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Crossovers in Botswana: Women Entrepreneurs Who Operate in Male-Dominated Sectors

Output for Women Entrepreneurship Study (P164089)

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Abstract

To build on its successful rise to Upper-Middle-Income Status, Botswana needs to diversify its economy which has been largely driven by the public sector and the diamond industry, which has created few jobs and limited spillovers. One priority for achieving this which has been highlighted in recent work is the need to raise returns to non-farm self-employment, including by improving the productivity of micro and small enterprises. This may be particularly important for women-owned businesses, with research from across the region showing that women owned businesses tend to be less profitable than their male-owned counterparts. Using data collected from microenterprises in Gaborone, Botswana, this paper finds that women who cross over into male-dominated sectors make higher profits and grow larger firms in terms of number of employees compared to women who operate businesses in female-concentrated sectors. Women's likelihood of entering a male-dominated sector appears to be influenced by their level of education and their exposure to male-dominated sectors, including through work experience. While we do not find evidence that spouses help women to enter male-dominated sectors, we do find evidence that spouses support women's business performance outcomes in the sector they choose to operate in, such as by providing skills, access to finance/capital, and by helping with standard business processes, such as business registration. We suggest that any policies to encourage more women to cross over into male-dominated sectors focus on those women who share more of the characteristics of 'opportunity' rather than 'necessity' entrepreneurs and that such policies will need to be informed by an understanding of the types of challenges, including those that may be driven by discrimination, women tend to face when they operate in a male-dominated sector.

1. Introduction

Women in Sub-Saharan Africa have the highest labor force participation rate of any developing country region in the world. Women in Sub-Saharan Africa are also more likely than women of any other region to work as entrepreneurs and are more likely than men to be engaged in entrepreneurship. Among the non-agricultural workforce, almost 50 percent of women in the region (compared to less than 40 percent of men) are entrepreneurs, with the vast majority of these women being self-employed, rather than employers (World Bank, 2019).

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However, it is likely than many of these women go into entrepreneurship because of a lack of opportunities in wage employment and not because they necessarily have the right skills or experience or because they have identified a good opportunity. Sub-Saharan Africa is the region with the lowest ratio of 'opportunity' entrepreneurs to 'necessity' entrepreneurs (GEDI, 2018). Within the region, women may be even more likely than men to be necessity entrepreneurs, given the greater constraints they face to accessing wage jobs, which may push them into entrepreneurship as a last resort. Such constraints include lower education and skill levels, a greater share of child care and other domestic tasks, and possible discrimination in the wage job market. Indeed, previous research in Botswana indicates that while most microenterprises are 'necessity'[2] rather than 'opportunity' enterprises, this is even more the case for women-owned businesses (World Bank, 2011).

As outlined in the World Bank's (2019) Profiting from Parity report, beyond making the decision to become entrepreneurs, rather than wage workers, women face a series of constraints that influence their strategic decisions and ultimately contribute to weaker business performance outcomes. The report finds that, across 10 Sub-Saharan African countries, women entrepreneurs' profits are an average of 34 percent lower than those of their male counterparts, while their sales and value added are 38 percent lower.

One of the most important of the strategic decisions a business must take is on which sector to operate in. Research indicates that sectoral sex segregation is one of the factors underpinning women's inferior business performance outcomes (e.g. De Mel, McKenzie, and Woodruff, 2008) with women tending to operate businesses in less profitable sectors. This issue was examined in recent studies on Uganda (Campos et al, 2015) and Ethiopia (Alibhai et al, 2017) which found that women who operate in male dominated sectors make the same profits as men in these sectors and make significantly higher profits than women operating in female-concentrated sectors. On the other hand, a recent global paper that uses data from 97 countries, finds that while women in male-dominated sectors make higher profits than women in female-concentrated sectors, they still make less than the men operating in male-dominated sectors (Goldstein, Martinez, and Papineni, 2019).

This paper builds on these studies by investigating these issues looking at the specific case of Botswana. We use data collected from 637 formal and informal microenterprises in Gaborone, the capital city of Botswana, to answer three main research questions: (1) How do crossovers perform compared to non-crossovers and men-owned businesses in men-dominated sectors?; (2) How are crossovers and their businesses different from non-crossovers?; (3)What are the main constraints for business growth for men- and women-owned microenterprises, in both the informal and formal sectors?[3]

Answering these questions is relevant to key development challenges in Botswana. The country's impressive growth trajectory since independence, with its achievement of Upper-Middle-Income status, has been largely driven by the public sector and diamond industry. This model has not encouraged a strong and dynamic private sector and has hindered job creation and the sustainability of growth. While mining accounts for 25 percent of GDP (and minerals account for 90 percent of exports), it accounts for only 2.5 percent of national employment, with limited spillovers (World Bank, 2015). The unemployment rate is over 17 percent, with high levels of inactivity and low participation, especially among youth and women; half of the population in the 20-24 age group are either unemployed or inactive. The inability to create jobs, especially in the service sector where Botswana has more competitive advantages, is undermining the country's efforts to reduce high inequality and

[2] The authors of World Bank (2011) use the terms 'active' and 'involuntary' entrepreneurs, rather than 'opportunity' and 'necessity' entrepreneurs.

[3] Throughout this paper, we refer to women operating in male-dominated sectors as "crossovers" and women operating in female-concentrated sectors as "non-crossovers". We do not look at men in female-concentrated sectors, so any mention of men in this paper refers to men operating businesses in male-dominated sectors.

eradicate extreme poverty. To counter these issues, recent work such as the World Bank's Systematic Country Diagnostic (SCD) for Botswana has highlighted the need to raise returns to non-farm self-employment, including by improving the productivity of micro and small enterprises. This is particularly important given the high business failure rate in Botswana compared to its peers (World Bank, 2015). While Botswana has long had government programs supporting small, medium, and microenterprises, it is thought that these programs have been generally unsuccessful in reaching microenterprises, potentially because they are not well targeted to the needs of the smallest businesses and may not be affordable to them (World Bank, 2011).

The need to raise the productivity of microenterprises is especially relevant to women: while high skilled women in Botswana find opportunities with wage jobs in the public sector, where they outnumber men and where 70 percent of university-educated women work, less educated women and women from poorer backgrounds tend to be unemployed or self-employed, especially in low-productivity micro enterprises and the informal sector (World Bank, 2015). So, while females have had higher enrollment rates at primary, secondary, and tertiary levels of education for many years, among microenterprise owners women appear to have lower levels of education than men (World Bank, 2011), indicating that small-scale entrepreneurship is selected by the most disadvantaged women. Evidence also suggests that there is significant sector-based sex segregation of male and female entrepreneurs in Botswana; women are over represented in sectors, such as personal services, hotels and restaurants, textile manufacturing and retail, while men are represented in more profitable sectors, such as construction and electronics/IT (Botswana Central Statistics Office, 2009). Given this context, it would be useful for policymakers to understand how some women in Botswana are able to cross over into male-dominated sectors and the impact this has on their business performance outcomes.

Our results are broadly consistent with those of Campos et al (2015) in Uganda and Alibhai et al (2017) in Ethiopia, with some notable differences. In terms of profits, we find that women who operate in male-dominated sectors make just as much as men in those sectors and make significantly more than women who operate in female-concentrated sectors. However, our sensitivity analysis also finds that these results are partly driven by the profits of high-performing outliers. These outliers tend to be foreign-born owners or those who jointly own their business with another owner. Our results specifically highlight the positive impact on women's profits of jointly owning a business with a spouse. After accounting for the role of high-performing outliers, our results look similar to those found by Goldstein, Martinez, and Papineni (2019), with crossovers earning higher profits than non-crossovers but less than men.

