcare services, particularly to working parents with very young children, in increasing women's participation in the labor force (Thévenon, 2013; Christiansen and others, 2016). While data is unavailable for childcare use or public spending on childcare for the WB, anecdotal evidence suggests limited options for affordable and high-quality child care. This, combined with the lack of provision for flexible work arrangements, which have helped improve women's participation significantly in other European countries (see Connolly and Kimmel, 2003 and Kinoshita and Guo, 2015), compel mothers to stay out of the labor force. Part-time work is significantly less common in WB countries.

- ***Family leave policies.*** Experience of other European countries show that women's successful return to labor force after childbirth and durable stay in the labor force requires family leave policies that (i) do not create incentives for women to stay too long away from work causing skills loss and (ii) ensure the possibility or even mandate for fathers to take leave (Pylkkänen and Smith, 2004, Thévenon, 2013, Henn 2016). For example, the experience of Sweden and Denmark shows that policies that give options to either parent to use child-related leave (not just mothers) and flexibly could result in high labor force participation for mothers. A comparison of WB with other European countries show that paid maternity leave is excessively generous in these countries (as high as 56 weeks at 100 percent compensation) compared to other European countries which are often paid by employers creating disincentives for both businesses to hire and for women to return

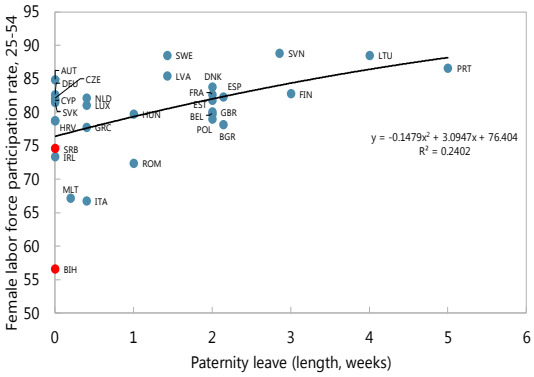
to work. At the same time, paternity and parental leave are essentially non-existent. Cross-country evidence shows a positive association between paternity leave and female labor force participation.

Paid Maternity Leave and Female Labor Force Particiaption



Sources: OECD; ILO; and IMF staff estimates.

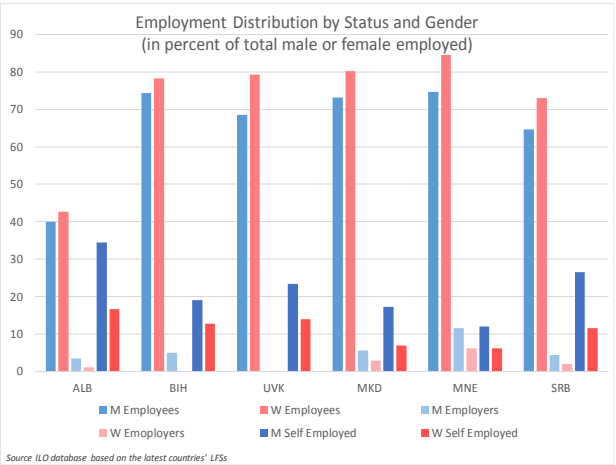
Paternity Leave and Female Labor Force Participation



Sources: OECD; ILO; and IMF staff estimates.

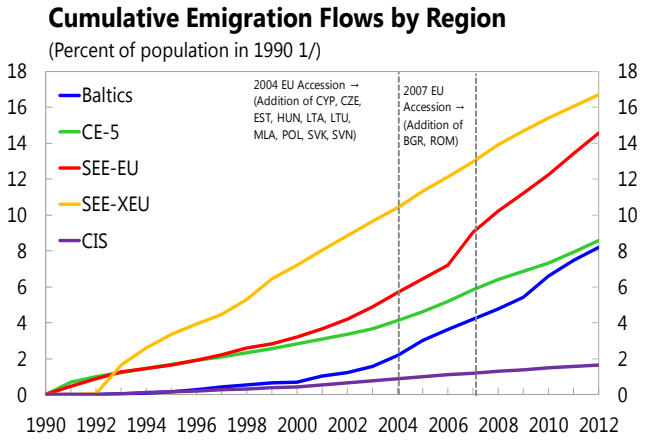
- ***Sizable emigration of male workers***. Estimates show that during 1995-2010, countries in the WB have lost up to 18 percent of their population to emigration, mostly men of prime age (Box 1). Several empirical studies (Rodriguez and Tiongson, 2001; Amuedo-Dorantes and Pozo, 2006; Hansen, 2007) note that remittances affect employment and participation negatively particularly that of female workers. Emigration impacts negatively participation of both male and female workers who stay behind by increasing the reservation wage; it tends to push men into informal employment and women into inactivity who need to take on added family responsibilities. Petreski and Jovanovic (2013) documents that the share of female-headed households in the WB is higher for remittance-recipient households with remittances constituting a very high share of household consumption spending particularly in the lower income quintiles.

Moving on to employment, the vast majority of employed women are aged between 25 and 54 with a secondary school education (Figure 3). Having a tertiary education significantly improves employability, even more than that of men. While consistent estimates for women employed in the informal sector are not available, surveys show that women tend to work more in unpaid family businesses or in the informal sector. For example, in FYR Macedonia, the 2015 LFS shows that one in every ten women serve as unpaid family worker compared to one in every twenty men. In Serbia, a quarter of women work in the informal sector compared to around 12 percent of men. In Montenegro and Bosnia and Herzegovina, two out of three family



Box 1. Emigration from the Western Balkans

The scale of emigration from Southeastern Europe and particularly Western Balkan countries has been staggering.[1] During the past 25 years, about 18 percent of Western Balkan population in 1990 have left the region, relocating to wealthier OECD countries. In relative terms, these outflows are far larger than from any other Central or Eastern European country.

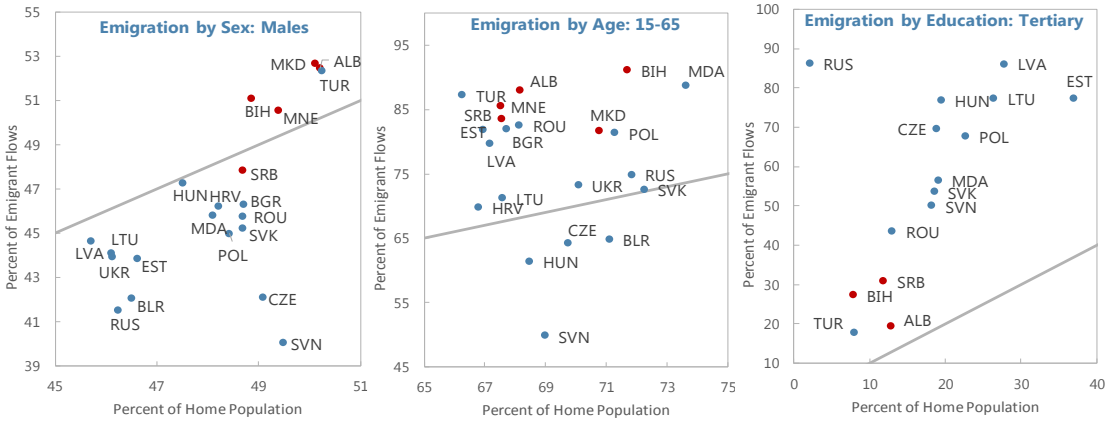


Emigrants were more likely to be men. Significantly more than half of emigrants from most Western Balkan countries have been men, in contrast with their generally lower share in the region's population at large. This trend is also in stark contrast with most other Central or Eastern European countries, with only Serbia being an exception. This has likely significantly contributed to the higher dependency ratios in the region.

