ANALYZING THE ECONOMIC DETERMINANTS ON EMPLOYERS' DYNAMICS - EVIDENCE FROM THE WESTERN BALKANS

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ABSTRACT

This research paper analyzes the economic indicators that influence the employers' dynamics based on the evidence from the Western Balkans countries, i.e., investigates the determinants of employment structure in the Western Balkans, particularly focusing on how these factors shape the self-employment jobs. Employing a panel regression analysis based on pooled OLS and Least Square Dummy Variable (LSDV) models, the study analyzes the impact of various economic factors like economic growth, wages, inflation rates, and other labor market variables on employers' composition. The research intends to identify the potential determinants and assess their variations across countries in the region. The results indicate that unemployment rate and wages are significant determinants on self-employment jobs. The study contributes to understanding employer's (self–employment jobs) determinants at a critical juncture in the Western Balkans' economic development.

KEYWORDS
Employers, self-employment jobs, labor market, wages, inflation rate, Western Balkan Economies.

JEL CLASSIFICATION CODES
J21, E24, E31

1. INTRODUCTION

The study of employment structures holds paramount importance in the sphere of economic research. It offers critical insights into how labor markets evolve, adapt, and respond to various socio-economic stimuli. The structure of employment not only reflects the current economic status of a region but also serves as a predictive tool for future economic health and stability. In this context, understanding the dynamics of self - employment structures can aid in designing more effective economic policies, targeting specific sectors for growth, and addressing socio-economic disparities.

The Western Balkans, comprising countries like Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia, presents a unique case for the study of employment structures. This region, characterized by its transitional economies, has undergone significant political and economic changes over the past decades. The shift from centrally planned economies to market-oriented systems has brought about profound transformations in their employment landscapes.

These countries have faced challenges such as high unemployment rates, a significant informal sector, emigration of skilled labor, and varied sectoral development. The agrarian sector, although diminishing in its contribution to GDP, still employs a considerable portion of the workforce in some of these countries. On the other hand, the service sector has been expanding, reflecting a broader shift towards a knowledge-based economy. These changes are not uniform across the region, thereby making the analysis of employment structures both challenging and essential.

Economically, the employment structure in the Western Balkans is indicative of each country's stage in the transition process and its approach to economic reforms. Socially, employment trends can impact areas such as

poverty, social inequality, and overall quality of life. The interplay of economic policies, education systems, labor laws, and global economic trends shape the employment scenario in these countries. The region's aspirations to integrate into the European Union add another layer of complexity. This aspiration requires not just economic reform but also alignment with EU standards in various sectors, which directly and indirectly affects employment structures.

Given this backdrop, the primary research question of this study is: "What are the key determinants of self -employment jobs in the Western Balkans, and how do they interact to shape the current labor market?" To address this question, the study will employ a pooled Ordinary Least Squares (OLS) regression analysis to empirically investigate the factors influencing self-employment jobs in the region. The objectives include identifying these determinants and analyzing their variances across different countries within the Western Balkans and formulating policy recommendations to enhance employment structures and economic stability in the region. This study seeks to contribute to a comprehensive analysis of the employment structure at a critical juncture in the Western Balkans' economic development and European integration.

2. LITERATURE REVIEW

For exploring the relationship between labor market dynamics and a wide range of its determinants within the context of the Western Balkans is essential to delve into existing literature. This provides a foundational understanding of the current knowledge landscape, shaping the contours of this investigation.

The Western Balkans' transition from centrally planned to market economies brought about multifaceted challenges in labor market dynamics. Studies such as those by Boeri and Terrell (2002) elucidated the labor market rigidities that emerged during this transition, noting significant unemployment spikes and slow job creation processes. Another salient aspect within the regional labor market narrative has been migration. Kahanec and Zimmermann (2008), among others, emphasized the pivotal role of labor mobility and migration towards EU countries. Such movements, they argued, not only relieved pressures on local job markets but also ushered in significant remittance inflows that have their own implications on labor demand and supply.

Macroeconomic theory has often posited the relationship between wages, employment, and prices. Researchers like Lamo et al. (2010) postulated a weaker relationship in their study pointing to specific labor market peculiarities and institutional variances. Additionally, the concept of the Wage-Price spiral, explored by scholars such as Blanchard and Galí (2007), posits that wage growth, especially when driven by factors like powerful labor unions and centralized wage bargaining, can be a precursor to inflation.