Consistent with the studies in Uganda and Ethiopia, our results on the correlates of being a crossover highlight the importance of exposure to male-dominated sectors. However, unlike in Uganda (Campos et al, 2015) and across the 97 countries covered by Goldstein, Martinez, and Papineni (2019), where the impact of this exposure was seen in terms of women having had a male role model, and unlike in Ethiopia (Alibhai et al, 2017) where it was seen in terms of having a spouse who is also an entrepreneur, in Botswana the positive impact of exposure is through having had prior work experience or training in male-dominated sectors. However, once women are operating in a male-dominated sector, we find evidence that their spouses provide significant support to help them succeed. Additionally, unlike in the other crossovers studies, the level of education of crossovers and their mothers' is a significant correlate of operating in a male-dominated sector, as is being a foreign-born business owner.

Finally, regarding the main constraints to growth, we see consistencies as well as differences between women and men. Access to finance is a key challenge for all firms, with women and men owners equally likely to list it

as the most important problem they faced when they opened their business. However, women (both crossovers and non-crossovers) are more likely than men to identify finding a business location as the most important problem, while non-crossover women are more likely than both cross-overs and men to list weather conditions as the most important challenge.

The remainder of this paper is organized as follows: section 2 explains how we classified businesses as either male-dominated or female-concentrated and explains the identification and collection of our study sample; section 3 presents the results of our study related to business performance, the correlates of being a crossover, and differences in business challenges and characteristics between the three groups of entrepreneur we look at (men, crossovers, non-crossovers); and chapter 4 concludes.

2. Data

2.1 Classification of sectors as male-dominated or female-concentrated

The study's research questions and objectives required us to define a sample structure that allows for comparisons between men-owned enterprises in male-dominated sectors, women-owned enterprises in female-concentrated sectors (non-Crossovers) and women-owned enterprises in male-dominated sectors (crossovers).

The first step to define the sample of firms was to identify the business sectors in which these firms operate. The sample includes twenty-eight business sectors, as shown in figure 1. It does not include agricultural, forestry and fishing sectors, as the focus of the study is the urban area of Gaborone. We also excluded sectors for which a university degree is the minimum requirement to open and operate a business, as the policy focus of this study is on microenterprise owners who tend to have lower levels of education.

Available data from the Botswana Business Registry did not include the gender of the business owner, thus it was not possible to classify sectors as male-dominated or female-concentrated by looking at the actual gender composition of business owners. Given the lack of recent representative data on sex of firm owners by sector, we classify sectors as male-dominated or female-concentrated using the same approach as Alibhai et al (2017) which is based on the perceptions of business owners. Thus, in September 2017, we carried out a phone survey of 797 firms in Gaborone, randomly sampled from the Botswana Business Registry across all business sectors in our sample. The business sector was classified as male-dominated if at least 75 percent of the respondents answered that most enterprises in their business sectors are owned by men[4]. Where this is not the case, we classify the sector as female-concentrated[5].

Out of 28 sectors, only 9 are classified as female-concentrated (as shown in Figure 1) and only two out of these 9 sectors are reported as mostly owned by women by more than 75 percent of the respondents, while 4 sectors have an almost equal share of respondents perceiving that the business is mostly owned by men or women. We

[4] The exact question was: *"Are most enterprises in your business sector owned by men or women?";* While we conducted some sensitivity analysis by changing the cut off of what we define as a male-dominated sector (from 75% to 70%), we do not report the results here, as the change we find in our results as a result of this is simply because we reclassify women from the broad 'other retail trade' sector as crossovers (this study did not include men in female-concentrated sectors) and these women bring the average profit down.

[5] It should be noted that we use the term "female-concentrated" rather than "female-dominated" as there were only 2 of the 9 non-male-dominated sectors for which more than 75 percent of respondents said that most of the businesses were owned by women.

compared our survey results with the Enterprise Survey Data from 2018; there are fewer sectors in the Enterprise Survey, but the male-dominated sectors identified in this study correspond to the sectors in the Enterprise Survey with more than 75 percent male-owned firms. The only exception is the sector "other services", which is female-concentrated in the Enterprise Survey, but for which there is no corresponding sector in our study.

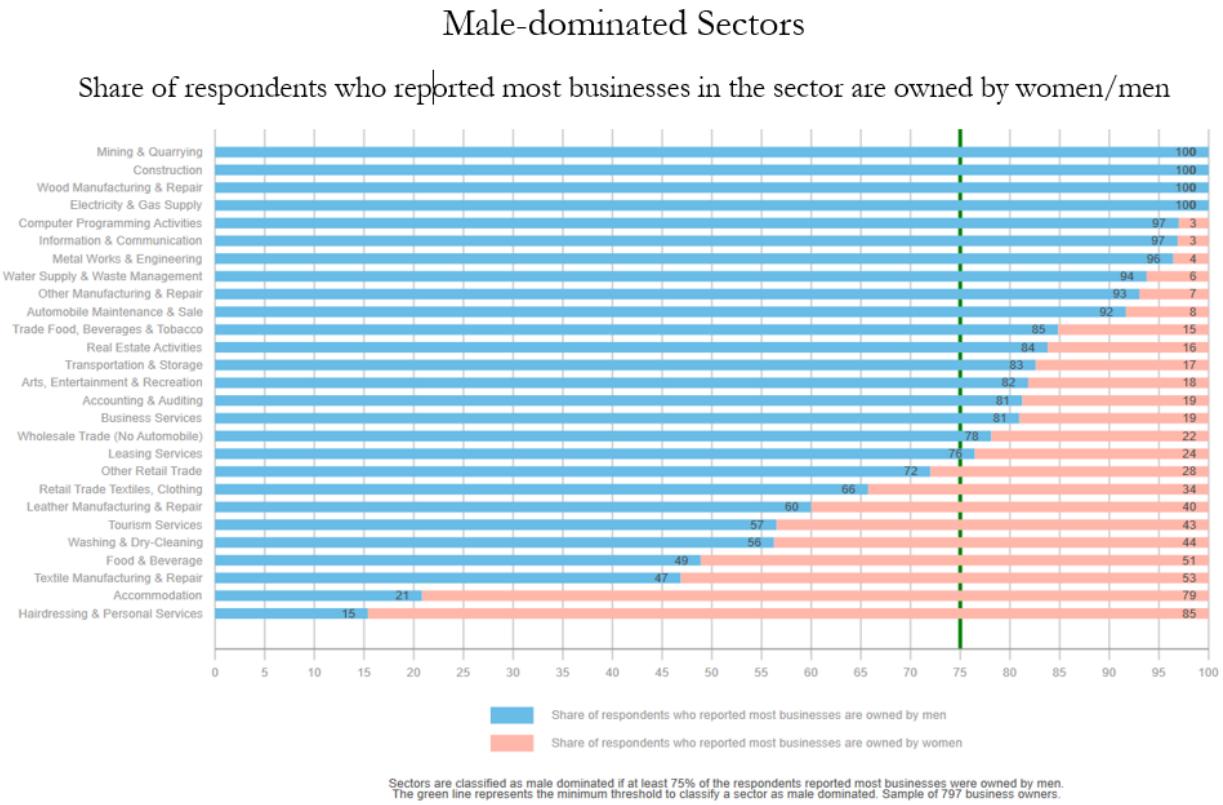


Figure 1: Perceived sex domination of sectors

2.2 Study sample

The principal source of data for the study is a firm-level survey carried out between October 2017 and February 2018. The sample includes 637 firms divided into three groups, as shown in table 1: 224 male-owned firms in male-dominated sectors, 151 crossovers (women-owned firms in male-dominated sectors) and 262 non-crossovers (women in female-concentrated sectors).