Emigrants have generally been younger than the populations they left behind. In 2010, about 85 percent of emigrants from Western Balkans were of working age (15 to 64 years old)—well above the share of working-age people in the region's population at large. This has likely further aggravated dependency ratios in the region.

Emigrants' education levels tended to be higher than their home country averages. As of 2010, the share of emigrants from Albania, Bosnia and Herzegovina, and Serbia with tertiary education was well above the equivalent ratio in the general population. Given that these countries have already low shares of people with tertiary education in the population, the brain drain from emigration may have had particularly important implications for productivity (and thus economic growth) and left Western Balkan countries with significantly reduced supply of skilled labor.

Demographics of Emigration Flows to OECD Countries

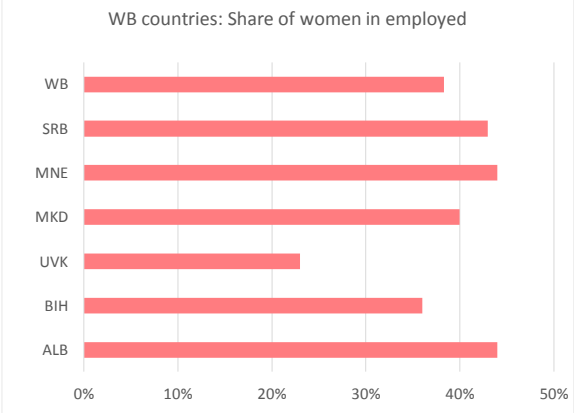


Note: For the figure on educational attainment, due to data restrictions some observations reference the closest available x-axis datapoint to 2011.
Sources: OECD Database on Immigrants in OECD Countries, 2010; World Bank World Development Indicators, Eurostat, and IMF staff calculations.

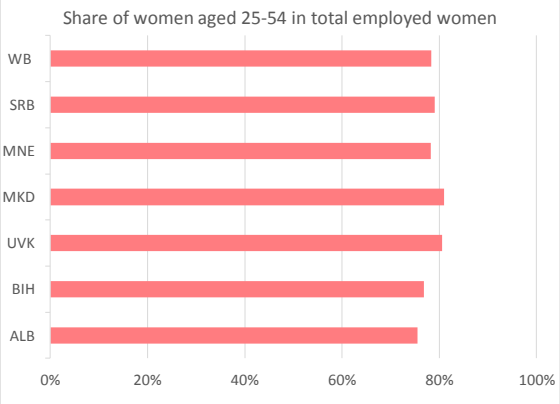
[1] See Atoyan et al (2016) for details.

Figure 3. Western Balkans: Women's Employment

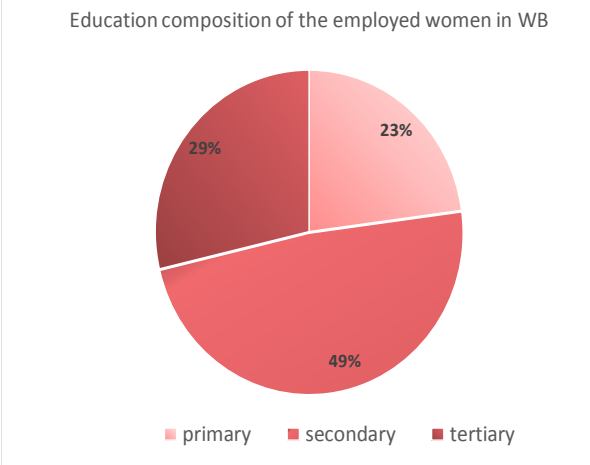
Women comprise little less than 40 percent of employed …



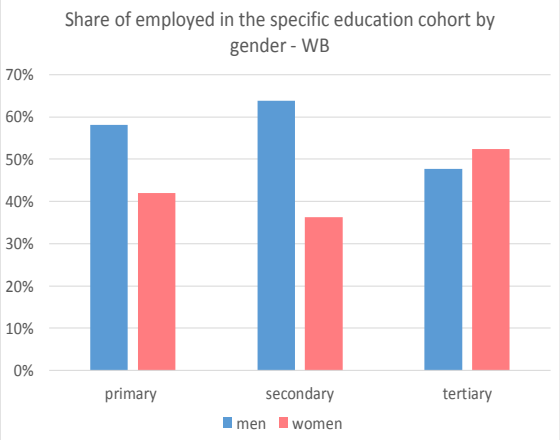
Most of these women are in the prime age



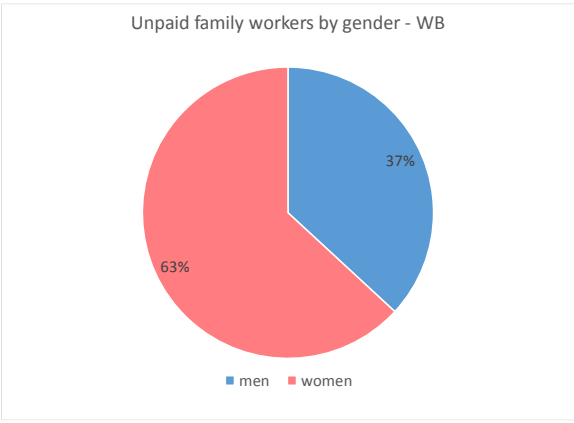
More than two-thirds of employed women are without a t degree



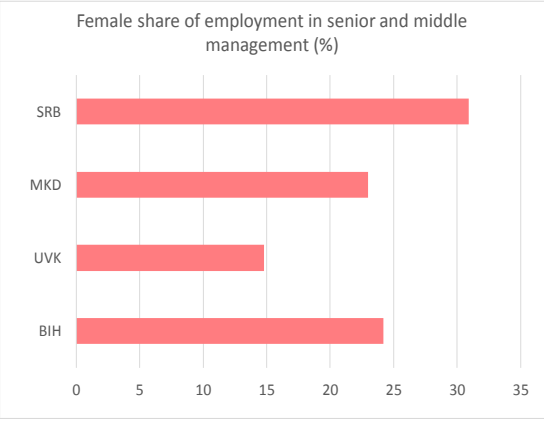
With higher education gender parity is achieved in employment



A larger share of women is employed as unpaid family workers and at wage level below 50 percent of average wage



Women tend to be under-represented in and managerial positions

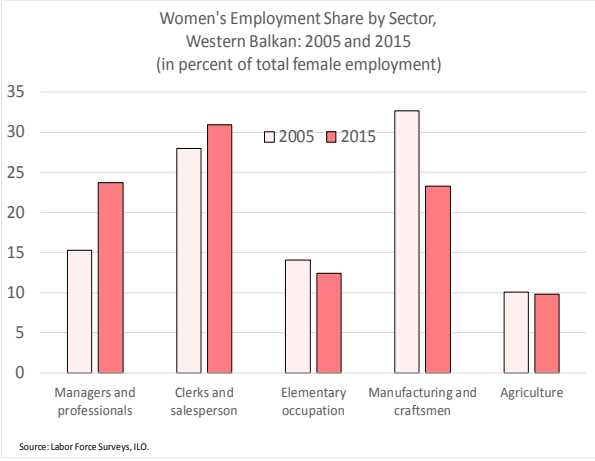


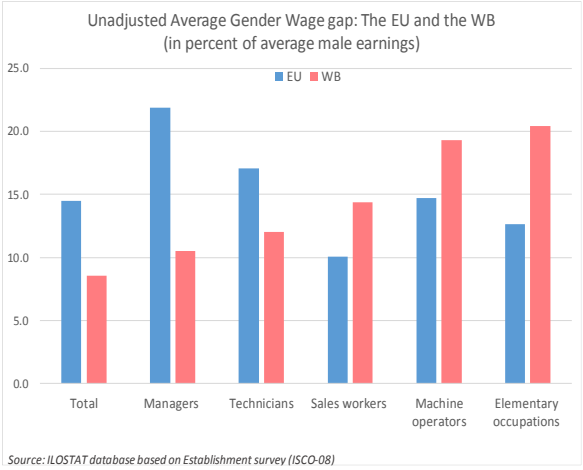
Sources: ILO. Latest Labor Force Surveys for Western Balkan countries.

workers are women although overall share of working age population employed in family businesses is low. The vast majority of women in the region are employed as wage workers with the share of self-employed at 10 percent, roughly half of that of men.

