Breaking Barriers, Boosting Productivity: A Firm-Level Perspective on Decent Work for Women in North Macedonia

Policy brief No. 74

To boost productivity in female-related businesses, we recommend improving access to finance for innovation, encouraging diversification into high-productivity sectors, providing training in efficiency skills, and link wages to productivity to reward performance.

PROBLEM

North Macedonia has committed to advancing gender equality through national strategies and alignment with international frameworks such as the UN Sustainable Development Goals and the EU's gender mainstreaming policies. The country's *National Strategy for Gender Equality (2021–2026)* outlines priorities for increasing women's labor force participation, improving employment quality, and reducing gender pay gaps. However, despite these efforts, significant disparities persist. As of 2023, only **42.8%** of women in North Macedonia were in the labor force, compared to **62%** of men, reflecting one of the lowest female labor force participation rates in the Western Balkans (State Statistical Office, 2025).

Women continue to face structural barriers in employment and entrepreneurship. They are overrepresented in lower-paid sectors, such as retail and hospitality, and underrepresented in leadership positions, with only **27%** of firms having female top managers (World Bank Enterprise Survey, 2023). The gender pay gap remains a concern, with women earning on average around **10%** less than men, when accounting for education and experience (Finance Think, 2019). While policies promoting gender equity exist, implementation challenges persist, limiting women's access to stable, well-paid jobs and economic opportunities. Addressing these gaps is crucial for fostering inclusive economic growth.

WHAT DOES THE LITERATURE SAY?

The relationship between productivity and decent work has been widely explored in economic and labor literature, with growing attention to how gender dynamics influence firm-level outcomes. Decent work, as defined by the International Labour Organization (ILO), encompasses fair wages, job security, social protection, and safe working conditions—factors that enhance worker motivation, reduce turnover, and improve efficiency (Berg, 2015; Freeman & Medoff, 1984). Empirical studies suggest that firms offering better working conditions experience gains in productivity due to increased innovation, improved labor relations, and greater employee commitment. However, gender disparities persist in access to decent work, particularly in developing and transition economies. Women are more likely to be concentrated in lower-paying, less secure jobs, especially in service sectors and informal employment, limiting their overall contribution to productivity growth (World Bank, 2021).

Evidence suggests that gender diversity in leadership can enhance firm performance. Firms with greater gender balance in top management often outperform male-dominated firms in terms of productivity and financial returns, attributed to more inclusive decision-making and better employee engagement (Hunt et al., 2020; Noland et al., 2016). Female-managed firms tend to emphasize worker well-being and long-term sustainability, contributing to efficiency gains. However, gender-based barriers in entrepreneurship—especially in access to finance—hinder female-owned firms from scaling and achieving higher productivity levels. Studies indicate that women entrepreneurs are more likely to face higher loan rejection rates and stricter borrowing conditions, limiting their ability to invest in technology, workforce training, and market expansion (Klapper & Parker, 2011). Additionally, the concentration of female-led businesses in low-margin industries, such as retail and hospitality, further exacerbates productivity gaps. Addressing these challenges requires targeted policies that promote gender-inclusive labor markets and support female entrepreneurs in accessing financial and institutional resources necessary for business growth.

OBJECTIVE

This policy brief aims to analyze the relationship between productivity and decent work for women in North Macedonia, using firm-level data to examine gender disparities in business performance, employment quality, and access to economic opportunities. By identifying key barriers and drivers of productivity in female-led firms, the study provides evidence-based recommendations to enhance women's economic participation and promote inclusive growth.

DATA AND METHODOLOGY

This study utilizes firm-level data from the **2023 World Bank Enterprise Survey (WBES) for North Macedonia,** which provides insights into business performance, workforce composition, and gender-related firm characteristics. The dataset includes **354 firms** across various industries and ownership structures, with a specific focus on gender disaggregation in ownership, management, and workforce composition.

The analysis begins with a **descriptive assessment of productivity,** measured as **sales per worker,** across firms with different gender-related characteristics. Productivity trends over a three-year period are examined to assess growth dynamics. Additionally, sectoral distribution, firm size, and access to finance are analyzed to identify structural barriers faced by female-related firms.

