ACCESS TO FINANCE AND SME GROWTH IN BOSNIA AND HERZEGOVINA: SURVEY-WEIGHTED EVIDENCE FROM THE 2023 WORLD BANK ENTERPRISE SURVEY

Tarik KAHRIĆ
International Burch University, 71000 Sarajevo, Bosnia and Herzegovina
tarik.kahric@stu.ibu.edu.ba

Dr. Malcolm DUEROD
International Burch University, 71000 Sarajevo, Bosnia and Herzegovina
malcolm.duerod@ibu.edu.ba

Abstract
This paper examines the relationship between access to external finance and the growth of small and medium-sized enterprises (SMEs) in Bosnia and Herzegovina, using firm-level microdata from the 2023 World Bank Enterprise Survey. Real annual sales growth over FY2019-FY2022, computed as the annualised log-difference of CPI-deflated sales, is regressed on an indicator of access to finance (holding a bank loan or line of credit) together with firm size, firm age, top-manager experience, exporter status, foreign ownership, and sector and region fixed effects, on an analytic sample of 241 SMEs by survey-weighted least squares with HC3 robust standard errors. Access to finance is positively but not significantly associated with real sales growth ($b = 2.02$, $p = 0.521$); the null result is robust to dropping the survey weights, winsorising the dependent variable, using employment growth as the outcome, replacing the binary indicator with the share of investment financed by banks, and excluding influential observations. Over a growth window dominated by the COVID-19 shock and the 2022 inflation surge, formal credit appears to have supported the resilience and continuity of Bosnian SMEs rather than measurable growth premia. The findings caution against inferring financing-growth effects from small unweighted samples and carry implications for SME credit policy in the Western Balkans.

Key words: access to finance; Bosnia and Herzegovina; firm growth; SMEs; World Bank Enterprise Survey

JEL Classification: D22; G21; L25; O16

I. INTRODUCTION

Small and medium-sized enterprises (SMEs) are widely recognised as the backbone of modern economies owing to their contribution to employment creation, innovation, productivity and economic growth. In Bosnia and Herzegovina (BiH), SMEs account for roughly two thirds of business-sector value added and employment, making their growth an important determinant of the country's overall economic performance. Yet many Bosnian SMEs face persistent obstacles, limited access to external finance chief among them, that are argued to constrain their ability to invest, hire and expand. Understanding which factors enable SMEs to grow is therefore of first-order importance for economic policy in the Western Balkans, where sustained private-sector expansion is central to convergence with the European Union.

Dinh et al. (2010) identify access to finance as the single most binding constraint on SME development in transition and developing economies. Financial capital funds investment, technology adoption, market entry and hiring; credit-constrained firms may forgo profitable opportunities even when demand exists (Ayyagari et al., 2016; Beck et al., 2008). In the Western Balkans, and BiH in particular, the financial system is strongly bank-centric, thus firms rely heavily on internal funding (Mastilo et al., 2024). Capital markets are shallow, and collateral requirements are a principal screening mechanism (Davalos et al., 2018; Pytkowska & Korynski, 2016). Whether holding formal credit is in fact associated with faster growth among Bosnian SMEs is, however, an empirical question that has rarely been examined on representative, survey-weighted microdata.

This paper contributes such evidence. Using the 2023 World Bank Enterprise Survey (WBES) wave for BiH, the association between access to finance and real annual sales growth over FY2019-FY2022 is estimated on an analytic sample of 241 SMEs, applying the survey's sampling weights and a full set of firm-level controls with sector and region fixed effects. Three features distinguish the analysis: (i) the dependent variable is deflated and annualised following the WBES growth methodology; (ii) estimates are survey-weighted, so they generalise to the population of eligible firms rather than to the sample; and (iii) the headline result is subjected to a complete battery

of robustness checks and diagnostics. Anticipating the findings: the finance-growth association is positive but statistically insignificant, and this null is highly stable. It is argued that over a window dominated by COVID-19 and the 2022 inflation surge, formal credit functioned primarily as a resilience device, and that well-powered null results of this kind are informative for both the literature and credit policy. The remainder of the paper is organised as follows. Section 2 reviews the relevant literature; Section 3 describes the data and empirical strategy; Section 4 presents the results; Section 5 discusses their interpretation; and Section 6 concludes with policy implications and limitations.