Labor market dynamics and wage growth are intrinsically intertwined. A healthy labor market, characterized by low unemployment and a balanced ratio of job seekers to job openings, is typically conducive to wage growth. Lehmann et al. (2012), in their studies on transition economies, found productivity growth to be a primary driver for wage growth. However, they also accentuated the significant role played by institutional structures, such as trade unions and labor regulations, in wage determination processes. Furthermore, Becker et al. (2010) delved into wage differentials in the Western Balkans, linking them to industry-specific demands, worker experience, education levels, and even regional disparities.

The tapestry of literature provides insights into the multifaceted relationship between labor market dynamics, wage growth, and inflation in the Western Balkans. While many patterns and theories have been identified, the uniqueness of each nation within the region, combined with evolving global economic realities, underscores the need for continuous research. This study, with its focus on Western Balkan countries, seeks to add another layer of depth to this ongoing dialogue, providing targeted insights that can guide both policy and future research trajectories.

3. METHODOLOGY

This study employs a quantitative approach to analyze the determinants of self-employment structure in the Western Balkans. The primary method of analysis is a panel regression based on pooled Ordinary Least Squares (OLS) regression, chosen for examining the linear relationship between multiple independent variables and a

dependent variable.

The study utilizes secondary data collected from reliable sources such as the World Bank, the International Monetary Fund, and national statistical offices of the Western Balkans. The data spans a period from 2000 to 2022, providing a comprehensive overview of the region's labor market dynamics post-transition. The variables selected are based on their relevance and availability, including employers (employers are those workers who, working on their own account or with one or a few partners, hold the type of jobs defined as a "self-employment jobs"), unemployment rates, GDP growth, inflation rates, average wages, labor force participation rates.

The dataset underwent an initial descriptive statistical analysis to provide an overview of the economic indicators across the Western Balkan countries. This analysis includes a calculation of means for each variable used in the model. The descriptive statistics offered preliminary insights into the general trends and variations within the data, setting the stage for more detailed regression analysis.

Table 1. Mean values of each economic indicator for the Western Balkan countries

Country	Employers Total (%)	GDP Growth (Annual %)	Inflation Consumer Prices (Annual %)	Labor Force Total	Real Interest Rate (%)	Unemployment Total (%)	Wage and Salaried Workers Total (%)
Albania	2.588	4.149	2.547	1,312,841	7.981	11.963	39.446
Bosnia and Herzegovina	4.753	3.414	0.974	1,419,067	3.191	17.944	71.166
Kosovo	3.984	4.528	1.758	1,483,365	3.787	31.995	70.732
Montenegro	7.172	2.909	2.220	256,323	3.175	12.996	76.909
North Macedonia	4.846	2.575	2.653	914,029	3.895	28.521	70.866
Serbia	3.749	3.550	14.033	3,279,744	-3.411	15.968	64.422

Source: Author’s calculations

Note: The values are mean (average) calculations for each indicator. We use the secondary data collected from reliable sources such as the World Bank, the International Monetary Fund, and national statistical offices of the Western Balkans

This research utilizes some variables encompassing various economic indicators relevant to the Western Balkan economies, specifically focusing on North Macedonia, Albania, Kosovo, Bosnia and Herzegovina, Serbia, and Montenegro. The dataset spans multiple years and includes the following key variables:

1. Employers, total (% of Total Employment) (modeled ILO estimate) - Employers are those workers who, working on their own account or with one or a few partners, hold the type of jobs defined as a "self-employment jobs" and, in this capacity, have engaged, on a continuous basis, one or more persons to work for them as employee(s).
2. GDP Growth (annual %) - Indicating the annual percentage growth rate of GDP at market prices based on constant local currency.
3. Inflation, Consumer Prices (annual %) - Reflecting the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services.
4. Labor Force, total - The total number of people employed and actively seeking employment.
5. Real Interest Rate (%) - The lending interest rate adjusted for inflation.

6. Unemployment, total (% of Total Labor Force) (national estimate) - The share of the labor force that is without work but available for and seeking employment.
7. Wage and Salaried Workers, Total (% of Total Employment) (modeled ILO estimate) - The percentage of workers who hold the type of jobs defined as "paid employment jobs".