To further explore the link between **decent work and firm productivity,** the study examines key indicators such as **wage levels, training opportunities, employment stability, and regulatory constraints.** A regression analysis is conducted to assess how firm characteristics and gender composition interfere with the wages-productivity nexus. These findings provide a data-driven foundation for policy recommendations aimed at enhancing women's participation in productive and high-quality employment.

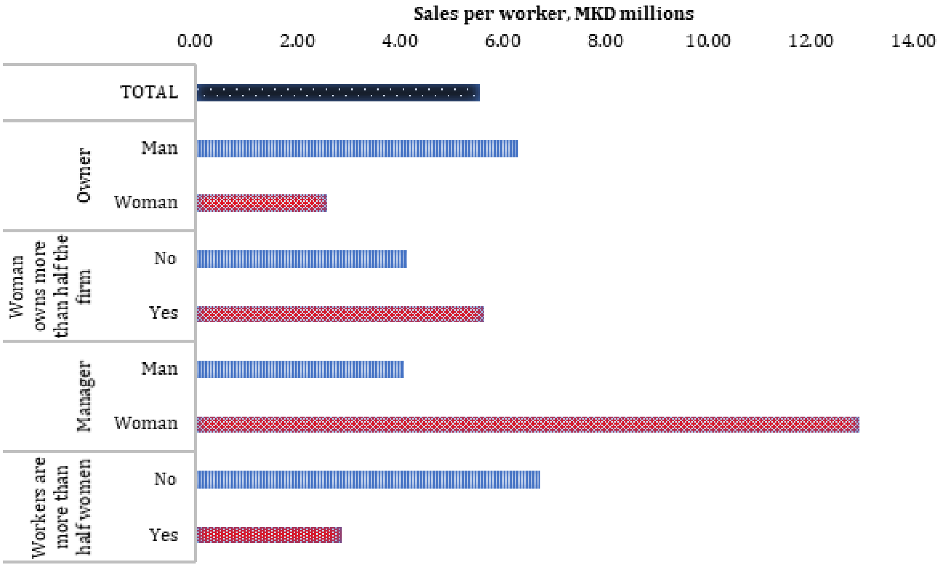
RESULTS AND DISCUSSION

Women's Representation in Firm Ownership and Management & Productivity

To understand productivity, **Figure 1** presents **sales per worker** across Macedonian firms, segmented by gender-related firm characteristics. The highest productivity is observed in **firms managed by women**, where sales per worker exceed those of male-managed firms and the total average. This suggests that female managers may implement more effective management practices, foster inclusive work environments, or leverage employee engagement to drive efficiency. Additionally, it is possible that female-managed firms are concentrated in higher-productivity industries or tend to be larger in size, factors that could explain their superior performance.

However, when looking at ownership, firms **owned by women** show significantly lower productivity than those owned by men. This may indicate that female entrepreneurs face greater barriers in accessing finance, expanding their businesses, or breaking into high-productivity sectors. However, when women own more than half of a firm, productivity levels surpass those of other firms, suggesting that **greater decision-making control might allow women entrepreneurs to implement business strategies that drive efficiency.** This could also reflect differences in firm characteristics, such as sectoral distribution and firm size. On the other hand, firms where **women make up the majority of the workforce** have lower sales per worker, reinforcing the idea that female-dominated industries may be concentrated in lower-revenue sectors.