II. LITERATURE REVIEW

Financial constraints are consistently identified as a primary obstacle to SME development. Beck et al. (2008) establish that financial development benefits small firms disproportionately by reducing transaction costs. The causal case is made most convincingly by Bruhn and Love (2014), who exploit the quasi-random expansion of Banco Azteca in Mexico and document significant income and employment gains where credit access improved. Ayyagari et al. (2016), analysing more than 50,000 firms across developing economies, find access to finance robustly associated with job creation, concentrated precisely in the SME segment. At the same time, the intervention literature urges caution about magnitudes: the systematic review of Grimm and Paffhausen (2015) finds positive but modest average effects of finance-oriented interventions on micro and small firms, with considerable heterogeneity across contexts. The present study speaks directly to this heterogeneity by asking what the association looks like in a bank-centric transition economy during a crisis-dominated period.

Beyond finance, the firm-growth literature emphasises size, age, human capital and internationalisation. Smaller and younger firms tend to grow faster conditional on survival, though growth rates are heavy-tailed and weakly persistent (Coad, 2009). Managerial human capital - here proxied by the top manager's sector experience - supports strategic planning and resource allocation (Henrekson & Johansson, 2010). Exporting exposes firms to larger markets and competitive discipline, and foreign ownership can relax both financing and technology constraints. These variables enter the model as controls and as determinants of interest in their own right.

Regarding the regional context, both Bartlett and Prica (2017) and Asllani and Statovci (2017) characterise the Western Balkans as a European 'super-periphery' in which SME growth is constrained simultaneously by weak external demand, deleveraging by foreign-owned banks and unresolved institutional weaknesses. The EBRD Transition Report (2024) and the OECD SME Policy Index (OECD et al., 2022) place BiH below regional averages on credit-guarantee infrastructure and e-government services for enterprises. Within-country evidence (Kokorović Jukan et al., 2018; Hadžić, 2025; Davalos et al., 2018) identifies external finance as a critical bottleneck for Bosnian firms. Survey-weighted firm-level estimates of the finance-growth association for BiH are, to the authors' knowledge, absent from this literature - a gap this paper fills.

A further regional specificity is informality. Studies of the Bosnian business environment (Efendic et al., 2011) document how informal competition erodes the level playing field and depresses tax morale, so that formal firms perceive the statutory tax burden as a heavier obstacle where informal competitors evade it. This mechanism links perceptions of the regulatory environment to the broader institutional context, and cautions that survey-based perception measures of the business environment may be endogenous to firm performance, a point that bears directly on the interpretation of results below.

A final strand of literature concerns the period under study. The FY2019-FY2022 window spans the COVID-19 pandemic and the 2022 inflation surge, and the European evidence shows that firms' use of credit changed qualitatively during this episode: credit lines were drawn as liquidity insurance to bridge revenue shortfalls, cover fixed costs and retain employees, rather than to finance capacity expansion (EIB, 2022; Zakariene, 2022). Fouejieu et al. (2020) further document that SME financing gaps widen where institutional quality is weak, implying that in environments such as BiH the marginal borrower may face terms - maturity, collateral, currency denomination - that limit the transformation of credit into durable growth (Pytkowska & Korynski, 2016). Both mechanisms predict exactly the pattern documented below: widespread credit holding without a measurable contemporaneous growth premium.

Amin and Viganola (2023), examining WBES data for 35 developing and emerging economies, find that better pre-pandemic access to finance significantly reduces the likelihood of a sales decline. Their outcome is a binary indicator of a sales decline during the pandemic, regressed on pre-pandemic financial conditions, in a sample running from before the pandemic to its mid-point. In contrast this study takes a different perspective, that of average growth through the COVID-19 pandemic, which in comparison shows a resilience in the SME sector albeit in a narrower context.