The sample was randomly drawn from a list of both formally registered and unregistered firms in Gaborone. The population of formally registered firms included 3,337 firms with 5 or fewer employees from the Botswana Business Registry[6]. The population of unregistered firms included 1,024 firms identified through a listing exercise that was specifically carried out for this study in six areas of Gaborone, where most of the unregistered

[6] Originally, there were 4,019 firms in the Botswana Business Registry. We decided to only include those with 5 or fewer employees as it was not possible to set up interviews with a sufficient number of larger firms.

firms are located[7]. Firms were stratified by sector of operation and proportionally sampled based on the business sector population proportions (Figure 2 shows the firms distribution by sector).

For each firm we interviewed only the business owner, who was identified[8] by initial screening questions in the survey. In cases where there was more than one owner, only the owner who was initially identified by the survey enumerator was interviewed. The survey included modules on (i) business performance; (ii) employment; (iii) entrepreneur business history; (iv) access to finance; (v) entrepreneur skills; (vi) business owner and household demographics; and (vii) challenges faced by the business.

Table 1. Sample

	Number of Firms
	(1)
Male Owned	224
Female Owned Crossovers	151
Female Owned Non-Crossovers	262
Total	637

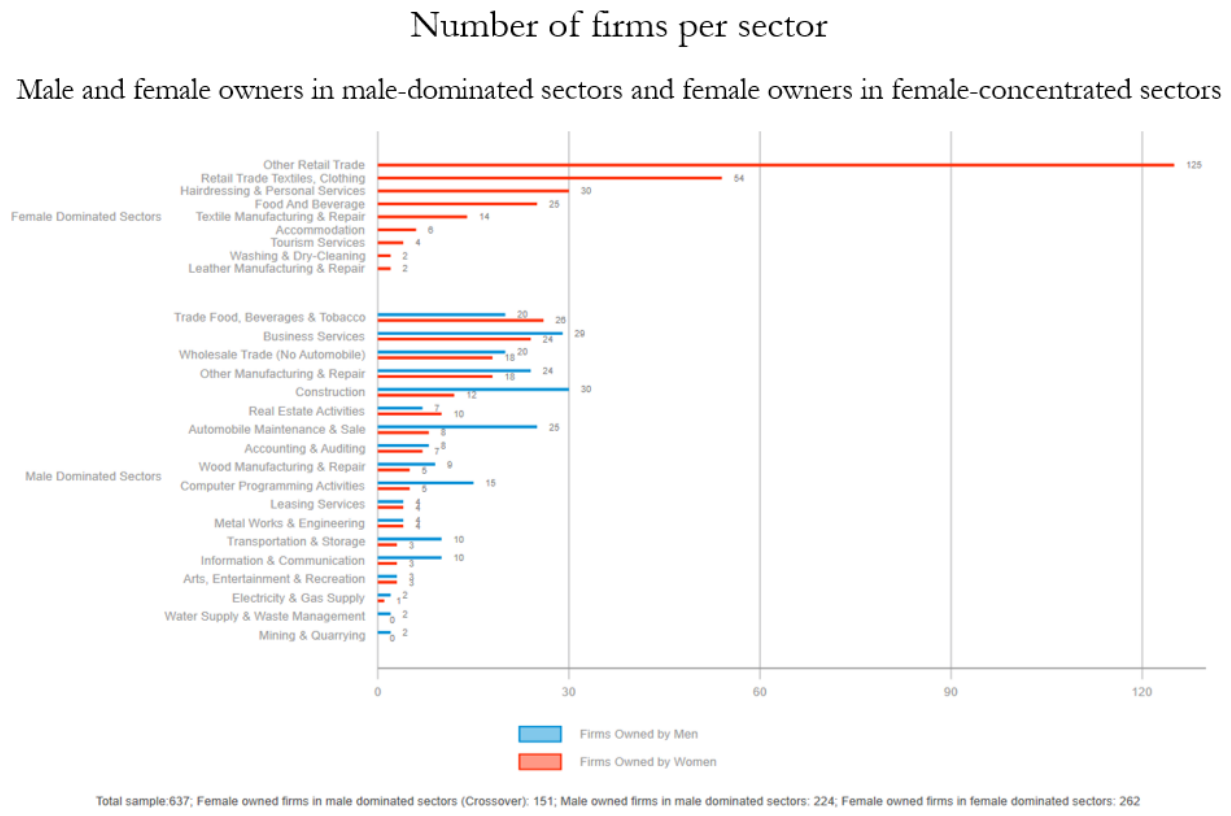


Figure 2: Sample distribution by Sector and Owner's gender

[7] One weakness to this approach is that it fails to capture home-based enterprises. The budget of this study did not allow for us to identify and interview such businesses. It is likely that such businesses would be underrepresented in male-dominated sectors compared to other types of business and may represent those businesses with the greatest constraints. Thus, our results are not representative of home-based businesses and the results may understate the differences between women and men owned businesses.

[8] Business owner definition: who owns shares of the business, and can decide to sell/close the business. Can take managerial, financial, marketing decisions.

3. Results

In this section, we present the results of this study, looking at: differences in firm performance; factors correlated with being a crossover; and differences in the business constraints faced and business characteristics of the three groups of entrepreneurs studied.

3.1 Firm performance

To investigate firm performance, we looked at profits and firm size in terms of employees. For profits, we look at two variables. The first variable we look at is the self-reported business profit for the month prior to the interview. We use the inverse hyperbolic sine transformation, which is the most appropriate transformation when there are many zero values. The second variable we use is total annual profit[9].

We first run a regression that estimates the differences across the three groups of firms for each variable of interest of the analysis: previous month's profit, annual profit and number of employees.

$$y_i = \beta_1 Crossover_i + \beta_2 Male_i + \epsilon_i$$

Where y_i is the outcome of interest, Crossover is a dummy equal to 1 if the firm belongs to the crossover group and Male is a dummy indicating whether the firm belongs to the male-owned group of firms in our sample. The coefficient indicates the difference between each group and non-crossovers firms.

Table 2. Business Performance

	(1) Previous month profit in Pula I HS	(2) Annual Profits in Pula I HS	(3) # of employees
Male owner	0.642*	1.892***	5.043***
	(0.337)	(0.163)	(0.554)
Crossover	0.918***	1.206***	3.561***
	(0.325)	(0.195)	(0.530)
Constant	8.032***	10.64***	-1.271**
	(0.280)	(0.203)	(0.610)
Observations	632	632	632
R-squared	0.021	0.233	0.167