Fiscal disincentives in the form of higher tax wedge and social benefits contribute to women's relatively lower participation in formal job market. With genrally flat and low income tax rates in the region and a relatively high threshold for social security contributions, labor taxation in the region is not very progressive. In fact, most WB countries have either very high progressivity for low wage earners with incomes below 50 percent of the average gross wage, or no progressivity at all (Box 2). This significantly decreases incentives for formal employment for low-skilled and low-paid workers in Albania, FYR Macedonia and Serbia. Social assistance, although not generous and mostly means-tested, may reduce incentives for participation and formal work when tax wedge is too high as participants need to give up assistance for every dollar earned from work. The availability of social assistance combined with some income from remittances provides a level of non-wage income for poorer women which is not worth giving up for the net wage income at the lower end, particularly taking into account the lack of affordable childcare. Not surprisingly, the World Bank (2015) finds that employment rate for women living in households with social assistance drops from 28 percent with no children to 6 percent when with children. A very low share of poor people work in the WB compared to other regions in the world. While it is important to ensure well-targeted social safety nets to address poverty, to maximize participation of able working age population and reduce fiscal burden, tax and social assistance policies need to coordinate better in some WB countries.

Women also tend to be underpresented in managerial roles and skill-intensive professions (Figure 3). Labor force surveys indicate that women's representation in middle and senior management ranges between 15 percent in Kosovo to little less than a third in Serbia. However, it is important to note that the share of women working as managers has improved significantly in the last decade. In fact, as women moved out of manufacturing into services reflecting structural transformation of these economies, the employment growth in services sector has mostly been on the back of higher paying professional jobs. A granular analysis of pay gap across professions also suggest that the gender pay gap is significantly lower for managers in the WB in contrast to EU countries.

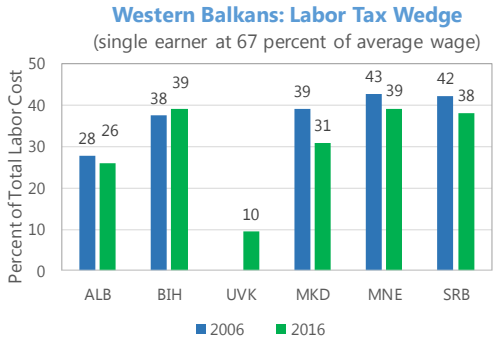




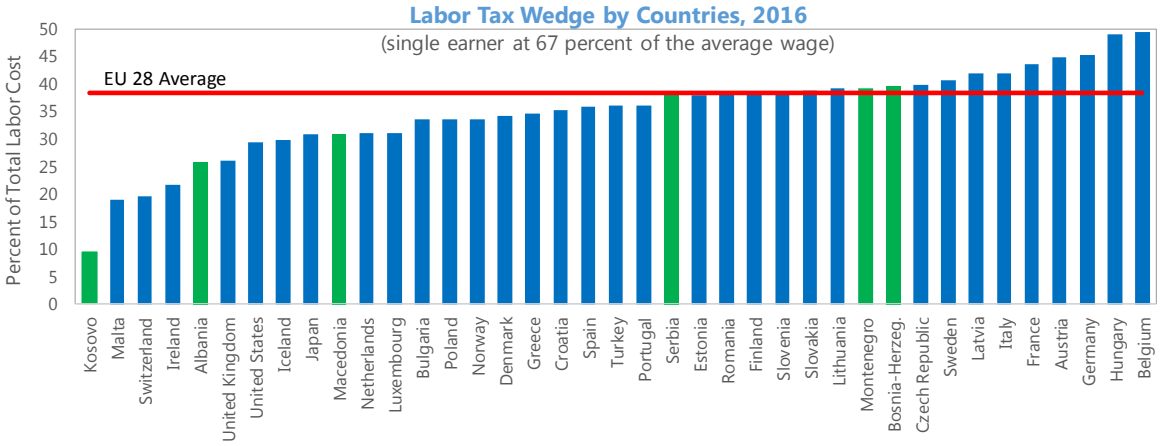
Box 2. Labor Tax Wedge in Western Balkan Countries: Conducive to Employment?[1]

The high tax wedge can have significant implications for activity, employment, and informality, particularly at low levels of income. It may discourage individuals to take up formal employment by raising the cost of labor to the employers and reducing the take-home pay for workers. Carefully designing the tax wedge on labor income by revisiting the SSC and PIT systems could stimulate both demand and supply of labor but may also have significant fiscal implications given the link between contributions and entitlements.

Tax burdens on labor income vary significantly across the WB countries, but are generally below or at the EU average. Wage earners in the WB face two major taxes on labor: the personal income tax (PIT) and social security contributions (SSC). On average, the region has relatively low PIT rates, but high SSC rates. Over the last decade, most countries in the region have lowered PIT and SSC rates and streamlined PIT schedules, thus marginally reducing the labor tax wedge (the difference between take home wage and total labor cost). SSCs continue to dominate labor costs.

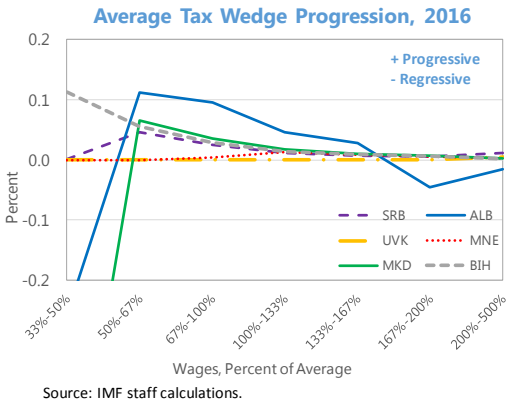


Source: World Bank; IMF staff calculations.