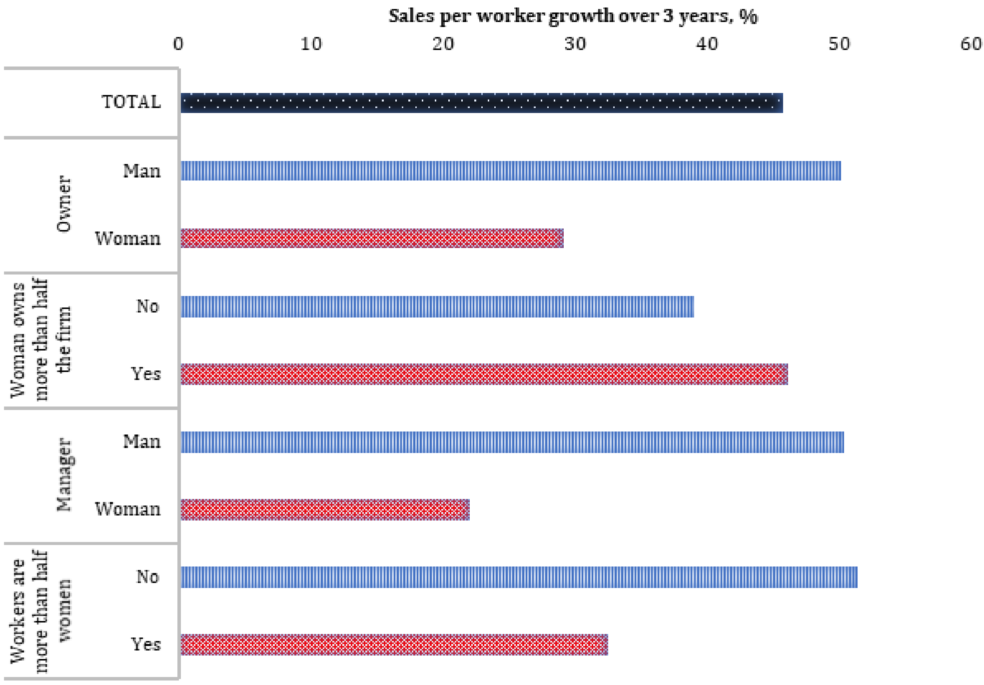
Figure 1 – Productivity in Macedonian firms (2023)



Source: World Bank Enterprise Survey (2023).

Figure 2 illustrates the **growth rate of sales** per worker over a three-year period. Unlike the absolute sales per worker, the **growth trends show a different dynamic.** Here, firms with female ownership exceeding half exhibit strong sales per worker growth, significantly outpacing male-managed firms. This suggests that, despite potential structural challenges, high female ownership may be driving efficiency improvements and business expansion. However, firms **managed by women and dominated by female workers** show weaker productivity growth compared to those managed by men and dominated by male workers, possibly reflecting constraints in accessing capital, networks, or scaling opportunities; and/or concentration in less propulsive industries.

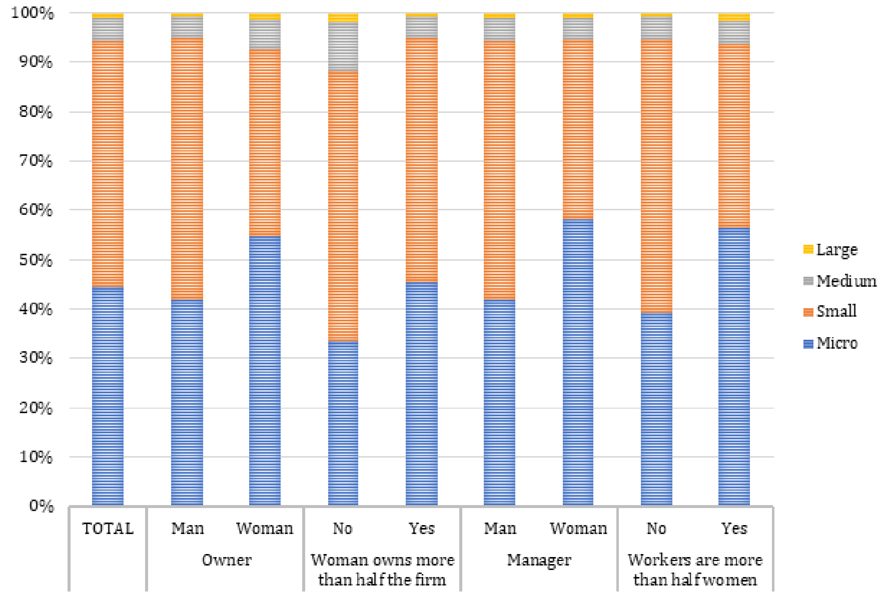
Figure 2 – Productivity growth in Macedonian firms (2023 versus 2020)



Source: World Bank Enterprise Survey (2023).