Robust standard errors in parentheses

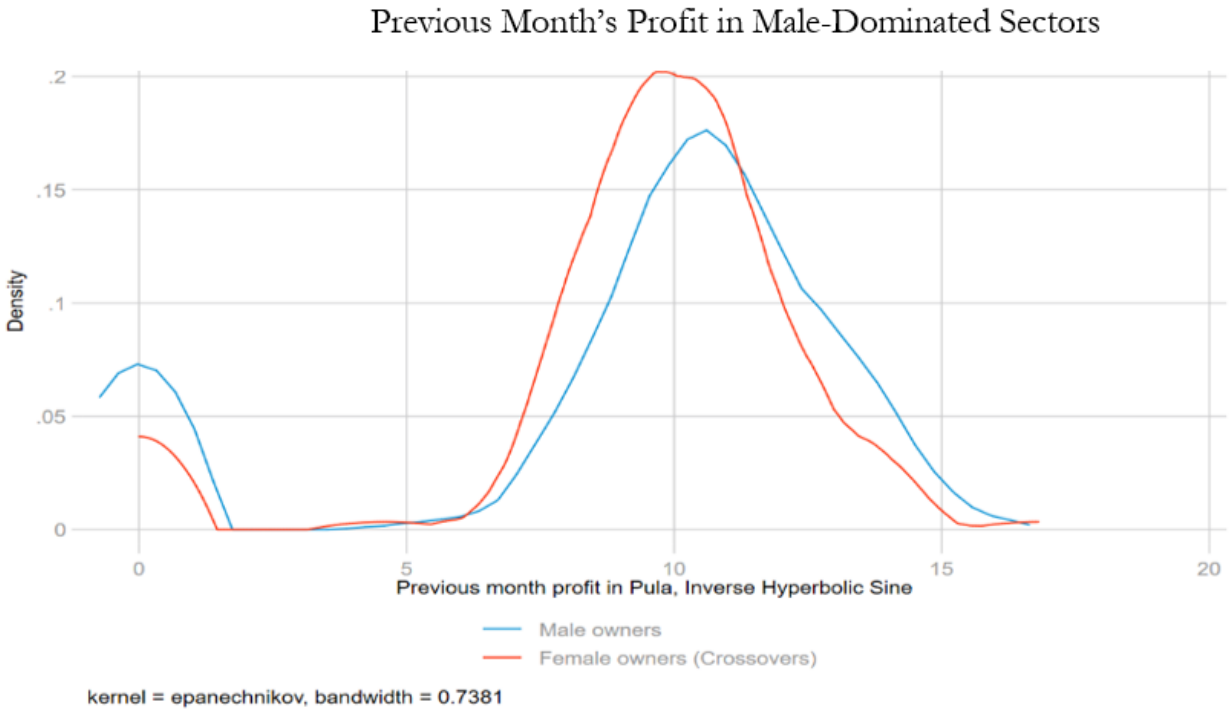
*** p<0.01, ** p<0.05, * p<0.1

Overall, our results indicate that crossovers make higher profits than non-crossovers and that their profits are as high as those of men. Using the previous month's profit variable, we find that the profits of crossovers are 92 percent higher than those of non-crossovers, while the profits of men are only 64 percent higher than those of non-crossovers.

[9] This variable is created by summing the reported profits in high, average, and low profit months, with each multiplied by the number of high, average, or low profit months reported by the respondent. If the total number of months reported by the respondent was less than 12, we classified the missing months as average months.

As shown in table 3, the difference[10] in previous month's profit between crossovers and men is not statistically significant, while the difference between crossovers and non-crossovers is significant. Indeed, when we look at a graph of the distribution of previous month's profit (figure 3), we see that there is substantial overlap in the profit distribution of crossovers and men, though a higher proportion of men are in the right tail of the distribution, indicating that men may be more likely to have the most profitable firms.

When looking at the annual profit variable, we find that male business owners come at the top of the ranking, with profits that are 189 percent higher than those of non-crossovers, while crossovers have annual profits that are 121 percent higher than those of non-crossovers. However, when considering annual profit, the difference between crossovers and non -crossovers is no longer statistically significant.



[10] To estimates the differences between the male owned firms and crossovers we ran the regression:

$$y_i = \beta Crossover + \gamma Non - crossover + \varepsilon_i$$

Where y_i is the outcome of interest, Crossover is a dummy equal to 1 if the firm is a Crossover, Non-crossover is a dummy indicating whether the business is a non-crossover. β is the coefficient for the difference between the Crossover and the male owned groups.

To estimate the difference between crossovers and non-crossover we run the regression:

$$y_i = \alpha MaleOwned + \gamma Non - crossover + \varepsilon_i$$

Where y_i is the outcome of interest, MaleOwned is a dummy equal to 1 if the firm is male owned, Non-crossover is a dummy indicating if the business is non-crossover. γ is the coefficient for the difference between the Crossover and non-crossover groups.

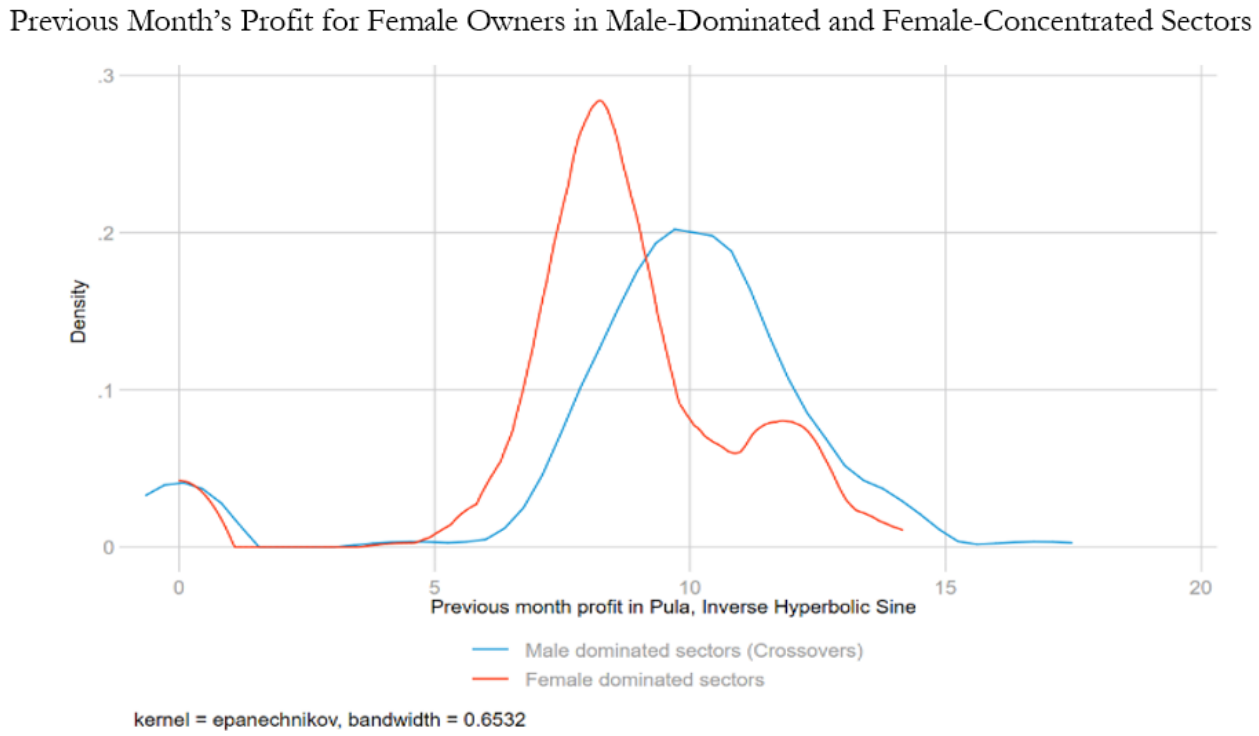


Figure 3: Previous month profit (IHS)

To account for the impact of outliers, we also estimate the difference between the three groups winsorizing the profit variables at the 1 percent level. When we do this, we see small but significant differences between the profits of crossovers and the profits of men, with men having higher profits. After winsorizing, crossovers still have significantly higher profits than non-crossovers, though the gap is smaller. These results indicate that the overall high performance of crossovers is partly driven by the performance of outliers.

Table 3. Differences in Business Performance

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Previous Month Profit In Pula	636	111,178	116,522	25,195	5,344	-91,327 **
		[348,776]	[821,308]	[76,720]	(47,659)	(46,252)
Previous Month Profit In Pula, winsorized	636	85,731	55,189	25,195	-30,543 **	-29,993 **
		[172,025]	[135,291]	[76,720]	(13,821)	(13,413)
Annual Profit In Pula	636	11,316,588	51,874,812	271,858	40,558,224	-51,602,952
		[103,503,928]	[626,608,192]	[2,115,447]	(32,722,672)	(31,756,668)
Annual Profit In Pula, winsorized	636	1,714,520	934,160	271,872	-780,360 *	-662,288
		[5,553,046]	[3,724,471]	[2,115,445]	(421,667)	(409,219)
Number Of Employees	636	6.35	4.94	1.07	-1.41 **	-3.87 ***
		[8.60]	[6.31]	[2.11]	(.644)	(.625)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

Our sample included a large proportion of businesses that have more than one owner and businesses that are owned by somebody who was born outside of Botswana. In fact, 25 percent of our sample are co-owned, while

21 percent are owned by a person who was born outside of Botswana, mostly China, India, and countries neighboring Botswana. Therefore, we decided to look at these groups separately. In the case of jointly owned businesses, this is appropriate given the potential impact of having support from a business partner, especially a spouse or other man – 11 percent of the full sample and 18 percent of crossovers are co-owned by a spouse (Table A6 in the appendix). In the case of country of birth of business owner, enterprises that are owned by a foreigner may have specific characteristics that make their performance irrelevant to the concerns of policymakers who are focused on the situation of Botswana citizens.