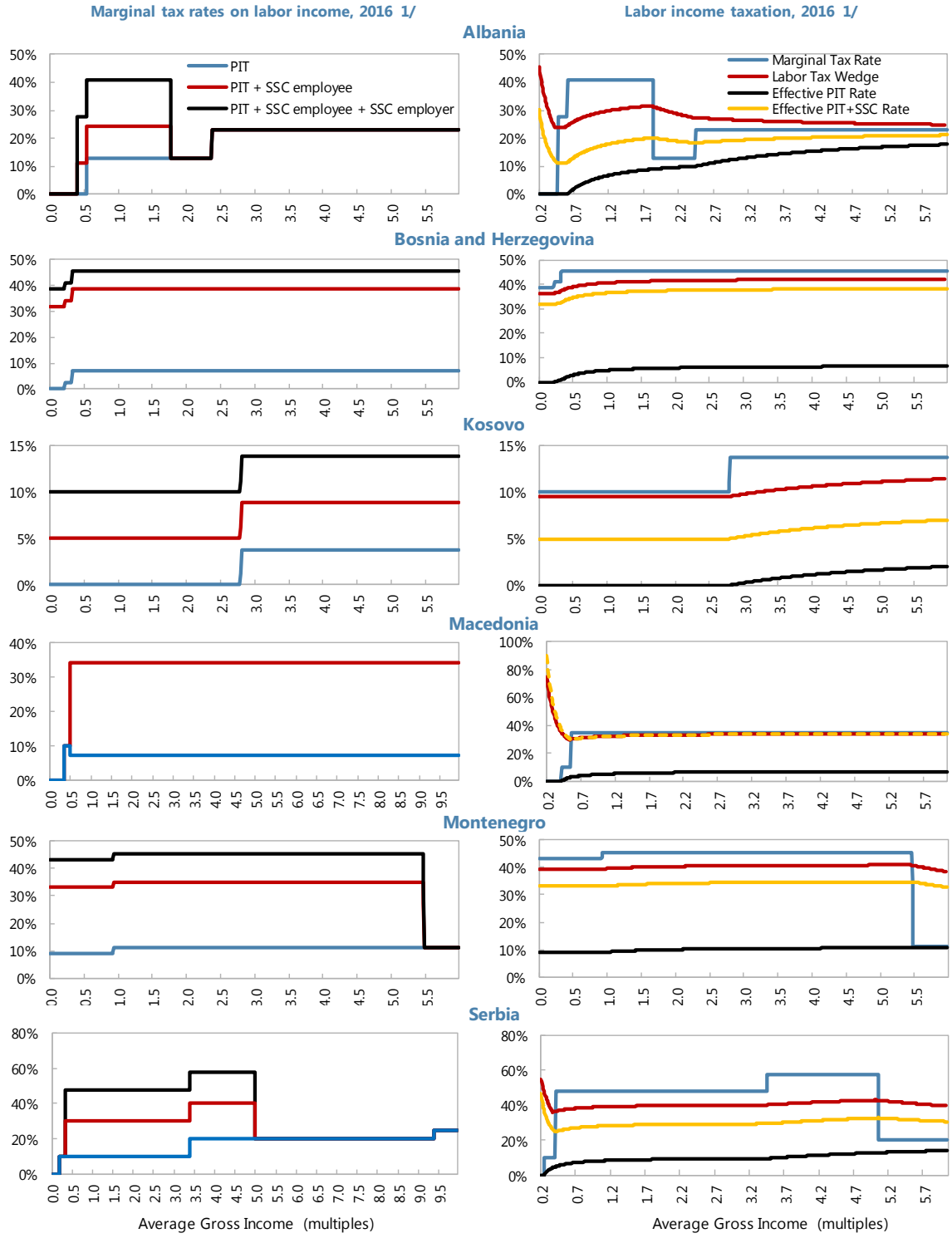


Source: Eurostat; IMF staff calculations.

Labor tax progressivity varies across the region with most dynamics taking place on the tails of wage distribution. Based on an average wage progressivity (defined as the ratio of the change in the labor tax wedge per unit of change in income), the WB countries have either very high progressivity for low wage earners with incomes below 50 percent of the average gross wage, or no progressivity. Above this low-level of income, taxation becomes regressive as the effective tax burden falls with income. Progressivity at low-income levels and regressivity at high levels is due to minimum and maximum SSC thresholds.



Source: IMF staff calculations.

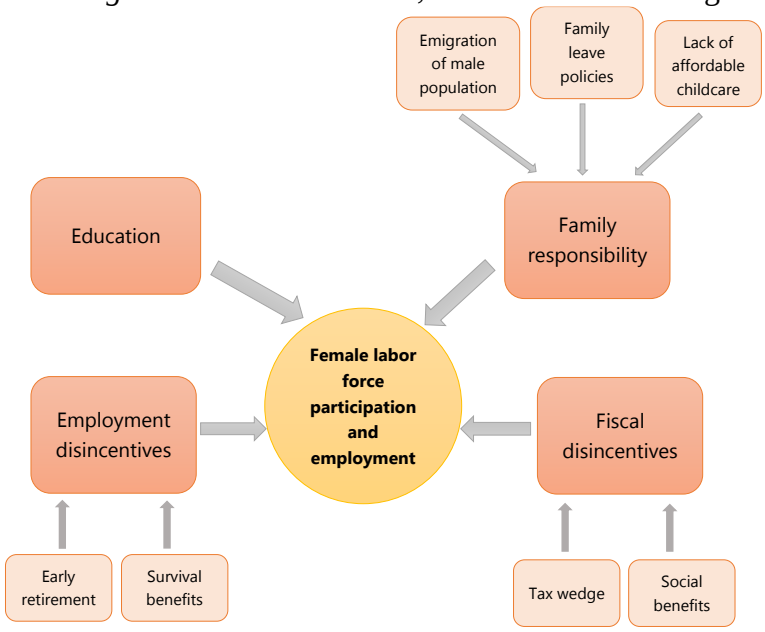


Source: IMF staff calculations.

1/ Calculated for a single taxpayer with no children.

[1] Prepared by Irena Jankulov Suljagic (FAD).

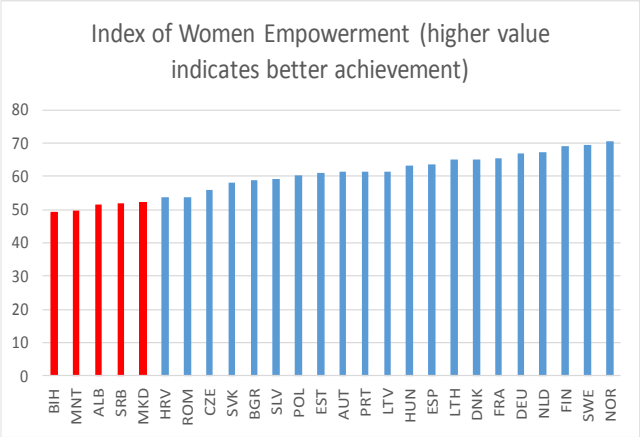
The discussion in this section suggests four broad factors contributing to the gender gap in labor force participation and employment in the WB region. First, *a lack of adequate educational attainment*: women tend to stay outside the labor force or unemployed significantly more than men unless they have a tertiary degree. Second, *a higher burden of family and care responsibilities for women* more resulting from a lack of affordable childcare, family leave policies and emigration of male population. Third, *fiscal disincentives in the form of higher tax wedge and social assistance*, that seem to discourage formal employment, particularly for the low-skilled, low-paid workers. Given that women have a higher representation in the low-paid part-time segment, these fiscal factors tend to be more applicable to women. And finally, *low statutory and effective retirement age* for women coupled with *generous survival benefits based on lax eligibility criteria* cause many to leave the labor force early and prematurely dropping participation and employment of workers above 55.