3.1. Model Specification

In a pooled OLS regression, the relationship between the dependent variable and the independent variables is typically expressed in the following general form:

$$\boldsymbol{\gamma_{it} = \beta_0 + \beta_1 X_{it1} + \beta_2 X_{it2} + \beta_3 X_{it3} + \cdots + \beta_n X_{itk} + \varepsilon_{it}} \qquad \textbf{(1)}$$

Where:

- *Yit* is the dependent variable for observation *i* in time period *t* (in this case - Employer Total % of Total Employment).
- X_{it1}, Xi_{t2},...,X_{itk} are the independent variables for observation *i* in time period *t* (e.g., GDP growth, inflation rate, labor force, etc.).
- β_0 is the constant or intercept of the regression model.
- β_1, β_2,...,β_n are the coefficients for each independent variable, representing the expected change in *Yit* for a one-unit change in the corresponding independent variable, holding all other variables constant.
- ε_i is the error term for observation *i*, capturing all other factors that influence *Yi* but are not included in the model.

Pooled OLS relies on the classical linear regression assumptions and it assumes that there is no unobserved heterogeneity or time-specific effects. Pooled OLS is often used in the context of panel data, where observations are made on multiple countries over time. However, it does not account for individual or time-specific effects, for this reason the next model is based on Least Square Dummy variable model (LSDV) which allows for individual-specific (cross-sectional unit) effects but assumes that the relationship between the independent variables and the dependent variable is constant across time.

4. EMPIRICAL RESULTS

The model demonstrates a relatively high goodness of fit with an R-squared value of 0.726, indicating that about 72.6% of the variation in the dependent variable, the percentage of employers in total employment, is explained by the independent variables. This R-squared metric is a key statistical measure in regression analysis that reflects the proportion of variance in the dependent variable accounted for by the independent variables.

Table 2. Pooled Regression Analysis for the Western Balkan Countries

Variable	Coefficient	Std. Error	t-value	p-value
Constant	1.2867	0.4112	3.130	0.000
GDP Growth (Annual %)	0.0034	0.0248	0.138	0.890
Inflation Consumer Prices (Annual %)	0.0193	0.0100	1.936	0.055
Labor Force Total	-8.724e-07	1.065e-07	-8.191	0.000
Interest Rate (%)	-0.0439	0.0191	-2.300	0.023
Unemployment Total (%)	-0.0101	0.0074	-1.377	0.170
Wage and Salaried Workers Total (%)	0.0722	0.0048	14.983	0.000

Source: Author's calculations

The pooled OLS regression analysis reveals significant insights into the factors affecting the percentage of employers in total employment in Western Balkan countries. The coefficients of GDP Growth and Unemployment rate are not statistically significant. This suggests that these factors may not be reliable predictors of employer percentages within this context. In contrast, a one percentage point increase in the Real Interest Rate is associated with a 0.0439 percentage point decrease in employer percentages, and a one percentage point increase in Wage and Salaried Workers Total is linked to a 0.0722 percentage point increase, both statistically significant (Real Interest Rate p-value: 0.023; Wage and Salaried Workers p-value: 0.000). This indicates a strong inverse relationship with interest rates and a direct relationship with the proportion of wage and salaried workers in the labor market.

The model reveals a significant relationship between the rate of inflation and employer percentages, where a one percentage point increase in inflation corresponds to a 0.0193 percentage point increase in employer percentages (p-value: 0.055). Moreover, a highly significant finding is the inverse relationship between the total labor force and employer percentages, where each additional person in the labor force is associated with a decrease of approximately 8.724e-07 percentage points in employer percentages (p-value: 0.000). These results underscore the complex dynamics of economic and labor market factors in the Western Balkan region, highlighting the significant roles of the labor force size, interest rates, and the proportion of wage and salaried workers in shaping the landscape of employers in the total employment.

Table 3. LSDV Regression Results on Employer Composition in Western Balkan Countries

Variable	Coefficient	Std. Err.	t-value	P-value
GDP Growth (Annual %)	0.0279	0.0204	1.37	0.174
Inflation Consumer Prices (Annual %)	0.0074	0.0085	0.87	0.385
Labor Force Total	1.47e-06	1.21e-06	1.21	0.228
Interest Rate (%)	-0.0109	0.0178	-0.61	0.541
Unemployment Total (%)	0.0263	0.0073	3.59	0.000
Wage and Salaried Workers Total (%)	0.0621	0.0049	12.45	0.000
Albania	3.5745	2.3232	1.54	0.126
Bosnia and Herzegovina	3.4365	2.2073	1.56	0.122
Kosovo	2.1998	2.1309	1.03	0.304
Montenegro	7.3394	3.6155	2.03	0.044
North Macedonia	4.0294	2.8120	1.43	0.154
Intercept	-5.7245	3.8998	-1.47	0.145

Source: Author's calculations

Based on least squares dummy variable (LSDV) regression model and according to the estimated coefficients and significance levels of various independent variables, including country dummy variables, several interesting insights emerged. While traditional economic indicators like GDP growth and inflation exhibited positive coefficients, they failed to attain statistical significance, indicating that fluctuations in these factors are not strongly associated with changes in the number of employers across the region. Similarly, variations in the labor force size and real interest rates showed positive and negative coefficients, respectively, but lacked statistical significance, suggesting limited explanatory power in the context of employer dynamics.