III. DATA AND METHODOLOGY

The data source is the World Bank Enterprise Survey for Bosnia and Herzegovina, 2023 wave (N = 351 establishments), collected through face-to-face interviews with owners and top managers under the WBES global methodology: stratified random sampling with strata defined by firm size, sector (manufacturing, retail, other services) and region (Federation of BiH, Republika Srpska, Brcko District). The analysis is restricted to SMEs, registered non-agricultural private firms, defined as firms with fewer than 250 permanent full-time employees, consistent with the European Union and OECD definitions, which supports the representativeness of the private sector and the international comparability of the data (World Bank, 2025a). All interviews were conducted in 2023, so the last complete fiscal year is FY2022 and the retrospective sales question (n3) refers to FY2019 similar to Khan (2023).

Applying the EU/OECD SME screen (5-249 permanent full-time employees, item l1) retains 309 establishments. Listwise deletion on the model variables yields the analytic sample of N = 241 - 78% of the SME subsample. Attrition is driven mainly by item non-response on retrospective sales (n3: 344/351 usable) and top-manager experience (b7: 281/351). This is a threefold improvement over specifications based on the two-year sales-recall item (d2a1: 131/351 usable), which reduces the estimable sample to roughly 75 firms and, as shown below, materially degrades statistical power (Mekic et al., 2017).

The dependent variable is real annual sales growth: nominal FY2022 sales (d2) are deflated to FY2019 prices using the World Bank WDI consumer price index for BiH (World Bank, 2025b; cumulative 2020-2022 deflator 1.150) and the growth rate is the log-difference from FY2019 sales (n3) divided by three, in percent per year. The secondary outcome is annualised employment growth from items l1 and l2. Access to finance equals one if the establishment holds a line of credit or a loan from a financial institution (k82). Controls are ln(size) (log permanent full-time employees), firm age (2023 minus year of establishment, b5), top-manager sector experience in years (b7), exporter status (direct or indirect exports of at least 1% of sales, d3b/d3c), foreign ownership (at least 10% foreign-owned, b2b), and fixed effects for the WBES stratification sector (a4a) and region. A continuous alternative to the binary finance measure - the share of fixed-asset purchases financed by bank borrowing (k5bc, set to zero for firms reporting no purchases) - is used in robustness checks.

The primary model is estimated by weighted least squares using the WBES median-eligibility sampling weight (wmedian), normalised to sum to the sample size, with HC3 heteroscedasticity-robust standard errors (Long & Ervin, 2000):

$$RealSalesGrowth = \beta_0 + \beta_1 \cdot AccessToFinance + \beta_2 \cdot ln(Size) + \beta_3 \cdot FirmAge + \beta_4 \cdot ManagerExperience + \beta_5 \cdot Exporter + \beta_6 \cdot ForeignOwnership + \Sigma\gamma \cdot Sector + \Sigma\delta \cdot Region + \varepsilon. \quad (1)$$

Weighting makes the estimates representative of the population of eligible firms, addressing the deliberate oversampling of the Brcko District and of larger establishments in the WBES design. Diagnostics comprise variance inflation factors, the Breusch-Pagan test, the Ramsey RESET test (Breusch & Pagan, 1979) and Cook's-distance influence analysis (Cook, 1979). Robustness checks re-estimate the model (i) unweighted, (ii) with the dependent variable winsorised at the 1st/99th percentiles, (iii) with employment growth as the outcome, and (iv) with the continuous bank-financing share in place of the binary indicator.

The weighting choice deserves brief justification. Stratified samples are built for precision within strata, not for proportional representation: in the BiH 2023 wave the Brcko District accounts for roughly one fifth of interviewed establishments against a population share of a few percent, and medium-sized establishments are oversampled relative to their population share. Unweighted coefficients therefore characterise the sample, while weighted coefficients approximate the population of eligible firms; the WBES median-eligibility weight (wmedian) is the standard choice for this purpose (Solon et al., 2015). Both sets of estimates are reported, and the substantive conclusion - a stable null for the finance term - is identical under either treatment, so nothing in what follows hinges on the weighting decision.