First, we exclude from the analysis all the firms that are jointly-owned, as shown in table A1 in the Appendix. Once we do that, we see that male owners earn significantly higher previous month's profits than crossovers, while crossovers still earn significantly more profits than non-crossovers. This result indicates how being a crossover is still profitable compared to operating in female-concentrated sectors, but that the female owned businesses in our sample are less profitable when they do not operate their business with a joint-owner.

In terms of the impact of joint ownership on profits, we wanted to understand if this was driven by having a male co-owner or whether it was specifically driven by having a spouse as co-owner. We find that crossovers that are jointly owned by a spouse have statistically significantly higher previous month's profits than solely-owned crossovers, yet there is no significant difference in profits between solely-owned crossovers and those jointly owned by any male co-owner (this pattern is also reflected in differences in number of employees, see table A2 in Appendix). As shown in table A3 in the Appendix, crossover businesses that are jointly owned with a spouse have annual profits that are 175 percent higher than those that are solely-owned or are jointly owned with someone who is not a spouse. These results suggest that there is a specific impact on crossovers' profits of having a spouse as a joint owner. As discussed in section 3.3 (below), husbands appear to support crossover businesses by providing the initial business idea, providing skills (through their own labor or by imparting these skills on their wives) and by helping with business registration or the acquisition of a license.

When we exclude businesses with owners born outside of Botswana, our results are broadly similar to those we get using the full sample (see table A4 in the Appendix). However, there are a couple of key differences. When we exclude foreign-born owners, we find that crossovers' previous month's profits are significantly less than those reported by men, even when we do not winsorize the results. If we winsorize the results, crossovers' previous month's profits are significantly lower than those of men for both for the full sample and the Botswana born sample, yet the gap is larger in the latter case, with Botswana born crossovers earning only 51 percent of the profits of their male counterparts, compared to 64 percent if we include foreign-born owners. While the two distributions mostly overlap, men have a higher proportion of their firms in the right side of the distribution, indicating they are more likely to have the highest performing businesses. Excluding the foreign-born owners also results in the share of businesses that are co-owned with a spouse dropping from 11 percent to 6 percent, indicating that there is significant overlap in co-ownership with spouse and foreign ownership[11]. As well as having the support of a spouse, foreign-born business owners may also benefit from the greater outward orientation that being foreign-born gives them. For example, Islam et al (2018) find that across formal firms in 128 countries the lower rate of foreign ownership of female-managed formal firms contributes to a 12 percent widening of the labor productivity gap between female and male-managed businesses. However, it is unclear how important an outward orientation would be for the relatively small firms in our sample.

Finally, in addition to looking at differences in profits, we also look at differences in number of employees (Table 3). With an average of 6.4 employees, we find that men have the highest number of employees, compared to 4.9 for crossover businesses, and 1.1 for non-crossover businesses. The differences between the three groups are all statistically significant at standard levels. While number of employees is not necessarily a fair measure of

[11] However, given the size of our sample, this overlap means that we cannot compare the relative magnitude of the impacts of co-ownership with spouse versus the impacts of foreign ownership

business performance, with firms in different sectors requiring differing amounts of labor, there is evidence that firms with more employees enjoy higher growth rates, perhaps because they have more entrepreneurial skills to draw on. In fact, this is what Okurut et al (2015) find in a study on SMEs in Botswana.

3.2 Correlates of crossing over

In this section, we examine differences across a range of household and individual characteristics to identify which factors are associated with women operating in male-dominated sectors. While these results should be interpreted only as correlations, we did exclude factors, such as household income and variables related to current business activities, that presented clear reverse-causality risks.

The results of our regression (Table 4) suggest that the following factors are positively associated with women operating in male-dominated sectors: being foreign-born; being older, having been exposed to the sector through working in the sector, being a supplier to the sector, through friends and family, or by receiving information about its potential; having had at least one of one's last five jobs in a male-dominated sector; having completed more than secondary education; and having a mother who completed more than primary education. On the other hand, a woman's level of household decision-making empowerment is negatively associated with being a crossover.

There are both differences and similarities between the results from Botswana and those found by Alibhai et al (2017) in Ethiopia, Campos et al (2015) in Uganda, and Goldstein, Martinez, and Papineni (2019) across 97 countries globally. Exposure to male-dominated sectors appears to be important, but the specific mechanisms through which exposure has an impact differ between Botswana and the other crossover studies. As in Uganda, exposure to male-dominated sectors through work experience seems important. However, unlike in Uganda or across the 97 countries analyzed in Goldstein, Martinez, and Papineni (2019), in Botswana having had a male role model does not appear to be an important determinant of crossing over. For Botswana (unlike Ethiopia), we also cannot say whether the spouse plays an important role in allowing women to cross-over - though, as we discuss above, our study does suggest that having a spouse as a co-owner has a positive impact on profits for women who already managed to cross over (the specific types of support that spouses provide, and which may contribute to the impact on profits, are discussed in the following section). Another key difference between Botswana and the other crossover studies is the apparent importance of education in helping women in Botswana to cross over. Indeed, among our sample we see that more than double the proportion of crossovers compared to non-crossovers (36 percent versus 16 percent) reported having more than secondary education.

Some of the results change if we exclude jointly-owned businesses (see table A5 in the Appendix). In this case, having a father who was owner/manager of a firm in a male-dominated sector when the respondent was a child becomes a significant correlate, while being foreign-born and having a mother with more than primary education lose their significance. It is not surprising that the influence of a woman's father's job could be more important to her chances of deciding to operate in a male dominated sector if she does not have a business partner to support her. Being foreign-born likely loses its explanatory power when we exclude jointly-owned businesses as there is significant overlap between joint-owned and foreign-owned businesses in our sample.

For the sample of firms including only crossovers born in Botswana (Table A5 in the Appendix), having received training in the current sector of operation is no longer significant (though having had a job in a male-dominated sector remains significant), and the father's job when the respondent was a child is no longer significant. The most important correlate is the level of education, together with the mother's level of education. It might be that Botswana women who received an education and come from a family where the mother has a high level of education are more informed and exposed to promising business opportunities.