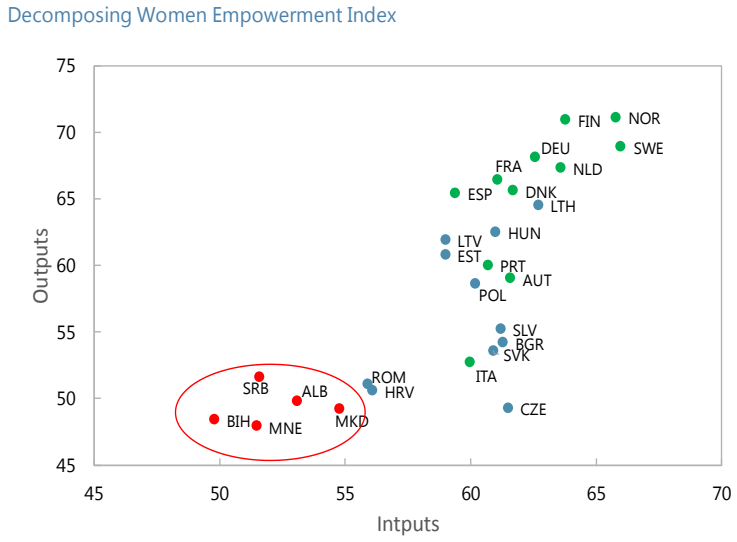
A recent cross-country study finds a strong link between a country's policies in the above-mentioned areas and gender outcome (Box 3). A country's relative empowerment of women and success in durable inclusion of women in the labor force seems to be strongly positively correlated with policies to improve education, legal barriers, parental leave policies and entrepreneural support. The WB region, when compared to other European countries, fare poorer both in policies and outcome. In the next two sections, our empirical investigation uses macro- and micro-level data to explore roles of various policies in affecting gender outcome in labor force participation and employment.

Box 3. Policies and Outcome: Where Do Western Balkan Countries Stand Relative to Europe in Terms of Empowering Women[1]

Aguirre and others (2013) shows that the WB fare poorer than others in Europe in terms of policy efforts and outcome related to women's empowerment and optimal inclusion in the labor force. The study uses an index-based methodology to capture policy efforts by countries to improve gender parity (called "inputs") and actual parity in inclusion, earning, and work advancement (called "outputs") for 152 countries. The index values for countries range from 26.1 (Yemen) to 70.6 (Australia and Norway). Among European countries, Western Balkan countries fare at the lower end behind all new member states of the European Union and advanced Western European countries.



The study finds a strong positive correlation between front end processes and policies regarding women's economic opportunities (inputs) and actual success (outputs). For inputs, it uses women's various aspects of educational attainment, legal barriers for equal pay and job access, parental leave policies and entrepreneurial support, such as access to finance and property rights. For outputs, the study looks at comparative achievement of women in participation, pay, and job composition relative to their male counterparts in each country. Overall, the study finds a strong positive correlation between inputs and outputs.



Source: Empowering the Third Billion: Women and the World of Work in 2012 by Aguirre and others (2013).

The WB region lags behind other European countries in both inputs and outputs. In terms of inputs, countries in the region fare particularly poor in access to education (Albania and FYR Macedonia), and access-to-work policy (Bosnia and Herzegovina, Montenegro and Serbia). For outputs, the region fare poorly in inclusion and advancement with two of the five WB countries ranked in the bottom half of the whole sample.

[1] Based on *Empowering the Third Billion: Women and the World of Work in 2012* by Aguirre and others (2013).

III. MACRO-LEVEL EMPIRICAL INVESTIGATION OF FEMALE LABOR FORCE PARTICIPATION AND EMPLOYMENT

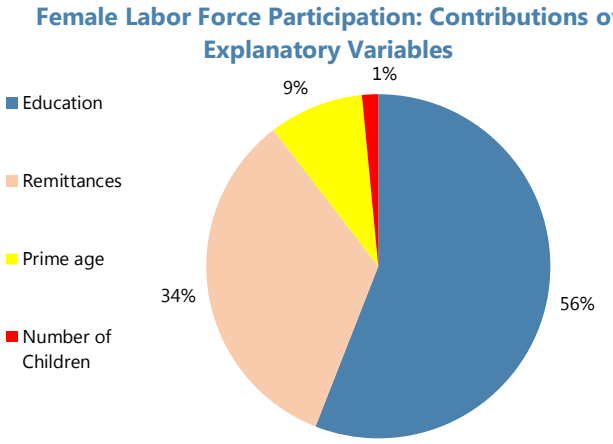
This section investigates the determinants of female labor force participation and employment at the macro level. Based on the existing literature, we use the following explanatory variables in a panel regression setting using data from 37 European countries which include 5 WBs (Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro and Serbia, data for Kosovo was not available) during 2006-16. We run the regressions separately for male and female population as well as for the total population and for the gap between male and female.

- **Educational attainment**: We include a variable that captures the ratio of population with secondary and tertiary education relative to the population with primary and less-than-primary education. A higher value indicates a higher education level and is expected to affect labor participation and employment positively.
- **Emigration:** We include remittances received in percent of GDP (lagged by one year) as a variable to capture the impact of emigration. A higher value is expected to signal higher level of emigration, and have a negative impact on labor force participation and employment.
- **Children:** This variable captures the number of children (aged below 15) per working age male or female (aged 15-64). In the absence of adequate and affordable child and old care facility, a higher number of dependent population imply a higher burden which is likely to decrease participation, particularly that of women.
- **Demographics:** We include a variable that captures the share of population aged 25-54. A higher share indicates higher prime age population which is expected to impact labor force participation positively.
- **Tax wedge:** This variable captures tax paid by a single employee earning average income in percent of total labor costs. A higher tax wedge is likely to decrease participation and employment through both decreased demand and supply.

We also control for income, macroeconomic conditions and labor market conditions. We use GDP per capita, labor market efficiency and flexibility, financial access and GDP growth in the regression.

The results from macro-level regressions show the expected signs (Table 1). We find that higher education has a statistically significant strong impact on both male and female labor force participation and employment. The value of the coefficients is higher for employment than participation and education seems to have a slightly higher impact on female participation. The remittances variable is statistically insignificant for the whole sample and has the wrong sign. However, when we interact with the WB dummy, the coefficient becomes negative implying higher emigration reduces labor force participation and employment and significantly so for women in the region. Being in the prime age matter for both male and female participation and employment, but more so for male population. The higher probability of prime age men being in the labor force or employment indirectly

captures the role of women in childcare resulting from a combination of lack of affordable quality childcare, parental leave policies and cultural norms. The regression results also show that higher number of children tend to decrease female participation and employment significantly, but not that of male. Tax wedge has a negative impact on female participation and employment but not statistically significant.[3] In terms of relative importance, for WB countries, education and remittances are the most important explanators.



Source: IMF staff calculations.

