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Policy Brief

Africa's Female Entrepreneurs – Towards Funding Success

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KEY POINTS

- Calculating alternative measures for productivity, we confirm a productivity gap of 10 percentage points for Ghana's businesswomen.
- Businesswomen are significantly less likely to export than their male peers.
- Our regressions reveal that businesswomen suffer most from lack of finance.
- One answer to this underfunding problem may lie with technology (help with online sales platforms and in formulating business plans for micro-financiers).

Opportunities for well-paid employment for women are scarce in many African countries. Entrepreneurship is therefore one way in which women can earn a decent livelihood for themselves and their families. Despite the potential opportunities arising from entrepreneurship, the possibilities are often not fully exploited. Female entrepreneurs in the developing world are severely underperforming. Such is the conclusion of several studies which point to a gender productivity-gap (Aterido, Beck and Iacovone; 2013; Bruhn, 2009; Davies and Mazhikeyev, 2021; Hallward-Driemeier, 2013). Apart from a productivity-gap, compared with their male-owned peers, firms owned and managed by women are usually smaller. Moreover, a disproportionately high number of female entrepreneurs are located in lower skilled sectors such as textiles. For African business women to realize the full potential form entrepreneurship, it is crucial to understand the drivers of the performance-gap. So far, the reasons put forward for this gender performance-gap are largely anecdotal, at best interpretative. Empirical explanations for the performance-gap are scant. For countries in Africa, women may face discrimination in sourcing finance, among other things (Davies and Mazhikeyev, 2021; Fafchamps et al, 2010; Hallward-Driemeier, 2013).

The purpose of this policy brief is twofold. Firstly, we measure the scale of the gender productivity gap, using a variety of productivity measures. Secondly, we observe the extent to which self-reported finance constraints underpin this productivity gap. Our regressions reveal that lack of finance is the most severe constraint facing female entrepreneurs. Lack of finance also emerges as the main reason for the productivity gap. To investigate our research question, we use data from the Ghanaian ISSER-IGC panel for almost 700 male and female entrepreneurs in Ghana over the time period 2011 to 2015. Ghana is sometimes cited as a textbook case of female participation – a poster-child for other developing countries to follow (MIWE Report, 2018). This African country can boast of the highest percentage of women business owners in the world (circa 46 percent). And these women are not just driven to business out of necessity (MIWE Report, 2018). The percentage of businesswomen motivated by profit-making opportunities is a healthy 80 percent of that of males. Ghana also ranks highly in terms of the number of female business leaders. However, these female-owned businesses are often outside the formal sector and are characterized as traditional industries (e.g. textiles). As such, the scope to expand production, enhance productivity and export is limited.

Like the case of Ghana, some of the least wealthy and developed economies have higher women business ownership rates than their wealthier developed global peers. But this headline figure of high female business participation can mask a more sobering reality – opportunities for productivity improvements and profitmaking may remain difficult.

The ISSER-IGC panel has been used by others to investigate questions relating to developing country firms, including questions touching on gender inequalities (Abeberese et al, 2019). In the survey, entrepreneurs were asked to rank the most crippling barriers facing their businesses. By examining the responses of those participating in the survey, and how the role of gender interacts with a set of key business constraints (including finance) in our productivity regressions, we can help to isolate the mechanisms underlying any productivity-gap. Only then, can we suggest ways in which Government and other stakeholders (e.g credit institutions) can best support female entrepreneurs. We begin by visiting other studies, helping us to pick out the most crippling business constraints facing Ghana's businesswomen.

Access to finance

Top of our list of barriers to the success of Africa's businesswomen is access to finance. A novelty of our analysis – to our knowledge, an aspect not covered in work by others – is that we pose the question, '*Are these constraints (e.g. lack of finance) facing Africa's entrepreneurs, more harmful for the productivity of businesswomen?*' To answer this question, we use a double interaction term, showing the severity of the constraint for female versus male entrepreneurs.

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Table 1 Gender gap in productivity and business constraints

Dependent variable:	log TFP			
Business constraint (BC) included:	access to finance	taxation	bribery	market access
Female-owned	0.3341*	0.0058	-0.0120	-0.0328
	(0.1846)	(0.1510)	(0.0970)	(0.1242)
BC (lagged)	0.0099	0.0065	0.0026	-0.0046
	(0.0164)	(0.0154)	(0.0165)	(0.0133)
Female-owned x BC (lagged)	-0.0596**	-0.0174	-0.0290	-0.0123
	(0.0241)	(0.0230)	(0.0271)	(0.0203)
Control variables	firm age, firm size, full sets of industry, location and year dummies			
Observations	2903	2901	2898	2902
R-squared	0.095	0.093	0.093	0.093

Notes: Estimates from four OLS regressions, each containing one of the four business constraints. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

There are good reasons to suspect lack of finance is a problem encountered by Africa's business community. Cho and Honorati (2014), synthesizing the work of several development economists in a meta-analysis, cite access to competitively priced finance as a key business barrier. By extension, taxation is also a problem. Taxes divert much-needed liquidity from the business. Moreover, filing tax returns is a time-consuming administrative task – one that necessitates considerable numerical and clerical skills. Sadly, these skills may be lacking in female entrepreneurs, inferring from the Hallward-Driemeier (2013) finding that many women in Africa do not enjoy the same benefits from education as their male peers. In concrete terms, two variables in our survey data, 'access to finance' and 'taxation' pick up these financial constraints. To elicit this information, respondents to the ISSER-IGC survey were asked to rank several constraints in terms of their effects on the firm's annual operations.