Table 4. Correlates with being a Crossover				
	Full Sample			
	(1)	(2)	(3)	(4)
	Crossover	Crossover	Crossover	Crossover
Owner's age	0.00457**	0.00475**	0.00381*	0.00423*
	(0.00224)	(0.00224)	(0.00223)	(0.00218)
Completed more than Secondary education	0.142**	0.118*	0.131*	0.156**
	(0.0700)	(0.0695)	(0.0690)	(0.0689)
Married	0.0210	0.0286	0.0268	0.0369
	(0.0994)	(0.0993)	(0.0977)	(0.0991)
Household Decision Making Index (High:5, Low:1)	-0.0445***	-0.0436***	-0.0432***	-0.0405***
	(0.0143)	(0.0145)	(0.0144)	(0.0146)
Foreign Born	0.176**	0.197**	0.216***	0.205***
	(0.0776)	(0.0780)	(0.0785)	(0.0784)
Proportion of male siblings	0.0251	0.0114	0.0129	0.0165
	(0.0785)	(0.0779)	(0.0775)	(0.0779)
Number of siblings	-0.00363	-0.00304	-0.00445	-0.00422
	(0.00935)	(0.00935)	(0.00914)	(0.00929)
First born in the family	-0.0484	-0.0572	-0.0648	-0.0829
	(0.0564)	(0.0593)	(0.0591)	(0.0600)
Mother Completed more than primary education	0.128*	0.131*	0.136*	0.129*
	(0.0747)	(0.0734)	(0.0750)	(0.0718)
Mother was owner/manager firm when respondent was a child	-0.0865	-0.0884	-0.0779	-0.0788
	(0.0651)	(0.0653)	(0.0667)	(0.0653)
Father Completed more than primary education	0.0946	0.0802	0.0818	0.0813
	(0.0729)	(0.0724)	(0.0725)	(0.0699)
Father was owner/manager firm in male dominated sector when respondent was a child	0.140*	0.133*	0.121	0.117
	(0.0789)	(0.0789)	(0.0778)	(0.0806)
Spouse Completed more than primary education	-0.103	-0.103	-0.0896	-0.112
	(0.105)	(0.104)	(0.102)	(0.104)
Spouse is owner/manager other firm	0.0691	0.0495	0.0271	0.0309
	(0.0808)	(0.0828)	(0.0813)	(0.0825)
Role model was male		0.103	0.0892	0.0793
		(0.0812)	(0.0823)	(0.0811)
Knows more than 30 owners in any sector		-0.0672	-0.0554	-0.0335
		(0.0648)	(0.0634)	(0.0638)
Training in sector of current business		0.209**		
		(0.0995)		
Any last 5 job was in male dominated sector			0.120***	
			(0.0452)	
Exposed to the current sector of operation by someone				0.147***
				(0.0508)
Constant	0.239**	0.273**	0.261**	0.224*
	(0.117)	(0.130)	(0.130)	(0.130)
Observations	408	408	408	408
R-squared	0.164	0.180	0.184	0.188

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

3.3 Constraints and business characteristics

Once business owners have entered their chosen sector, whether it is male-dominated or otherwise, they may then face a differing series of constraints and opportunities that have an impact on their business performance outcomes.

To examine differences in the challenges faced by the three groups of businesses and differences in business characteristics, we compared the mean values of a range of variables related to business history and spousal role, business formality and processes, business networks, access to finance and savings, household wealth/income, and business challenges faced. There are commonalities and key differences in the types of challenges reported by men, crossovers, and non-crossovers.

Table 5. Challenges and Experiences in the last 12 months

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Most important problem when opened firm						
Access credit	637	.219	.179	.153	-.040	-.026
		[.414]	[.384]	[.360]	(.041)	(.039)
Find clients	637	.188	.152	.156	-.035	.004
		[.391]	[.361]	[.364]	(.039)	(.038)
Find location	637	.156	.238	.252	.082 *	.013
		[.364]	[.428]	[.435]	(.043)	(.042)
Find right staff	637	.107	.026	.019	-.081 ***	-.007
		[.310]	[.161]	[.137]	(.023)	(.022)
Weather conditions can stop me from working	637	.036	.046	.179	.011	.133 ***
		[.186]	[.211]	[.384]	(.030)	(.030)
Experience in past 12months (Female owners)						
Failure of clients to pay	413		.417	.443		.026
			[.495]	[.498]		(.041)
Theft of goods	413		.411	.500		.089 **
			[.494]	[.501]		(.041)
Sexual proposals	413		.146	.111		-.035
			[.354]	[.314]		(.027)
Vandalism of premises or merchandise	413		.126	.164		.038
			[.333]	[.371]		(.029)
Threats to shut down business	413		.119	.252		.133 ***
			[.325]	[.435]		(.033)
Shouting, making a nuisance in the firm	413		.086	.141		.055 **
			[.281]	[.349]		(.027)
Extortion/bribery	413		.073	.061		-.012
			[.261]	[.240]		(.020)
Confiscation of property or merchandise	413		.046	.065		-.012
			[.211]	[.247]		(.020)
Experience as a woman business owner (Female Owners)						
Encouragement from the community when entering this sector	327		.620	.498		-.122 **
			[.488]	[.501]		(.060)
Difficulty in getting loans as a woman	327		.130	.063		-.068 **
			[.338]	[.243]		(.033)
Clients preferring to deal with men business owners	327		.162	.058		-.104 ***
			[.370]	[.234]		(.034)
Difficulty in building networks	327		.121	.040		-.081 ***
			[.328]	[.197]		(.030)
Control of the business by spouse	327		.010	.004		-.006
			[.100]	[.067]		(.009)
Male employees looking down on me	327		.071	.009		-.062 ***
			[.259]	[.095]		(.020)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

A large proportion of all three types of business list access to credit as the most important challenge they faced when they opened their business, with no significant differences between the three groups (Table 5). However, women (both crossovers and non-crossovers) are more likely than men to report finding a location as the most important problem they faced (24 and 25 percent versus 16 percent), while non-crossovers are more likely than crossovers or men to list weather conditions that stop them from operating (18 percent versus 5 percent and 4 percent). Also hinting at the specific vulnerabilities of non-crossover women are differences in the exposure to various violent events and threats to the continued existence of their businesses. Non-crossovers are more likely than crossovers to report having experienced theft of goods (50 percent versus 41 percent), threats to shut down the business (25 percent versus 12 percent), and people shouting and making a nuisance in the business (14 percent versus 9 percent). We also find that women (both crossovers and non-crossovers) are less likely than men to report that a spouse, relative, or friend looks after their children when they are working (13

percent and 19 percent, versus 32 percent), indicating that childcare may be more of a constraint for women than for men. We find that while crossovers received some encouragement from their community when they entered their sector, they are more likely than non-crossovers to experience several issues that may have their roots in social biases against women operating in a traditionally male world, such as problems accessing loans and building networks and problems with discrimination from clients and employees. These findings indicate that any policies to help women cross over into male-dominated sectors should also be accompanied by efforts to help these women overcome the different forms of discrimination that they may face once operating in these sectors.

Overall, our findings on business challenges indicate that men, crossovers, and non-crossovers are each in a different position on a business hierarchy of needs, with non-crossover women experiencing difficulties related to their basic physical existence and crossovers experiencing problems that may reflect social biases against women working in their sector, while men are able to focus on higher level challenges related to continuing and growing their businesses.

Table 6. Spouse support

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Spouse help to the business:						
Provide capital	295	.236	.449	.447	.213 ***	-.002
		[.426]	[.501]	[.500]	(.068)	(.072)
Money	318	.215	.432	.412	.217 ***	-.020
		[.412]	[.498]	[.495]	(.065)	(.069)
Relevant advice	318	.444	.457	.353	.012	-.104
		[.499]	[.501]	[.480]	(.069)	(.073)
Providing skills	318	.170	.296	.137	.126 **	-.159 ***
		[.377]	[.459]	[.346]	(.055)	(.058)
Acquiring license/registering business	318	.178	.370	.137	.193 ***	-.233 ***
		[.384]	[.486]	[.346]	(.056)	(.060)
Giving skills to respondent	318	.148	.247	.137	.099 *	-.110 *
		[.357]	[.434]	[.346]	(.053)	(.056)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

A higher percentage of crossovers (54 percent) than non-crossovers (39 percent) report being married and crossovers are also more likely than non-crossovers to have a co-owner (33 percent versus 14 percent), with most of these being co-owned with their spouse (Tables A6 and A7 in the Appendix). While the crossover determinants regression (see above) cannot determine whether the spouses of crossovers play an important role in helping them enter male-dominated sectors, we do find that crossovers are less likely than both men and non-crossovers to report that they came up with their business idea themselves and are more likely to report that their spouse came up with the idea (Table 8). It also appears that spouses do at least play a very important role supporting crossovers once they are operating in their chosen sector by providing support related to skills and business registration (Table 6). Crossovers are also more likely than non-crossovers and men to report that their spouse helped by providing skills (either by providing their own labor or by imparting these skills on the wife) and by helping with business registration or the acquisition of a license[12].