Table 1: Regression Results for Labor Force Participation and Employment 1/

	Labor Force Participation 2/				Employment 2/			
	Male	Female	All	Gap	Male	Female	All	Gap
secon_tertiary 2/	1.113***	1.367***	1.209***	1.411***	1.802***	1.561***	1.450**	0.98
	(0.34)	(0.25)	(0.37)	(0.49)	(0.66)	(0.39)	(0.57)	(0.62)
Lremittance	0.084	0.181	0.045	0.193	0.676	0.465	0.336	0.333
	(0.33)	(0.24)	(0.32)	(0.27)	(0.62)	(0.36)	(0.49)	(0.34)
Lwbremitt~e	-0.308	-0.708**	-0.235	-0.178	-0.782	-0.814*	-0.267	-0.362
	(0.36)	(0.29)	(0.36)	(0.30)	(0.7)	(0.46)	(0.56)	(0.38)
primeage 2/	0.976***	0.389***	0.643***	1.613***	1.752***	1.368***	1.817***	2.239***
	(0.2)	(0.14)	(0.19)	(0.33)	(0.39)	(0.22)	(0.29)	(0.43)
GDPcapita	0	-0.000**	0	0.000***	0.001***	0.000***	0.001***	0.000***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDPsquare	0	0.000***	0	-0.000***	-0.000***	-0.000**	-0.000**	-0.000**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
growth	0.016	0.009	0.011	-0.065***	0.029	-0.028	-0.011	-0.024
	(0.03)	(0.02)	(0.03)	(0.02)	(0.05)	(0.03)	(0.04)	(0.03)
children	-0.104	-0.133**	-0.132*	0.148***	-0.034	-0.355***	-0.358***	0.322***
	(0.07)	(0.07)	(0.07)	(0.05)	(0.14)	(0.11)	(0.12)	(0.07)
taxwedge	0.005	-0.091	0.057	-0.064	0.029	-0.103	0.143	-0.006
	(0.06)	(0.06)	(0.07)	(0.06)	(0.12)	(0.09)	(0.1)	(0.07)
laboreff	0.022	-0.038	0.007	0.056**	0.098	-0.03	0.054	0.092***
	(0.03)	(0.02)	(0.03)	(0.03)	(0.06)	(0.04)	(0.05)	(0.03)
_cons	11.048	41.771***	22.941***	-5.472	-57.730***	-11.684	-52.037***	-26.449***
	(9.04)	(6.65)	(8.56)	(4.12)	(17.5)	(10.58)	(13.29)	(5.37)
Adjusted r square	0.06	0.31	-0.03	0.16	0.20	0.31	0.24	0.30
N	180	164	180	180	176	160	176	175

1/ Data includes 37 countries for the time period 2006-2016.

2/ Variables for regression on Gap are taken as the difference between male and female.

Standard errors in parentheses: * p<0.1, ** p<0.05, *** p<0.01

[3] We were unable to incorporate variables capturing social attitude, spending on childcare, and marginal taxation on second earner due to the lack of data.

The control variables all showed the expected sign but were not all statistically significant. GDP per capita as well as GDP per capita squared were statistically significant in explaining female participation but not male confirming the non-linear relationship highlighted in the literature. Higher GDP growth helps participation and employment of both male and female, but not statistically significantly. Labor market efficiency had a mixed impact on male and female participation/employment, but statistically insignificant.

IV. MICRO-LEVEL EMPIRICAL INVESTIGATION OF FEMALE LABOR FORCE PARTICIPATION AND EMPLOYMENT

The micro-level analysis links labor market outcomes at the individual level with several key macroeconomic and country-level structural and institutional indicators. Specifically, transitions between employment, unemployment, and non-participation in the labor force are linked by means of micro-econometric multinomial logit model to various demographic characteristics of the labor force (age, gender, disability, education, and marital status, as well as employment status from a year ago), macroeconomic factors (overall economic growth rate, investment level, credit growth, as well as indicators of fiscal stance, and public expenditures), institutional factors (indicators of institutional rigidities in the labor market), and structural factors (level of emigration, tax wedge, length of parental leave, and an indicator reflecting the country's stage of transition to market economy).[4] The micro-level data are derived from labor force surveys of three Western Balkan countries (Bosnia and Herzegovina, FYR Macedonia, and Serbia) as well as Poland and Romania for 2006–13, thus covering periods of the pre-crisis boom, the crisis bust, and the post-crisis recovery for WB and a comparable group of EU peers. Just as in the macro-level regressions, the analysis here shows association and not causality and the exact magnitude of the effects are not identified.

The empirical analysis, based on a sample of both current and potential labor force participants, offers several important insights on the interplay of different factors in determining labor market outcomes in in the region (Table 2). It is importance to note that these discussions assume that these factors apply to both genders equally. We explore effects of possible gender differences in Box 4.

- *Gender and demographic characteristics of individuals are very important for determining labor market outcomes.* Specifically, previously unemployed people are more likely to remain unemployed, higher levels of education are generally associated with better chances of joining the labor force and finding employment, and younger people seeking employment face significant headwinds. But even controlling for all these characteristics, women are more likely to be inactive while those who seek employment appear to have much lower probability of finding a job than men.

[4] As macro-level variables are used in micro-level regressions, robust standard errors are estimated by clustering at the country level to avoid their under-estimation.

- *Structural impediments are key for understanding poor labor market outcomes.* Higher emigration-to-population rates are strongly associated with higher probability of inactivity (likely reflecting availability of non-labor income and higher dependency burden for those who stay) and lower probability of finding employment (likely reflecting higher reservation wage for households receiving remittances). Higher tax wedge is not found to significantly affect labor participation (as it only reduces financial incentives of entering formal labor market) but, somewhat surprisingly, is moderately associated with higher probability of finding a job for those who decided to seek employment (possibly reflecting the net effect of workers switching from formal to informal jobs, which is hard to test empirically given available LFS data). It is important to note that the labor force data captures both formal and informal employment. Finally, longer statutory parental leaves—an indicator that perhaps also picks up the flexibility of the system to allow both parents to share the burden of childcare more equally—seem to be associated with lower probability of inactivity.

- *Higher flexibility in labor market institutions seem to be associated with higher participation and employment.* The analysis shows that a more decentralized wage bargaining processes and more flexible hiring-firing practices are all largely associated with not only additional people joining the labor force but also with a greater probability of employment. Our analysis also confirms that an environment where pay is only weakly related to worker productivity is more likely to discourage people from seeking employment. Finally, higher female participation in the labor force is found to be associated with moderately lower probability of employment (possibly reflecting increased competition among the job seekers).

- *Macroeconomic indicators are also relevant for labor market dynamics.* Higher real GDP growth and more buoyant investment-to-GDP ratios are generally associated with better chances of finding a job although the impact is small emphasizing the importance of structural factors in persistence of low labor participation and the low growth-employment elasticities found in empirical studies (WIIW, 2017). Higher fiscal expenditure is associated with fewer people joining the labor force while having no statistically significant effect on employability.

- *Broader structural reforms are also very important.* The empirical evidence suggests that countries that are more advanced in overcoming the legacies of central-planned economies and completing transition to market-based economy are also the ones that encourage people to join labor force.

Table 2. Regression Results from Micro-level

Determinants of Labor Market Outcomes: Multinomial Logistic Regression Estimates 1/

Employment status (base outcome: Unemployed):	Inactive	Employed
Micro characteristics		
Age ≤ 20	1.558 ***	-1.926 ***
20 < Age ≤ 25	0.447 **	-0.939 ***
45 < Age ≤ 55	0.533 ***	0.145 *
Age > 55	3.021 ***	0.256
Married	-0.005	0.472 ***
Female	0.565 ***	-0.298 ***
Disabled	1.533 **	-0.641 *
Education: below highschool	0.254	0.17
Education: university 2/	-0.467 ***	0.361 ***
Status one year ago: unemployed	-2.941 ***	-3.632 ***
Macroeconomic factors		
Real GDP growth	0.071	0.064 **
Investment	0.049	0.069 ***
Private sector growth	-0.012 *	-0.015 ***
General government fiscal balance	0.241 **	-0.045 **
General government expenditures	0.254 **	-0.007
Structural and institutional factors		
Emigration	0.098 *	-0.046 ***
Tax wedge	0.075	0.121 **
Parental leave	-0.162 **	-0.028
Labor market: flexibility		
Cooperation in labor-employer relations	-0.03 **	0.005 **
Flexibility of wage determination	-0.014 *	-0.016 **
Hiring and firing practices	0.029 *	-0.006 **
Redundancy costs	0.03	0.004
Labor market: efficient use of talent		
Pay and productivity	0.011 **	0.008 ***
Reliance on professional management	-0.017 *	-0.001
Women in labor force	0.017	0.016 **
Stage of transition		
EBRD transition index	-7.211 *	1.352
Constant	18.322	-7.534 **
Log likelihood		-684,448
Pseudo R^2		0.355
Number of observations		1,232,390
Sample	BIH, MKD, SRB, POL, ROU; 2006-13, depending on availability	

Source: National Labor Force Surveys; IMF staff estimates.
1/ Robust standard errors are clustered at the country level.
2/ This variable includes graduate education.