Such differences may be due to women being concentrated in smaller firms, in low-pay low-productivity sectors and more constrained in access to resources. **Figure 3** reveals that women-related firms – on any axis – are more frequently micro-firms (less than 10 employees), which typically have fewer financial and technological resources, limiting their ability to achieve economies of scale and higher productivity. Interestingly, however, the shares of large firms owned or managed by women are slightly higher than those by men, which could well be related to the presence of some large-firm sectors where women are more represented in any aspect (like textiles). **Figure 4** gives a flavor of the sectoral distribution. It remains relatively consistent across categories, suggesting that gender-related ownership and management characteristics are not related to significantly different sectoral composition of firms. However, there is a visible tendency for women-led or women-owned firms to be more prevalent in services and more so in their lower-pay parts like retail trade and hotels and restaurants, while manufacturing and construction sectors remain male-dominated.

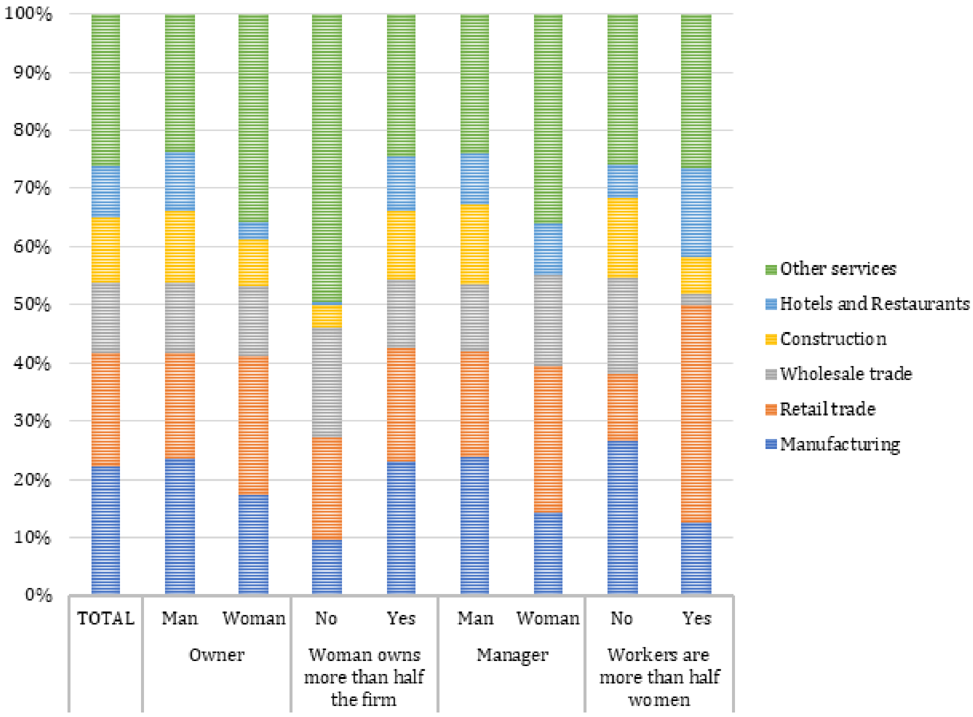
Figure 3 – Structure of firms by size and gender



Source: World Bank Enterprise Survey (2023).

Note: Micro firm (<10 workers); Small (10-49); Medium (50-249); Large (>250 workers).