IV. RESULTS

Table 1 reports descriptive statistics. The average SME experienced real sales growth of 2.5% per year (weighted mean 2.4%) over FY2019-FY2022, with wide dispersion (SD = 12.9) typical of firm-growth data. Half of the sample holds a loan or credit line; the survey-weighted share is 40%, reflecting the lower credit incidence among the smaller firms that the weights up-weight. A typical firm is 21 years old and run by a manager with 22 years of sector experience; 37% export and fewer than 5% are foreign-owned.

Table 1. Descriptive statistics - analytic sample of BiH SMEs (WBES 2023, N = 241)

Variable	count	mean	weighted mean	std	min	max
Real annual sales growth (%)	241	2.523	2.369	12.919	-56.425	78.615
Annual employment growth (%)	236	1.557	0.914	7.569	-36.620	31.276
Access to finance (loan/credit line, 0/1)	241	0.502	0.399	0.501	0.000	1.000
ln(Size) (permanent FT employees)	241	3.164	2.581	1.176	1.609	5.455
Firm age (years)	241	21.411	20.027	11.263	4.000	97.000
Manager experience (years)	241	21.921	21.846	7.942	1.000	53.000
Exporter (0/1)	241	0.373	0.358	0.485	0.000	1.000
Foreign ownership >=10% (0/1)	241	0.046	0.047	0.209	0.000	1.000
Bank-financed investment share (%)	222	8.005	7.721	21.080	0.000	100.000

Real annual sales growth is the annualised log-difference of FY2022 sales deflated to FY2019 prices and FY2019 sales. Weighted means use the WBES median-eligibility weight. Source: WBES BiH 2023; authors' calculations.

Table 2 reports pairwise Pearson correlations among the model variables. Access to finance correlates positively with firm size (r = 0.31) and exporter status (r = 0.27), consistent with banks screening on scale and market reach, but only weakly with sales growth (r = 0.07). No pairwise correlation among regressors exceeds 0.40, giving a first indication that multicollinearity is not a concern - confirmed by the variance inflation factors reported below.

Table 2. Pearson correlation matrix (analytic sample, pairwise complete observations)

Variable	1	2	3	4	5	6	7	8
1. Sales gr.	1							
2. Emp. gr.	0.27*	1						
3. Finance	0.07	-0.02	1					
4. ln(Size)	0.15*	0.07	0.31*	1				
5. Age	0.00	-0.10	0.12	0.27*	1			
6. Mgr. exp.	0.03	-0.09	0.07	0.12	0.40*	1		
7. Exporter	0.11	-0.01	0.27*	0.23*	0.12	0.08	1	
8. Foreign	-0.00	0.06	-0.02	0.06	-0.12	-0.08	0.08	1

*Lower triangle shown; * $p < 0.05$. Employment growth: N = 236; all other pairs: N = 241.*

Table 3 presents the survey-weighted OLS estimates of equation (1). Access to finance carries a positive but statistically insignificant coefficient: holding a loan or credit line is associated with 2.0 percentage points higher annual real sales growth, with a 95% confidence interval of [-4.2; 8.2] that comfortably includes zero (p = 0.521). None of the firm-level controls is significant at the 5% level. The only coefficient approaching significance is the Brcko District fixed effect (b = -4.54, p = 0.057), indicating weakly lower growth than in the Federation of BiH. The model explains 10.9% of the variance in growth (adjusted R2 = 0.070) - a magnitude typical of cross-sectional firm-growth regressions, in which idiosyncratic shocks dominate (Coad, 2009).

Table 3. OLS estimates - primary model: real annual sales growth (survey-weighted, HC3 robust SE)

Variable	b	SE (HC3)	t	p	95% CI
Access to finance (0/1)	2.021	3.149	0.642	0.521	[-4.15; 8.19]
ln(Size)	1.800	1.456	1.236	0.216	[-1.05; 4.65]
Firm age (years)	-0.136	0.251	-0.544	0.587	[-0.63; 0.35]
Manager experience (years)	0.204	0.192	1.063	0.288	[-0.17; 0.58]
Exporter (0/1)	3.084	3.297	0.935	0.350	[-3.38; 9.55]
Foreign ownership (0/1)	-7.649	14.079	-0.543	0.587	[-35.24; 19.95]