However, the analysis unearthed two pivotal factors that notably influenced the number of employers in the Western Balkans. Firstly, the highly significant positive coefficient for total unemployment rates underscores a compelling relationship: as unemployment rates rise, a greater number of employers tend to emerge. This finding implies that economic challenges, represented by higher unemployment, may spur individuals to embark on entrepreneurial journeys or opt for self-employment, thereby contributing to a growth in the number of employers. Secondly, a strikingly strong positive relationship between the number of wage and salaried workers and the number of employers was unveiled. A burgeoning workforce engaged in wage and salaried roles appeared to foster a greater number of employers, suggesting a symbiotic relationship between employment categories.

Furthermore, when scrutinizing specific countries within the Western Balkan region, it became evident that Montenegro, with its significantly higher number of employers compared to Serbia, stood out as a notable exception. Conversely, Albania, Bosnia and Herzegovina, Kosovo, and North Macedonia did not exhibit statistically significant differences in the number of employers when compared to Serbia. These findings provide valuable insights into the nuanced dynamics of employer formation in the Western Balkans, offering potential avenues for policymakers and researchers to explore the multifaceted factors underpinning entrepreneurship and employment in the region. Nonetheless, it is crucial to acknowledge that these interpretations are based on the given regression results and may necessitate further investigation, encompassing additional variables and context-specific considerations, to comprehensively grasp the real-world implications of these findings.

5. DISCUSSION

This analysis was focused on determinants of employers' dynamics of the Western Balkan region to identify the factors influencing the dependent variable employers' total. The examination of the coefficients and significance levels of various independent variables, including country dummy variables, revealed several intriguing insights. Traditional economic indicators like GDP growth and inflation exhibited positive coefficients but failed to attain statistical significance, suggesting that these factors may not have a strong association with changes in the number of employers across the region. Similarly, variations in the labor force size and real interest rates showed positive and negative coefficients, respectively, but lacked statistical significance, indicating limited explanatory power in the context of employer dynamics.

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6. CONCLUSION

This research paper aimed to explore the determinants of self-employment and employer dynamics in the Western Balkans, an area marked by its unique economic and social landscape. Through a meticulous analysis employing pooled Ordinary Least Squares (OLS) regression and the Least Square Dummy Variable (LSDV) models, it was uncovered several key findings that enrich our understanding of self- employment structures in

this region.

The study reveals that traditional economic indicators such as GDP growth and inflation, while showing positive coefficients, do not have a statistically significant impact on the number of employers. This suggests that other factors might be more influential in shaping the employment landscape in the Western Balkans. The lack of significant impact from these traditional indicators might be indicative of the unique economic conditions and labor market structures within these transitioning economies.

One of the most striking findings is the positive correlation between unemployment rates and the number of employers. This could imply that higher unemployment rates may encourage individuals to turn towards self-employment and entrepreneurship as alternative employment avenues. This trend is particularly relevant in the context of the Western Balkans, where formal job opportunities may be limited, and self-employment presents a viable alternative.

Additionally, the study highlights a significant positive relationship between the proportion of wage and salaried workers and the number of employers. This could indicate a symbiotic relationship between different employment sectors, where a robust formal employment sector could foster a conducive environment for self-employment and entrepreneurship.

The country-specific analysis within the Western Balkan region reveals that Montenegro stands out with a significantly higher number of employers compared to Serbia. This points towards the diverse economic and labor dynamics within the region, suggesting that each country's unique socio-economic context plays a crucial role in shaping its employment structure. This research contributes significantly to our understanding of employment dynamics in the Western Balkans. It underscores the complexity of labor market dynamics in transitional economies and highlights the importance of considering a range of factors, beyond traditional economic indicators, when analyzing employment structures. The findings of this study are particularly relevant for policymakers and stakeholders in the region, as they offer valuable insights that can inform the development of targeted employment policies and initiatives. These policies should aim to foster entrepreneurship and self-employment, especially in the face of high unemployment rates, thereby enhancing economic stability and growth in the Western Balkans.

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