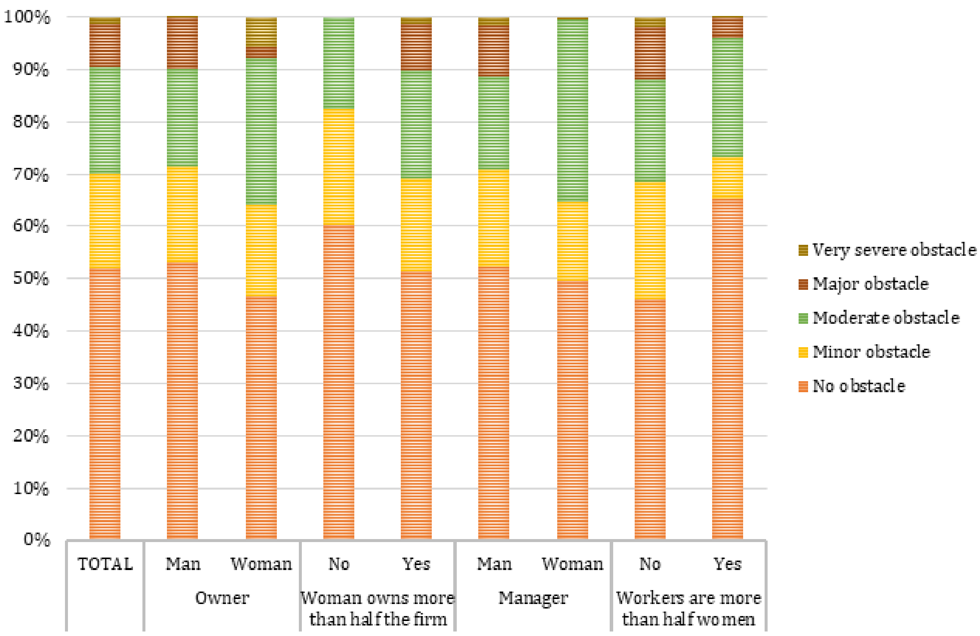
Figure 4 – Structure of firms by sector and gender



Source: World Bank Enterprise Survey (2023).

Figure 5 illustrates the perceived severity of obstacles faced by firms in access to finance, categorized by ownership, management, and workforce gender composition. The distribution of responses is relatively consistent across all categories, with most firms facing minor to moderate obstacles, while a smaller proportion reports major or very severe challenges. Female-owned firms report higher financial access barriers than male-owned firms, likely due to structural biases in lending practices and the fact that women entrepreneurs often have fewer collateral assets. In contrast, female-managed firms, which may not require direct capital investments, report similar financial access levels to male-led firms.

Figure 5 – Assessment of firm's access to finance and gender



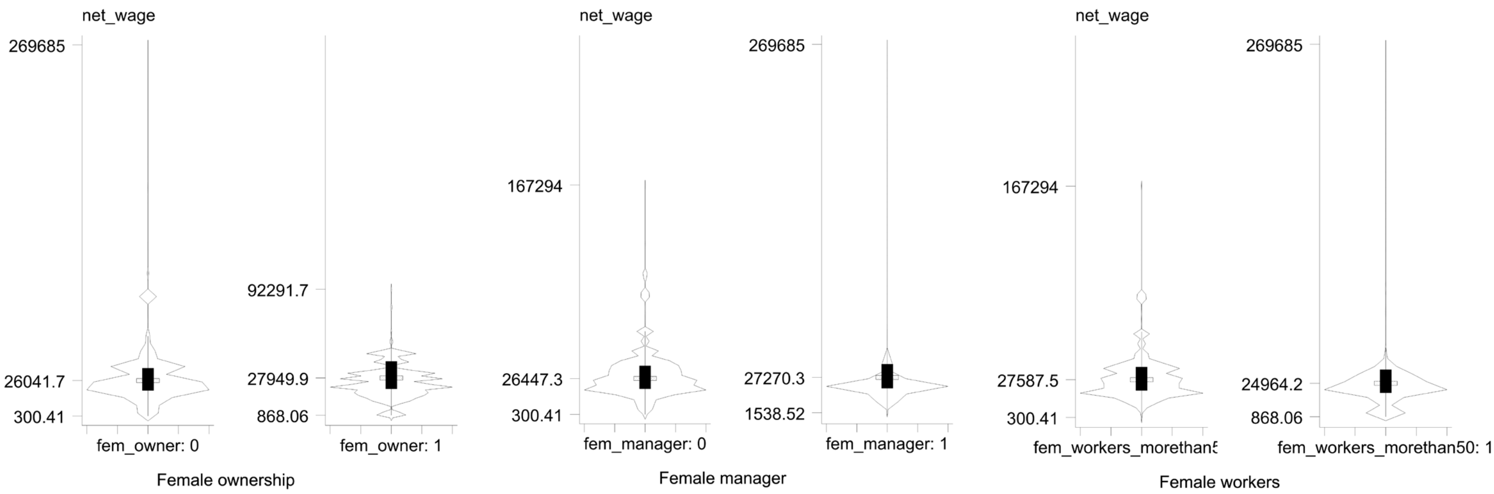
Source: World Bank Enterprise Survey (2023).