Even if we control for the presence of women in different industry sectors (e.g. textiles) or the smaller average size of their businesses, our regressions reveal that 'access to finance' is the most severe constraint facing female entrepreneurs.

Females lacking essential education and know-how

We have already alluded to Hallward-Driemeier (2013) – her remarks on the educational deficits of many of Africa's women. One consequence of this education deficit may be the inability to spot a market opportunity. Significantly, poorly educated entrepreneurs (women belonging disproportionately to this group) may not only find it difficult to identify a market opportunity, but also to exploit it. Accordingly, we include the variable 'market access' to capture this idea of unrealized sales potential.

Females excluded from business networks

Hallward-Driemeier (2013) similarly refers to the exclusion of females from business networks. One important way in which business deals get transacted is through the payment of bribes. These bribes can be considered the glue in some (but not all) business networks. But there are gender differences in the making of these informal payments, with females more likely to report these as a problem.[1] For this reason, we include the variable 'bribery' to help pick up any gender-bias in the perception of bribes.

Gender productivity gap

We begin by estimating the Total Factor Productivity (TFP) for the entrepreneurs in the ISSER-IGC panel.[2] Unsurprisingly and in line with previous studies, female entrepreneurs are associated with a lower productivity than their male peers (see also Davies and Mazhikeyev, 2021). This female productivity-gap is a stylized fact. For this reason, we do not report our productivity regressions here. However, we can note that the magnitude of the gap in our regressions is -10 percentage points. Similarly, businesswomen are also significantly less likely to export than their male peers (1.7 percent less likely).

Gender productivity gap and business constraints

In a next step, we use the estimated TFP and explore different business constraints as potential drivers of the gender productivity gap. **Table 1** reports our main results. None of the other business barriers affects productivity as adversely as the 'access to finance' variable. In fact, 'access to finance' is the only constraint which affects women significantly more than men.

We can illustrate the same information from our regressions in **Table 1** also as a set of margins plots, which show the estimated coefficient and the associated confidence band. In **Figure 1**, we can see that where female entrepreneurs dismiss 'access to finance' as a problem (low values on the y-axis), Total Factor Productivity (TFP) is higher. Not only is TFP higher in absolute terms, but it is also higher for these women compared to their male peers (orange dot denoting women to the extreme right – green dot for men to the left).

The flipside to the higher productivity registered by ***financially unconstrained businesswomen*** is that financially constrained businesswomen significantly underperform their male equivalents. From this, we can conclude that access to finance affects male and female entrepreneurs differently. Put another way, although a fraction of male entrepreneurs is similarly unable to source finance to cover their business needs, the productivity of these males is less handicapped by a lack of finance.

1 Hallward-Driemeier (2013) has noted that there is a greater similarity in responses between males and females to the Ease of Doing Business Survey, than exists between large and small firms. However, a regression-based approach – as we use here – helps to spot any residual differences, when firm size and other sources of heterogeneity are controlled for.

2 One novelty of our study is that we estimate Total Factor Productivity (TFP) in several different ways, to help increase confidence in the point estimates. On balance, our favoured estimation method is the Ackerberg–Caves–Frazer method, popularized by Manjón and Mañez (2016). A full set of these TFP results is available on request.

Figure 1: Access to finance and the productivity gender gap

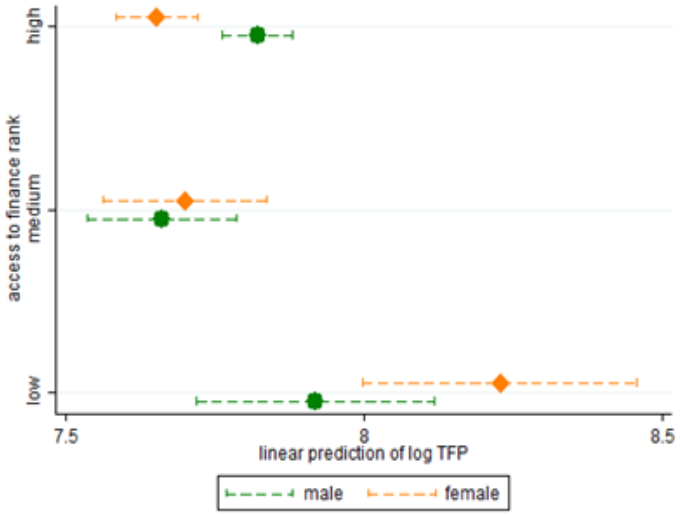
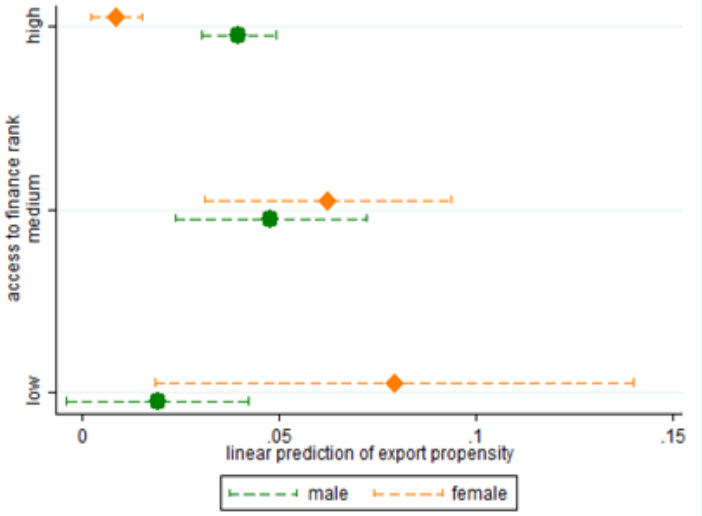