The support of the spouse with business registration is particularly important given the established literature on the positive impact on business performance of such standard business practices. For example, McKenzie and Woodruff (2015) find that the use of such better business practices by microenterprises is predictive of higher business survival and sales growth. Beyond the help of the spouse with business registration, we also

[12] We do not find any evidence that crossover business owners are only owners in name, with husbands running the businesses in practice. For example, as table XX (annex) shows, 87 percent of crossover owners report that they make the major decisions for the business alone or with others. This is not significantly different for the figure for male-owned businesses.

find that crossover businesses are more likely to run their businesses according to a range of professional best practices including formally registering the business, having a written business plan, having an annual budget, recording revenues and expenses, and having written contracts for employees. In Botswana, Okurut et al (2011) find that the inability of SME owners to maintain proper financial records, is one of the main reasons commercial lenders give for rationing out SMEs from their business loans, highlighting one of the mechanisms through which failure to follow some standard business practices could negatively impact non-crossovers. Except for the case of business registration, we cannot say whether a spouse played an important role in supporting or encouraging the aforementioned business practices among their crossover wives. It could also be the case that the use of such practices is associated with a set of skills or characteristics that we have not captured in this survey, including non-cognitive skills such as determination and initiative that have been shown elsewhere to be critical to business success. For example, an impact evaluation in Togo found that a training program for entrepreneurs that focused on such non-cognitive skills increased profits by 30 percent for all participants and 40 percent for women participants, compared to a statistically insignificant impact on profits for entrepreneurs who took a traditional business skills training program that focused on formal business skills, such as accounting and financial management (Campos et al, 2017).

It may also be the case that crossover spouses are able to provide useful information on certain sectors or business practices that are not captured in this study. Even when we look only at solely-owned firms, a significantly higher share of crossovers than non-crossovers (18 percent versus 6 percent, in Table A1 in the Appendix) report that their spouse is an owner or manager in a male-dominated sector. Such spouses may have greater access to relevant information that can help their crossover wives to succeed.

While the impact of male business partners on crossovers' profits appears to be a specific spousal impact, rather than a general impact of having a male co-owner, we do find evidence that male co-owners in general help crossovers to access finance. We find that, compared to solely owned crossover businesses, those owned jointly with a spouse and those owned jointly with a man who is not a spouse reported being able to borrow more funds and reported putting in a higher amount of capital into the business (Table A2 in the Appendix). The findings on capital and access to finance are important, given their potential impact on growth. For example, in a study of SMEs in Botswana, Okurut et al (2015) find that more highly-leveraged SMEs grew at a faster rate. While we find that, compared to solely owned crossover businesses, those owned jointly with a spouse report higher household income and assets, we do not know the direction of causality: i.e. these households could have acquired their higher wealth and assets through operating their business, or they could have been wealthier to start with, before establishing the business.

Table 7. Business Association

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Belongs to a business association	637	.170	.179	.099	.009	-.080 **
		[.376]	[.384]	[.300]	(.037)	(.036)
Most entrepreneurs in business association are Men	91	.868	.556	.154	-.313 ***	-.402 ***
		[.343]	[.506]	[.368]	(.102)	(.111)
Most entrepreneurs in business association are from the same sector	91	.474	.407	.269	-.066	-.138
		[.506]	[.501]	[.452]	(.123)	(.135)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

It is not only their male co-owners, whether a spouse or not, who may help crossover women to succeed. We also find evidence that crossover women have a superior quality of professional network that may give them an edge, as shown in Table 7. Crossovers are more likely than non-crossovers to belong to a business association

(18 percent versus 10 percent) and are more likely to say that the majority of entrepreneurs in their business associations operate in the same sector as them (41 percent versus 27 percent). This may indicate that non-crossover women are more inclined to group together with others simply based on their gender, while crossovers may choose a more effective strategy of networking with other owners in their sector.

Table 8. Reason to become business entrepreneur and not employee

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Gave idea to become owner business: Self	637	.920	.781	.927	-.138 ***	.146 ***
		[.272]	[.415]	[.260]	(.032)	(.031)
Gave idea to become owner business: Spouse	637	.009	.126	.031	.117 ***	-.095 ***
		[.094]	[.333]	[.172]	(.021)	(.021)
Reason: Wanted to be my own boss/have own business	637	.339	.298	.202	-.041	-.096 **
		[.475]	[.459]	[.402]	(.047)	(.045)
Reason: It allows me to make more money than with a wage	637	.232	.126	.279	-.106 **	.153 ***
		[.423]	[.333]	[.449]	(.044)	(.042)
Reason: Found an interesting market opportunity and wanted to take	637	.250	.252	.122	.002	-.130 ***
		[.434]	[.435]	[.328]	(.042)	(.040)
Reason: Could not find a wage job	637	.080	.132	.221	.052	.089 **
		[.272]	[.340]	[.416]	(.037)	(.036)
Minimum monthly wage to move from business owner to employee,	636	88,342	113,102	15,064	24,76	-98,038 ***
		[260,570]	[352,137]	[43,329]	-24,49	-23,767
Any last 5 job was in same sector as current business	637	.339	.179	.164	-.160 ***	-.015
		[.475]	[.384]	[.371]	(.044)	(.042)
Any last 5 job was in male dominated sector	637	.679	.503	.378	-.175 ***	-.125 **
		[.468]	[.502]	[.486]	(.051)	(.049)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

We see key differences in the reasons for choosing entrepreneurship over wage employment (Table 8). A significantly higher proportion of crossovers than non-crossovers list wanting to be their own boss (30 percent versus 20 percent) or having found an interesting market opportunity (25 percent versus 12 percent) as a reason for choosing entrepreneurship, and non-crossovers are more likely to list not being able to find a wage job. These results suggest that crossovers may be more likely than non-crossovers to be 'opportunity' rather than 'necessity' entrepreneurs. This interpretation is consistent with the definitions of 'opportunity' and 'necessity' entrepreneurs used by Calderon et al (2017)[13]. Non-crossovers also report that they would accept a much lower wage than crossovers to switch from entrepreneurship to wage employment[14]. However, the lower reservation wage that non-crossovers would accept to move into wage employment may simply reflect the lower profits that their businesses make.

[13] Calderon et al (2017) classify a respondent as an opportunity entrepreneur if she gives the following reasons for opening her business: (i) she wanted to become independent; (ii) she had money and found a good business opportunity; (iii) she wanted to practice her profession or develop her career profile. The authors classify as a necessity entrepreneur those who gave as a reason that they could not find a well-paid or suitable job and needed a source of income.

[14] Calderon et al (2017) also find that opportunity entrepreneurs score higher than necessity entrepreneurs on three measures of non-cognitive skills that could be associated with superior business performance: willingness to take risks, optimism and attitude towards business growth. However, we were unable to include any measures of non-cognitive skills in the survey for Botswana.