Overall, while female-managed firms exhibit higher productivity, female-owned firms face greater challenges. Women-led businesses are more concentrated in micro-firms and lower-pay service sectors, which may contribute to lower overall productivity. Financial constraints appear more pronounced for women-owned firms but less so for female-managed or female-dominated workforce firms.

Employment Quality, Wage Gaps, and Training for Women

Firms who are owned or managed by a woman pay slightly higher wage than those by man (Figure 6). The opposite holds true when the firm is women-dominated. However, in two of the three cases, the distribution when a woman is involved is wider on the right tail, i.e. there are more firms managed by women and dominated by women workers when it comes to the highest wages.

Figure 6 – Distribution of the firm's average wages and gender



Source: World Bank Enterprise Survey (2023).
Note: The wage is defined as the average net monthly cost for the firm of labor including wages, per worker, minus social security payments and employment-based taxes, but including bonuses.

We examine wage behavior and its relationship with firm productivity by running a simple regression of potential wage determinants, incorporating the firm's human capital endowment, years of operation, size, and sector. This approach, to some extent, mimics a Mincerian earnings function, which typically explains individual wages based on education and experience. The results, presented in **Table 1**, reveal no statistically significant differences in average wages between female-related firms and the rest of the sample. However, the interaction between productivity and wages varies depending on the firm's gender composition. Specifically, in the full specification, a **1% increase in productivity leads to a 0.9% rise in average net wages,** indicating a positive productivity-wage linkage. However, this effect is notably stronger in **female-owned** and **female-worker-dominated** firms, where wage responsiveness to productivity is significantly higher.

In **female-owned firms**, the elasticity rises to 1.4%, suggesting that women-led businesses distribute productivity gains more generously, possibly as a strategy to attract and retain talent in a competitive environment. In **female-worker-dominated firms**, the effect is even more pronounced, with an elasticity of 2.7%, which may reflect sectoral concentration in industries where wages are more directly tied to firm performance or labor-intensive production models. Additionally, **firm size and years of operation positively influence wages**, as larger and more established firms tend to pay higher wages due to better financial stability and bargaining power. Sectoral differences play a role, but only in the case of female-owned firms, suggesting that industry-specific wage structures are more relevant when women are in ownership positions rather than managerial roles or workforce composition.

Table 1 – Firm's wages and productivity

Dependent variable: Log of the net monthly average wage per firm					
		ALL	**Female owners**	**Female managers**	**Female worker dominated**
Female owner		-0.0859			
		(0.137)			
Female manager		-0.172			
		(0.163)			
Female workers dominated		-0.069			
		(0.120)			
Log of productivity		0.0895*	0.141*	-0.0218	0.272*
		(0.046)	(0.072)	(0.072)	(0.161)
Share of workers with high skills		0.00302	-0.00665	-0.00259	0.00139
		(0.002)	(0.005)	(0.005)	(0.003)
Years of operation		0.00592	0.00507	0.0275**	0.0339**
		(0.005)	(0.006)	(0.013)	(0.013)
Number of workers		-0.000305	0.000797***	0.00190*	0.0000203
		(0.001)	(0.000)	(0.001)	(0.001)
Sector (ref. = Manufacturing)	Retail trade	-0.209	0.327	0.678	-0.0161
		(0.163)	(0.314)	(0.573)	(0.295)
	Wholesale trade	-0.0616	0.548**	0.906	0.369
		(0.149)	(0.230)	(0.619)	(0.429)
	Construction	0.0453	1.229**		0.885*
		(0.172)	(0.536)		(0.485)
	Hotels and Restaurants	-0.183	-0.192	0.744	0.611
		(0.176)	(0.375)	(0.744)	(0.426)
	Other services	0.122	1.098**	0.68	0.832*
		(0.183)	(0.490)	(0.633)	(0.437)
Constant		6.960***	8.616***	7.548***	9.075***
		(0.756)	(0.704)	(1.141)	(1.050)
Observations		324	81	64	129
R-squared		0.148	0.511	0.383	0.378