Box 4. Exploring Gender Differences

To enrich our micro-econometric analysis and test robustness of results, we exploit interactions between explanatory variables and the female dummy. Specifically, we re-estimate the model while interacting policy variables and individual age/education characteristics with the female dummy. Our findings are qualitatively similar to the results discussed in the main text but highlight few important differences across genders:

- Older women (over age of 45) are more likely to be employed than their male peers.
- Higher educational achievement is important for employability of both genders but even more so for women.
- Emigration's statistical link to both inactivity and employability is stronger for women than for men but the quantitative impact is somewhat lower.
- Longer length of parental leave has a statistically significant negative effect on women's employability, while it was not significant for their male peers.

Determinants of Labor Market Outcomes: Exploring Gender Differences 1/

	Equal effect for both genders		Female-specific effects 2/	
Employment status (base outcome: Unemployed):	**Inactive**	**Employed**	**Inactive**	**Employed**
Age				
Age ≤ 20	1.558 ***	-1.926 ***	1.384 ***	-1.605 ***
20 < Age ≤ 25	0.447 **	-0.939 ***	0.343 **	-0.847 ***
45 < Age ≤ 55	0.533 ***	0.145 *	0.536 **	0.216 **
Age > 55	3.021 ***	0.256	3.244 ***	0.741 *
Education				
Education: below highschool	0.254	0.17	0.402 **	0.139
Education: university	-0.467 ***	0.361 ***	-0.578 ***	0.437 ***
Structural factors				
Emigration	0.071	0.064 **	0.045 ***	-0.012 ***
Tax wedge	0.049	0.069 ***	0.003	0.052 ***
Parental leave	-0.012 *	-0.015 ***	-0.01 **	-0.012 ***
Log likelihood		-684,448		-798,953
Pseudo R^2		0.355		0.247
Number of observations		1,232,390		1,232,390
Sample	BIH, MKD, SRB, POL, ROU; 2006-13, depending on availability			

Source: National Labor Force Surveys; IMF staff estimates.
1/ Robust standard errors are clustered at the country level.
2/ Obtained by interacting the female dummy variable with the corresponding explanatory variable.

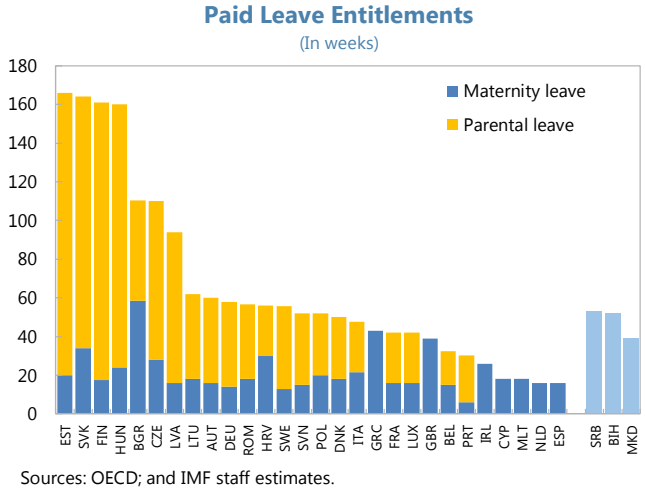
What would it take to improve labor force participation and enhance employment likelihood for women in the Western Balkans? The empirical model presented above offers an opportunity to design an illustrative counterfactual experiment that may help answer this question. Calibrating all macroeconomic, institutional, and structural factors to an average level of Western Balkan countries in 2016 (baseline), we next simulate the cumulative impact of a number of policy changes on employment probabilities of women. We differentiate simulations by age and level of academic achievement. All simulations

indicate activity and employment probability of a woman in a certain age and education group (as shown in Figure 4) who was previously unemployed.

- Under **the baseline**, the model predicts that the probability of a (previously unemployed) woman in an average WB country staying inactive is high, ranging from 0.6 for prime age women with tertiary education to 0.9 for younger women without a high school diploma.

A scenario envisaging a **lower tax wedge** shows a slightly increased probability of labor participation across all age and education groups but does not do much for improving the likelihood of a woman landing a job. In fact, the occurrence of unemployment among women is likely to increase as more women join the labor force. This may point to a couple of things. While a lower tax wedge may bring low-skilled women into labor force, the employment probability may be affected by a lack of skills. Also, given the lack of bargaining power of low-skilled workers, a lower taxation may only benefit employers who may be willing to employ more workers but with no change in net income, women may choose to stay on social assistance.

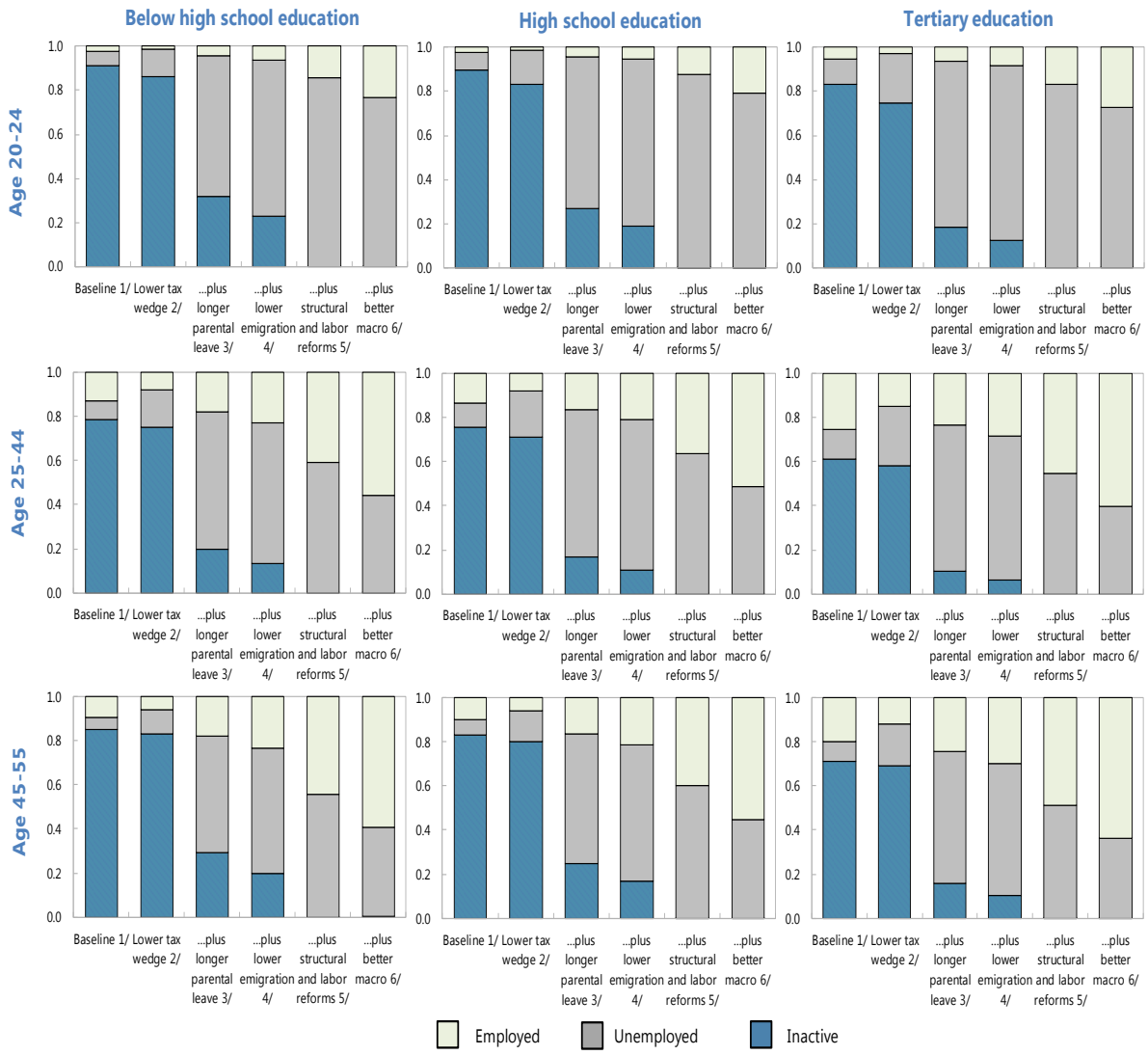
- **Increasing parental leave** to the average level of OECD countries could potentially have a large impact on reducing female inactivity permitting social norms do not get in the way. However, the probability of finding employment does not go up by much. Greater flexibility for a family in terms of both parents taking care of a child (reflected in longer and more flexible parental leaves) would facilitate women's re-entry into the labor market after the childbirth but employment probability is negatively affected by longer spans outside the workspace which makes them uncompetitive in countries with large pool of unemployed workforce through skills erosion and additional costs for employers.