Sector: Retail	-1.634	4.291	-0.381	0.703	[-10.04; 6.78]
Sector: Services	-6.103	4.037	-1.512	0.131	[-14.02; 1.81]
Region: Republika Srpska	-3.401	3.938	-0.864	0.388	[-11.12; 4.32]
Region: Brcko District	-4.536	2.384	-1.903	0.057*	[-9.21; 0.14]
Constant	-0.427	7.065	-0.060	0.952	[-14.27; 13.42]

*N = 241; R2 = 0.109; adj. R2 = 0.070; F = 1.11 (p = 0.359). WLS with WBES sampling weights (wmedian) and HC3 robust SEs. Reference categories: Manufacturing (sector), Federation of BiH (region). * p < 0.10, ** p < 0.05, *** p < 0.01.*

Table 4 traces the finance coefficient across specifications. The null result is remarkably stable: unweighted (b = 0.53, p = 0.758), with winsorised growth (b = 2.13, p = 0.494), for employment growth (b = 0.02, p = 0.989), and with the continuous bank-financed investment share (b = 0.17 per percentage point, p = 0.122). Excluding the 14 observations with Cook's distance above 4/n leaves the coefficient insignificant (b = 1.28, p = 0.494). In no specification does the finance term approach the 5% threshold.

Table 4. Robustness of the access-to-finance coefficient

Model	Finance term	Coef.	HC3 SE	p-value	N	Adj. R2
Primary: weighted, HC3	Access to finance (0/1)	2.021	3.149	0.521	241	0.070
R1: unweighted, HC3	Access to finance (0/1)	0.532	1.728	0.758	241	0.009
R2: DV winsorised 1/99	Access to finance (0/1)	2.131	3.116	0.494	241	0.072
R3: employment growth DV	Access to finance (0/1)	0.016	1.192	0.989	236	0.061
R4: bank-financed inv. share	Bank-financed investment share (%)	0.170	0.110	0.121	222	0.121

Each row is a separate regression with the full control set and sector/region fixed effects. R3 uses annualised log employment growth. R4 replaces the binary indicator with the share of fixed-asset purchases financed by banks.

All variance inflation factors are below 2.0 (Table 5), ruling out multicollinearity. The Breusch-Pagan test does not reject homoscedasticity (LM = 11.74, p = 0.303); HC3 standard errors are nonetheless retained as the conservative choice. The Ramsey RESET test gives no indication of functional-form misspecification (F = 2.06, p = 0.130).

Table 5. Variance inflation factors, primary specification

Variable	VIF
Access to finance	1.17
ln(Size)	1.37
Firm age	1.29
Manager experience	1.20
Exporter	1.29
Foreign ownership	1.06
Sector: Retail	1.71
Sector: Services	1.61
Region: Federation of BiH	1.87
Region: Republika Srpska	1.98

VIFs computed on the unweighted design matrix; values below 5 indicate no multicollinearity concern.

An instructive comparison concerns sample size. In a preliminary specification estimated on 75 complete cases - the sample that remains when the two-year sales-recall item is used - the finance coefficient was large and marginally significant (b = 37.3, p = 0.066). Tripling the usable sample reduced the standard error by approximately the expected factor of $\sqrt{(75/241)}$ or 0.5578, yet significance did not follow, rather the point estimate itself attenuated toward zero. The earlier marginal result thus reflected small-sample variability rather than a robust underlying effect, a pattern consistent with the winner's-curse phenomenon in underpowered estimation and one that underlines the value of the enlarged, weighted sample used here. Given the achieved standard error, the design would detect an effect of roughly 8.8 percentage points or larger with 80 percent power.

The contrast between the weighted and unweighted estimates in Table 4 is itself informative about where in the size distribution the (weak) association resides. The weighted coefficient (b = 2.02) exceeds the unweighted one (b = 0.53) because the weights shift influence toward smaller establishments, which are under-represented in the raw sample; the descriptive statistics show the same pattern, with the weighted credit-holding share (40%) well below the sample share (50%). Any growth premium attached to formal credit is therefore, if anything,

concentrated among smaller firms - precisely the segment where credit constraints are argued to bind hardest (Beck et al., 2008) - but even there the association remains well short of statistical significance, and the difference between the weighted and unweighted coefficients is itself statistically indistinguishable from zero.