Source: Own calculations based on the World Bank Enterprise Survey (2023).
*Note: *, ** and *** refers to 10%, 5% and 1% level of significance, respectively. Robust standard errors provided in parentheses. Population weights used accordingly.*

Analyzing aspects of employment quality, the indicator of the availability of formal training programs for permanent, full-time workers reveals that female-related firms tend to provide more opportunities (**Figure 7**, upper left). This can be attributed to several factors, such as a potential emphasis on promoting gender equality within the workplace, fostering skill development to close gender gaps, and encouraging long-term career advancement for female employees. On the other hand, female owners more frequently employ seasonal and temporary workers, which is not the case for female managers as well in firms where women dominate as workers (**Figure 7**, upper right). This presents mixed implications, suggesting that while female ownership may be associated with greater flexibility in workforce composition, it could also indicate structural challenges that limit long-term employment stability. This pattern may reflect industry-specific dynamics, strategic labor cost management, or a response to market uncertainties, rather than a uniform approach to employment quality across all female-led firms. Finally, women-related firms are less frequently involved in labor disputes (**Figure 7**, lower left) and partially performed better in 'health and safety' inspections (**Figure 7**, lower right). Overall, employment quality tends to be higher in female-related firms. They not necessarily pay higher wages (though not lower), but wage responsiveness to productivity is stronger in female-owned (1.4%) and female-worker-dominated firms (2.7%), suggesting a stronger productivity-wage link. Female-related firms offer more training programs, likely promoting gender equality, while female managed employ fewer temporary workers, reinforcing the role of job stability. Women-related firms also report fewer labor disputes and to some extent performed better in 'health and safety' inspections.

Business Environment and Barriers to Women's Economic Participation

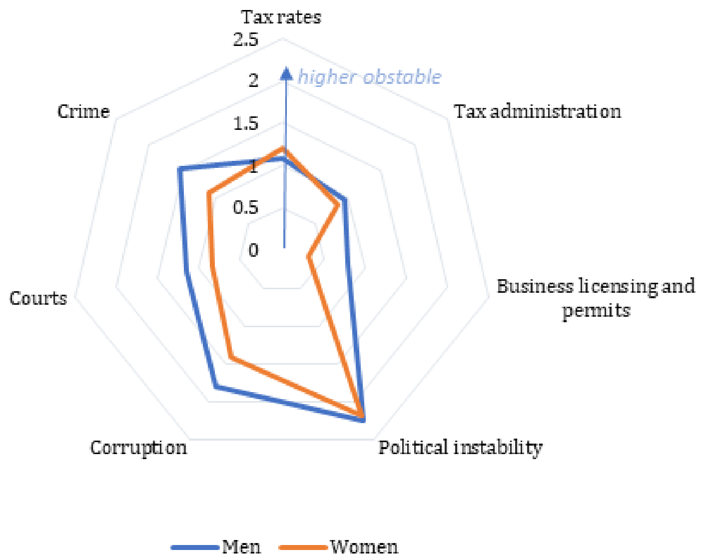
Women-managed firms generally encountered fewer obstacles in interactions with government agencies, courts, and corruption-related matters, suggesting either more efficient compliance strategies or differences in sectoral distribution (**Figure 8**).

However, taxation remained a notable challenge, potentially due to stricter scrutiny, complex regulations, or limited access to financial advisory support. Notably, corruption did not appear to be a widespread issue, as in 92% of cases—regardless of the firm's leadership—no gift or informal payment was expected or requested during inspections or meetings.