Figure 2: Access to finance and the export gender gap



Generally, however, entrepreneurs of both sexes who successfully obtain finance can realize higher productivity levels (women, even more so). Therefore, far from the finance being 'wasted' on female entrepreneurs, those females unconstrained by lack of funds perform comparatively well at translating any investment into higher productivity. This result for higher finance being associated with higher productivity is unlikely to be a chance finding in the data. When we repeated the regressions for ***exporting*** rather than ***productivity***, a similar pattern emerged (**Figure 2**).

In the context of exporting, those female entrepreneurs receiving adequate funding (scoring low on the access to finance ranking), are significantly more likely to export, than would be the case if funding were limited. The picture is less clear-cut for males. Here we see that for male entrepreneurs the likelihood of exporting is almost unaffected by the extent to which they report access to finance as a concern. For female entrepreneurs, this is not the case. Indeed, there is a monotone increase of the export rate with raised access to finance for women.

Conclusions

To shed light on the performance gap of Africa's businesswomen, we perform a productivity analysis for Ghana's female and male entrepreneurs. Specifically, we pick out several barriers to success that are highlighted (but not investigated) in other studies. The evidence from our productivity regressions supports the findings of others (Aterido, Beck and Iacovone, 2013; Davies and Mazhikeyev, 2021) – Africa's female entrepreneurs are not doing as well as their male counterparts. Moreover, this finding is robust to different ways of defining productivity. Zeroing in on the reasons for this performance gap, we see that women who cited access to credit as an important impediment, reported significantly weaker productivity performance than their male peers. This finding holds up even when our regressions account for the role of industry, business size and other characteristics of enterprises. This is an important consideration since women tend to occupy the more traditional sectors with little potential for productivity improvements or growth (Hallward-Driemeier, 2013).

Our insights on exporting are worth a second glance. The best-financed female entrepreneurs are significantly more likely to launch exports than their male peers. This evidence for Ghanaian female exporters ('success stories'), echoes the findings of Davies and Mazhikeyev (2021). The latter revealed how the largest firms run by businesswomen are very different to the smallest firms run by females.

One main message is that female entrepreneurs desiring to tap into value- and quality-driven demand, must aim to succeed on the export markets. And Africa's female entrepreneurs are no exception to the economic imperative to export. Most reassuringly, we find that those businesswomen ***not*** facing funding constraints are associated with stronger productivity and exports than their male peers. Perhaps, it is time for administrators of Africa's burgeoning Special Economic Zones (SEZs) to redouble their efforts to target these female-owned businesses best able to appropriate gains from exports. The issue of finance, however, is unlikely to fall within the scope of SEZs, unless the SEZ has provision for liberalizing or attracting investment.
Apart from leveraging the value of SEZs, there are other support possibilities for Africa's businesswomen. Already technological platforms exist allowing businesswomen to sell their products on the ***domestic market*** from home. An emerging group of online services is already fulfilling this need (examples include *Jumia* and *Takealot*, in Africa alone). Additionally, the use of cooperatives could help female entrepreneurs to optimize their exports by spreading the costs of advertising, certifying and distributing their products.

With respect to the focal point of our analysis – lack of finance – past studies have proposed initiatives to promote and support microfinance (Addai, 2017). In a randomized control trial conducted in Ghana, microlenders granting loans to 'marginal' (less obviously creditworthy) borrowers were able to do so without eroding their profitability. With this in mind, technological support (provision of decision-aids such as simple credit scoring models) could be extended to Ghana's microfinanciers. The desired result would be an expansion of micro-credit, without necessarily eroding the profits of the lenders. Businesswomen too could be helped. One possibility would be to make enhanced use of technology (assistance with webpages, finance and accounting software). Such IT support could prove useful for businesswomen to promote their products, making it also easier for lenders to evaluate the potential of any business

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plans submitted as part of a loan application.
Overall, while technology represents one solution to the problem of Africa's underperforming businesswomen (online sales platforms, technology-assisted microfinance) there is no silver bullet for narrowing the productivity gap. The solution may involve a combination of approaches. In any case, there is enormous economic potential of optimizing funding to females, in a country where 46 percent of all the businesses are owned by females.

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