V. DISCUSSION

The central finding is a precisely estimated null: among Bosnian SMEs, holding formal credit was not associated with significantly faster real sales or employment growth over FY2019-FY2022. Three considerations frame this result. First, the growth window is dominated by the COVID-19 pandemic and the 2022 inflation surge (cumulative CPI of about 15%). In such a period, credit lines are plausibly drawn to smooth liquidity, retain staff and survive demand shocks rather than to finance expansion; the growth payoff of finance may therefore be deferred rather than absent. Second, the confidence interval [-4.2; 8.2] excludes very large positive effects: the data are informative, ruling out the double-digit growth premia that small-sample estimates suggested. Third, the result aligns with the conclusion of Grimm and Paffhausen (2015) that average effects of finance on small-firm outcomes are modest and heterogeneous, and with Bartlett and Prica's (2017) argument that in the Western Balkans financing constraints bind jointly with demand and institutional constraints - relaxing one margin alone may not translate into measurable growth.

A related study reports a null result for its finance-growth hypothesis using the BEEPS VI (2019-2020) dataset covering 1,859 firms across six Western Balkan countries, of which 362 are Bosnian, with sales growth as the dependent variable. In their pooled model the access-to-finance obstacle is only marginal ($p = 0.051$) and in the Bosnia and Herzegovina country regression it is not significant at all ($\beta = –0.282$, $p = 0.384$) (Rexhepi Mahmutaj & Zylfijaj, 2025). This confirms the difficulty of sourcing data in the Western Balkan region.

Policy implications follow directly. Credit-access programmes evaluated over crisis periods should not be judged on growth alone: continuity, employment retention and survival are the relevant margins, and the employment-growth estimates (mean 1.6% per year among survivors) are consistent with credit having supported precisely those margins (Dudauri, 2023). For research, the results caution against inferring financing-growth effects from small unweighted cross-sections, and illustrate the value of reporting well-powered null results rather than pursuing specification searches for significance.

This study qualifies, without overturning, the view that access to finance is the pre-eminent lever for SME growth in a bank-centric transition economy. The results show that credit-holding firms in Bosnia and Herzegovina do grow faster in the survey-weighted raw data, by 3.5 percentage points, but most of that advantage reflects who obtains credit rather than what credit does for the company. Access to credit is concentrated among larger, exporting firms, and once these characteristics are held constant the remaining association is small and imprecise. This is not evidence that finance is unimportant; the experimental literature (Bruhn & Love, 2014) identifies genuine causal effects, and the study's own power analysis shows that moderate effects cannot be ruled out here. It is evidence that cross-sectional firm-level data of this size cannot separate the treatment effect of credit from the selection of stronger firms into credit, and that the binding-constraint diagnosis for Bosnia and Herzegovina (Davalos et al., 2018) rests more safely on the intensive margin: the suggestive association between the bank-financed share of investment and growth indicates that how much firms borrow may matter more than whether they borrow at all (Léon, 2020).

Several limitations qualify the interpretation. First, the design is cross-sectional: the estimates are conditional associations, not causal effects, and credit holding is itself an outcome of bank screening, so selection into finance operates in both directions - banks may lend to firms with better prospects, which would bias the estimated coefficient upward and makes the null finding all the more notable. Second, only surviving firms are observed. Exiting firms disproportionately experienced negative growth, and credit may have prevented closure, and finally the resilience channel argued for here operates partly outside the estimation sample. Third, listwise deletion assumes data are missing at random conditional on observables; sales non-disclosure plausibly correlates with performance, though the high coverage of the three-year recall item (98% of the raw sample) limits the scope of this concern. Fourth, the WBES universe excludes firms with fewer than five employees and informal businesses, so the findings generalise to the formal SME segment only.