Figure 8 – Availability of formal training programs and share of seasonal workers

Source: World Bank Enterprise Survey (2023).

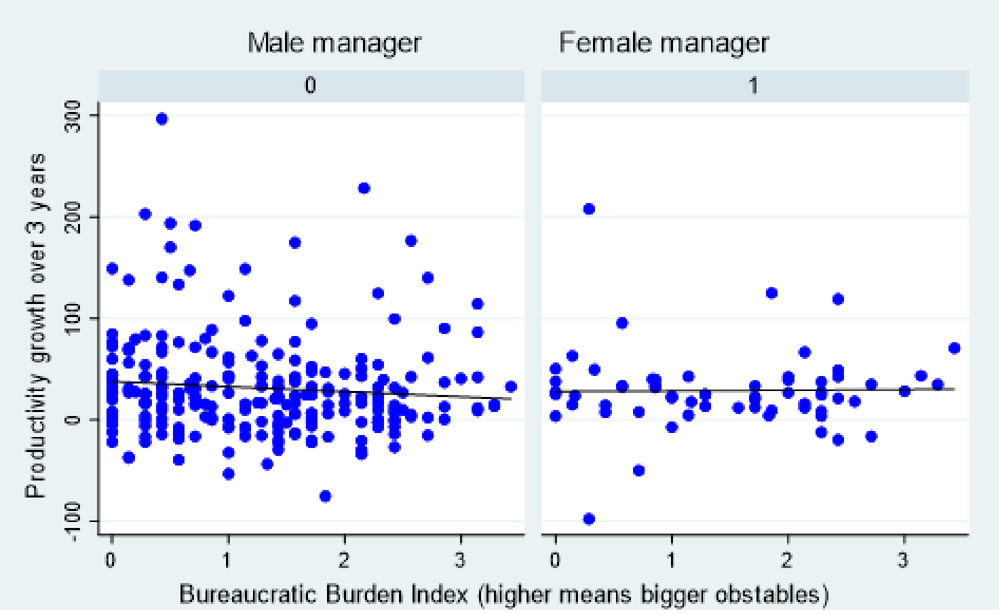
Figure 7 – Bureaucratic Burden Index: Female vs. Male-Managed Firms



Source: World Bank Enterprise Survey (2023).

Such bureaucratic burden is more frequently related to slower productivity growth in firms managed by men, while the relationship is inexistent, even positive, in firms managed by women (Figure 9). It could be that women in leadership positions may either be better equipped to mitigate bureaucratic delays or may foster environments where the bureaucratic processes are seen as necessary for long-term stability and growth. Furthermore, women leaders may prioritize more inclusive decision-making processes that reduce friction, even within bureaucratic structures, resulting in a eliminating detrimental effects that bureaucracy could exert on productivity growth.

Figure 9 – Bureaucratic Burden Index and Productivity



Source: World Bank Enterprise Survey (2023).

CONCLUSION

In conclusion, female-managed firms tend to exhibit higher productivity, stronger wage responsiveness to productivity, and better employment quality, with fewer labor disputes and more training opportunities. However, female-owned firms face greater challenges, particularly in terms of financial constraints and concentration in lower-pay, micro-firm sectors. Despite these challenges, women-led firms generally navigate bureaucratic processes more efficiently, with fewer obstacles in dealings with government agencies and corruption-related matters.

To further support productivity and enhance the performance of female-managed firms, the following recommendations can be considered:

- **Improve access to finance for productivity investments:** Provide targeted loans and financial advisory services to support investments in technology, automation, and innovation in female-led businesses.
- **Encourage sectoral diversification:** Offer incentives and training programs to help female entrepreneurs expand into higher-productivity sectors like technology and manufacturing.
- **Support capacity building for efficiency:** Provide training in productivity-enhancing skills such as lean management, digital tools, and process optimization tailored to women entrepreneurs.
- **Strengthen the productivity-wage link:** Implement policies that tie wages more closely to productivity, offering incentives for firms to improve efficiency and reward performance.

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