Sources: OECD; and IMF staff estimates.

- **Lower pace of emigration** (or greater degree of return migration)—by reducing dependency, access to non-labor income, and reservation wage—would provide greater incentives for women's labor force participation and higher chances of employment. The overall effect on corresponding probabilities is small, however, as lower emigration also implies lower remittances with positive spillovers for job creation through their support for financial deepening, consumption, and investment (Atoyan and others, 2016).

Figure 4. Western Balkans: Employment Outcome Probabilities for Women



Sources: National Labor Force Surveys; and IMF staff estimates.

1/ Calculated for a previously unemployed married (if 25 orolder) woman; and with macroeconomic indicators, EBRD transition indicators at Western Balkan average levels in 2016.

2/ Assumes a 10 percentage points reduction in the tax wedge.

3/ Assumes average OECD duration of parental leave.

4/ Assumes lower emigration equivalent to a quarter reduction in the stock of emigrants.

5/ Assumes 25 position improvement in WEF GCI ranking and EBRD transition indicator as in CE-5 countries.

6/ Assumes real GDP rates and investment rates as in 2007.

- **Advancing structural reforms** to the average level observed in Central Europe (as measured by the EBRD Transition Index) coupled with **enhancing labor market flexibility (**as measured by relevant rankings in the World Economic Forum's Global Competitiveness Indicators) is likely to generate a notable improvement in the probability of employment across all age and education groups for women. This will be reinforced by an **improved macroeconomic environment** that would further support job creation.

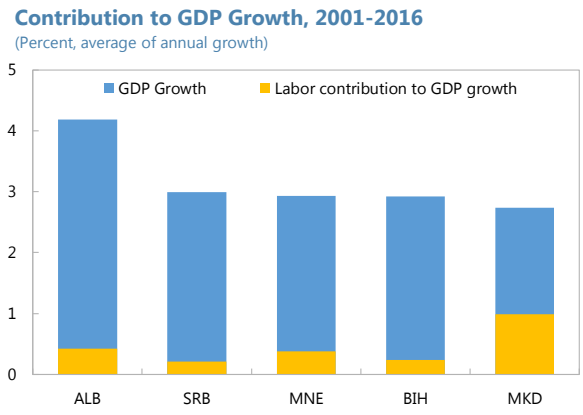
Simulations suggest that probability of employment could increase up to 0.65 for prime age women with smaller gains reported by younger women.

These simulations suggest that the employability of younger female workers (20-24 years) is somewhat less responsive to the reforms and policies considered above. This result is reversed and younger females' employability increases dramatically if the critical assumption of previous unemployment is relaxed in computing employment outcome probabilities.[5] In other words, obtaining initial work experience is a key precondition for improving chances of a young female finding a job. This highlights the importance of well-targeted policies aimed at facilitating the job search for first-time employees, including through vocational education and training, active labor market policies, and activation strategies specifically targeting young people, as well as a need to minimize skills mismatch produced by a disconnect between education and the labor market demand.

Our simulations show a strong role of policies to improve female participation in the labor force. It is important to note that our simulations do not represent steady-state effects of the reforms and thus should be interpreted with great care. Empirical results highlight important associations between policies and outcomes but should not be interpreted as causality or precise quantitative effects of simulated policy changes. With these important caveats in mind, our results suggest that the probability of being inactive for all education and age groups is likely to be drastically lowered once we increase parental leave, decrease tax wedge and (through an appropriate policy mix aimed at reducing incentives to leave) reduce migration to a certain threshold. This implies that policies can play a very effective role in improving incentives to join the labor force by alleviating constraints to juggle work and family, and allowing workers to keep a higher portion of income and creating better conditions for labor to stay home.

V. CONCLUSIONS

Western Balkan countries have some of the lowest female labor force participation and employment rates in all of Europe. The gender gap starts early and persists across all age groups. Inactivity rates are particularly large for women with lower level of educational attainment. Labor's contribution to overall GDP growth has been small for most countries in the last fifteen years. With working age population set to decline, policies need to target increasing women's role in the economy.



Sources: Eurostat; ILO; WDI and IMF staff calculations.

[5] Data limitations prevent us from explicitly controlling for the first-time employment condition.

A forensic investigation of labor market trends shows that women's potential contributions to the economy in the Western Balkans are held back by a compound set of factors. These include lack of adequate educational attainment, higher burden of family and inadequate childcare and family leave policies, fiscal disincentives, and low barriers to early retirements. A comprehensive mix of policies would need to be implemented to decisevly address these impediments through measures aimed at: (i) promoting higher educational attainment among women, including through changing cultural attitudes and social norms; (ii) reducing emigration and promoting return migration, including through strengthening institutions and economic policies to create an environment that encourages people to stay; (iii) facilitating more equal sharing of family responsibilities, including by investing in affordable childcare, improving family leave flexibility, and relying more on parental leave versus very generous maternity leave; (iv) lowering tax wedge for low-income earners and increasing progressivity of labor taxation; and (v) reviewing social assistance and old-age pension frameworks with a view to increase incentives for women's participation in formal employment.

Lasting gains in female labor participation and employment, however, will also require complementary macroeconomic and structural policies. Our analysis highlights an important policy lesson – labor market outcomes depend on factors well beyond the labor market itself. While necessary, parametric tweaks of the parental benefits or labor taxation would help promote incentives for women to seek employment but, in isolation, would not be sufficient to secure robust women's participation in the labor market. While these reforms will go a long way to increase the supply of female labor, to ensure their successful inclusion countries will need to create adequate and robust demand. Thus, macroeconomic stability and structural reforms to improve the overall quality of institutions are fundamental preconditions for creating employment opportunities for women in an economy characterized by high and sustainable economic growth.

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