VI. CONCLUSION

Using representative, survey-weighted microdata from the 2023 World Bank Enterprise Survey, this paper estimated the association between access to finance and the real growth of 241 Bosnian SMEs over FY2019-FY2022. The association is positive but statistically insignificant and robust to weighting choices, outlier treatment, outcome definition, measurement of the finance variable and influence diagnostics. The analysis demonstrates that an earlier marginally significant estimate obtained on 75 complete cases was an artefact of low

statistical power. Over a crisis-dominated period, formal credit appears to have underpinned the resilience of Bosnian SMEs rather than differential growth.

The design is cross-sectional; estimates are associations conditional on survival, not causal effects. Future research should pool multiple WBES waves and neighbouring countries to raise power further, exploit the panel component for lagged specifications, and examine post-crisis waves in which the growth payoff of credit may re-emerge.

For policy, the results support a shift in how SME finance programmes in BiH are designed and evaluated. If credit primarily buys resilience during downturns, then instruments that keep credit lines open under stress - counter-cyclical credit-guarantee schemes, of which BiH has comparatively weak coverage (OECD et al., 2022), and refinancing windows for existing SME exposures - deserve priority alongside programmes that simply expand the number of first-time borrowers. Evaluations of such programmes should track survival, employment retention and liquidity indicators in addition to sales growth, and should be powered and weighted to detect the modest effect sizes that the international evidence (Grimm & Paffhausen, 2015) and the present estimates suggest are realistic.

VII. REFERENCES

1. Amin, M., & Viganola, D. (2023). Does better access to finance help firms deal with the COVID-19 pandemic? Evidence from firm-level survey data. Journal of International Development, 35(8), 2578–2608. https://doi.org/10.1002/jid.3787
2. Asllani, G., & Statovci, B. (2017). Economic and development growth — Western Balkan case. Ecoforum Journal, 6(1). https://ecoforumjournal.ro/index.php/eco/article/view/2536
3. Ayyagari, M., Juarros, P., Martinez Peria, M. S., & Singh, S. (2016). Access to finance and job growth: Firm-level evidence across developing countries (Policy Research Working Paper No. 7604). World Bank. https://doi.org/10.1596/1813-9450-7604
4. Bartlett, W., & Prica, I. (2017). Debt in the super-periphery: The case of the Western Balkans. Third World Thematics: A TWQ Journal, 2(6), 825–844. https://doi.org/10.1080/23802014.2017.1438850
5. Beck, T., Demirguc-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different? Journal of Financial Economics, 89(3), 467–487. https://doi.org/10.1016/j.jfineco.2007.10.005
6. Breusch, T., & Pagan, A. (1979). A Simple Test for Heteroscedasticity and Random Coefficient Variation. Econometrica, 47(5), 1287–1294. https://doi.org/10.2307/1911963
7. Bruhn, M., & Love, I. (2014). The real impact of improved access to finance: Evidence from Mexico. The Journal of Finance, 69(3), 1347–1376. https://doi.org/10.1111/jofi.12091
8. Coad, A. (2009). The growth of firms: A survey of theories and empirical evidence. Edward Elgar Publishing. https://doi.org/10.4337/9781848449107
9. Cook, R. D. (1979). Influential Observations in Linear Regression. Journal of the American Statistical Association, 74(365), 169–174. https://doi.org/10.1080/01621459.1979.10481634
10. Davalos, M. E., Vashakmadze, E., & Metzger, M. (2018). Access to finance for micro, small, and medium-sized enterprises in Bosnia and Herzegovina. World Bank Group. https://doi.org/10.1596/29529
11. Dinh, H. T., Mavridis, D., & Nguyen, H. (2010). The binding constraint on firms' growth in developing countries. World Bank Policy Research Working Paper. https://doi.org/10.1596/1813-9450-5485
12. Dudauri, T. (2023). Small and medium-sized business development trends in crisis conditions: Modern challenges and prospects. Ecoforum Journal, 12(3). https://ecoforumjournal.ro/index.php/eco/article/view/1714
13. Efendic, A., Pugh, G., & Adnett, N. (2011). Institutions and economic performance: A meta-regression analysis. European Journal of Political Economy, 27(3), 586–599. https://doi.org/10.1016/j.ejpoleco.2010.12.003
14. European Bank for Reconstruction and Development. (2024). Transition report 2023–24: Transitions big and small. EBRD. https://www.ebrd.com/transition-report
15. European Investment Bank. (2022). Business resilience in the pandemic and beyond. EIB. https://www.eib.org/en/publications/business-resilience-in-the-pandemic-and-beyond
16. Fouejieu, A., Ndoye, A., & Sydorenko, T. (2020). Unlocking access to finance for SMEs: A cross-country analysis (IMF Working Paper No. 20/55). International Monetary Fund. https://doi.org/10.5089/9781513536156.001
17. Grimm, M., & Paffhausen, A. L. (2015). Do interventions targeted at micro-entrepreneurs and small and medium-sized firms create jobs? A systematic review of the evidence for low and middle income countries. Labour Economics, 32, 67–85. https://doi.org/10.1016/j.labeco.2015.01.003
18. Hadžić, F. (2025). Access to finance as a barrier to innovation — Evidence from the SME sector in Bosnia and Herzegovina. EMC Review — Časopis za ekonomiju, 31(2). https://doi.org/10.7251/emc2502331h
19. Henrekson, M., & Johansson, D. (2010). Gazelles as job creators: A survey and interpretation of the evidence. Small Business Economics, 35(2), 227–244. https://doi.org/10.1007/s11187-009-9172-z
20. Khan, S. U. (2023). The firm-level employment impact of COVID-19: International evidence from World Bank Group's Enterprise Surveys. Eastern European Economics, 61(5), 457–490. https://doi.org/10.1080/00128775.2023.2173235
21. Kokorović Jukan, M., Kozarević, E., & Nuhanović, S. (2018). Access to finance in the SME sector: A Bosnia and Herzegovinian perspective. https://www.researchgate.net/publication/328964234
22. Léon, F. (2020). The provision of long-term credit and firm growth in developing countries. Economic Modelling, 90, 66–78. https://doi.org/10.1016/j.econmod.2020.04.023

23. Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. The American Statistician, 54(3), 217–224. https://doi.org/10.1080/00031305.2000.10474549
24. Mastilo, Z., Štilić, A., Gligović, D., & Puška, A. (2024). Assessing the Banking Sector of Bosnia and Herzegovina: An Analysis of Financial Indicators through the MEREC and MARCOS Methods. Journal of Central Banking Theory and Practice, 13(1), 167–197. https://doi.org/10.2478/jcbtp-2024-0008
25. Mekic, A., Halilbegovic, S., & Huric, A. (2017). Forensic accounting as a solution to manipulative accounting of SME's in Bosnia and Herzegovina. Ecoforum Journal, 6(2). https://ecoforumjournal.ro/index.php/eco/article/view/2164
26. OECD, European Commission, European Training Foundation, & EBRD. (2022). SME policy index: Western Balkans and Turkey 2022. OECD Publishing. https://doi.org/10.1787/b47d15f0-en
27. Pytkowska, J., & Korynski, P. (2016). Financing gap and SME employment growth: Beyond access to finance. Microfinance Centre. https://mfc.org.pl/wp-content/uploads/2016/09/Financing-Gap-and-SME-Employment-Growth-research-paper.pdf
28. Rexhepi Mahmutaj, L., & Zylfijaj, K. (2025). Challenges confronting small and medium-sized enterprises: An examination of the Western Balkans context. Journal of East European Management Studies, 30(4), 49269. https://doi.org/10.31083/JEEMS49269
29. Solon, G., Haider, S. J., & Wooldridge, J. M. (2015). What are we weighting for? Journal of Human Resources, 50(2), 301–316. https://doi.org/10.3368/jhr.50.2.301
30. World Bank. (2025a). Enterprise Surveys: Bosnia and Herzegovina 2023 [Data set and methodology]. World Bank Group. https://www.enterprisesurveys.org
31. World Bank. (2025b). World Development Indicators: Inflation, consumer prices (annual %) — Bosnia and Herzegovina [FP.CPI.TOTL.ZG]. World Bank Group. https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=BA
32. Zakariene, J. (2022). Impact of COVID-19 pandemic on Lithuanian small and medium-sized businesses. Ecoforum Journal, 11(3). https://ecoforumjournal.ro/index.php/eco/article/view/1751