Table 9. Access to Finance and Savings

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Max amount the owner can borrow for business within a month in	637	60,084	20,639	4,651	-39,445	-15,988
		[221,747	[54,776]	[9,599]	-14,181	-13,762
Main source for emergency funds: Bank	637	.362	.238	.076	-.123 ***	-.162 ***
		[.482]	[.428]	[.266]	(.041)	(.040)
Main source for emergency funds: no source	637	.054	.060	.176	.006	.116 ***
		[.226]	[.238]	[.381]	(.032)	(.031)
Main source for emergency funds:Informal group/motshelo	637	.027	.079	.179	.053 *	.100 ***
		[.162]	[.271]	[.384]	(.031)	(.030)
Saved money in past 12 months At home/business premises	637	.059	.034	.161	-.026	.127 ***
		[.236]	[.181]	[.368]	(.031)	(.030)
Saved money in past 12 months in a Bank or credit union	637	.821	.820	.718	-.001	-.102 **
		[.384]	[.385]	[.451]	(.044)	(.042)
Saved money in past 12 months in a Informal savings club	637	.045	.140	.237	.095 ***	.097 ***
		[.208]	[.348]	[.426]	(.036)	(.035)
Saved money in past 12 months in a Savings and credit co-operative	637	.201	.173	.111	-.028	-.063 *
		[.402]	[.380]	[.314]	(.038)	(.037)
Saved money in past 12 months with a Mobile money account	637	.081	.140	.279	.059	.139 ***
		[.273]	[.348]	[.449]	(.039)	(.038)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

While the use of formal financial services to save money is relatively high across all groups, access to formal sources of financing appears to be lower, with 21 percent of the sample reporting that a bank is their main source of emergency funds for their business, while the majority of the firms rely on informal sources of emergency funds (41% spouse/family members, 10% informal savings groups) and 11% claim not to have any source of emergency funds. This echoes the identification by our survey respondents (discussed above) of access to finance as a key business challenge. Yet there are key differences between the three types of business in our study (as shown in Table 9). Despite operating in the same sectors, crossovers appear to have less access to finance than men. Men report being able to borrow a maximum amount of 60,000 Pula[15], while crossovers report only being able to access 21,000 Pula. Non-crossovers report being able to borrow just under 5,000 Pula, though this is not significantly different from the amount reported by crossovers. Beyond the sheer amount of financing available, crossovers appear to have lower access than men to formal financial services, while non-crossovers have even lower access to such services. Crossovers are less likely than men to use a bank as their main source of emergency funds and are more likely to use and informal group. They are also more likely than men to use an informal group for savings. On the other hand, non-crossovers report significantly lower access than crossovers to such formal financial services, but are more likely than crossovers to report using a mobile money account - likely reflecting the targeting of the most vulnerable women with such services.

Finally, we also find that crossovers are members of wealthier households, though the direction of causality between wealth and crossing over cannot be determined (Table A7 in the Appendix).

[15] At time of the survey, the exchange rate between US Dollars and Botswana Pula was between: 1 USD = 10.42 Pula and 1 USD = 9.54 Pula.

4. Conclusion

Our findings indicate that helping women entrepreneurs cross over into male-dominated sectors could help close the gender gap in business performance in Botswana. We find that women who cross over into male-dominated sectors are able to make higher profits and grow larger firms in terms of number of employees compared to women who operate businesses in female-concentrated sectors. However, we also find that the superior business performance of crossovers is partly driven by high-performing outliers, including jointly-owned business (especially those jointly-owned with a spouse) and those with an owner born outside of Botswana. Looking at factors that are associated with women operating in male-dominated sectors, we find that the level of education of the crossover and her mother and having been exposed to the sector, especially through work experience, are important.

We find that non-crossovers are less likely to be opportunity entrepreneurs, but it will be important for policymakers to consider approaches to effectively target those non-crossovers who share more of the characteristics of opportunity entrepreneurs: as discussed in World Bank (2011), these enterprises have the highest likelihood of developing into 'viable and growth-oriented' businesses. Among opportunity enterprises in Botswana, youth-owned enterprises and start-ups are thought to be the most promising potential beneficiaries of business development support (World Bank, 2011). Overall, a focus on supporting those women with the highest growth potential will not only help women entrepreneurs, but also women wage workers, given that women-owned firms tend to employ a higher share of women as workers (e.g. Amin and Islam, 2015). One potential approach for identifying such opportunity or high-growth entrepreneurs is through the use of business plan competitions (McKenzie, 2015).

Our findings suggest that exposing women to more profitable male-dominated sectors, such as through training, apprenticeship, and mentoring programs, could be effective in getting them to cross over. While we do not find evidence that husbands help women to cross over, spouse's do appear to provide important support that could help women to succeed in a given sector, such as by providing skills (either through their own labor or by imparting these skills on the wife), access to larger amounts of finance/capital, and by helping with business registration or the acquisition of a license. Given the importance of the role of spouses in helping crossovers operate their businesses, policymakers should consider interventions that sensitize husbands on the valuable role they can play in supporting their wives as entrepreneurs. To support unmarried women, programs could consider connecting women to non-family male business mentors. Regulatory reforms could also reduce the need for support from a husband, for example by making the business registration process less time-consuming - Botswana ranks a very low 157th in the World for the ease of 'starting a business' under Doing Business and it currently takes an average of 48 days to register a firm in Botswana, compared to an average of 23 days across all Sub-Saharan African countries.

While priority for business support should be given to opportunity entrepreneurs, it will clearly be important for some policies to focus on necessity entrepreneurs. In the short term these businesses may benefit from the same types of support that are needed by other entrepreneurs, given the similarities in the constraints faced by all businesses. Our findings suggest that policies that promote access to larger amounts of capital/finance may be valuable for all sole-owned women businesses, regardless of their sector. Such policies should take account of evidence from across the region indicating that women have unequal bargaining power in their households and often face competing claims on their business finances, resulting in business funds being diverted to a

spouse's business or to other non-business-related investments, such as children's education. Evidence indicates that secure savings mechanisms for women may help in this regard, by increasing their control over their finances and helping them to separate business from household funds. In Kenya, for example, Dupas and Robinson (2013) giving savings accounts to women market vendors led to a more than 45 percent increase in business investment, while there was no impact of providing such accounts to male motorbike drivers. While formal account ownership is already relatively high among our sample, we do find that over 28 percent of non-crossovers responded that they had not saved money in a bank or credit union in the past 12 months. Overall, findex data also indicate that only 41 percent of women and 49 percent of men in Botswana have an account at a financial institution. Policies could also focus on improving the provision of better-targeted and more affordable business development services to microenterprises, which would not only support the performance of these businesses directly but may also increase the incentives for them to officially register their businesses (World Bank, 2011). In the immediate term and for those businesses that plan on remaining within female-concentrated sectors, policymakers could consider policies aimed at ensuring their physical security, including policies that help them to find more secure locations to operate their businesses, free of risks related to adverse weather conditions, crime, and the threat of forced closure. These are all negative experiences that seem to be a more common problem for businesses operating in female-concentrated sectors.

However, in the longer term, there is clearly a need to help more 'necessity' non-crossovers find opportunities in wage employment, including through policies that increase the size of the wage job market. The potential impact of such an approach is clearly indicated by the relatively low wages that non-crossovers report would be sufficient to convince them to switch to wage employment. Enabling the shift of larger numbers of necessity non-crossovers into wage employment could also help address the currently high rate of business failure in Botswana, as identified in the World Bank's (2015) Systematic Country Diagnostic, by ensuring that businesses are more likely to only be started by those with the right skills, motivations, and ideas to be successful entrepreneurs.

5. References

Alibhai, Salman; Buehren, Niklas; Papineni, Sreelakshmi; Pierotti, Rachael Susan. 2017. Crossovers: female entrepreneurs who enter male sectors -- evidence from Ethiopia (English). Policy Research working paper; no. WPS 8065. Washington, D.C. : World Bank Group.

Amin, Mohammad; Islam, Asif Mohammed. (2015). "Does mandating nondiscrimination in hiring practices influence women's employment? Evidence using firm-level data (English)". Feminist Economics, February 26, 2015.

Botswana Central Statistics Office (2009). 2007 Informal Sector Survey Report. Gaborone.

Calderon, G., Iacovone, L., & Juarez, L. (2017). Opportunity versus necessity: understanding the heterogeneity of female micro-entrepreneurs. The World Bank Economic Review, 30(Supplement_1), S86-S96.

Campos, Francisco Moraes Leitao; Coleman, Rachel Dawn; Conconi, Adriana; Donald, Aletheia Amalia; Gassier, Marine; Goldstein, Markus P.; Chavez, Zenaida L.; Mikulski, Joanna; Milazzo, Annamaria; Paryavi, Maliheh; Pierotti, Rachael Susan; O'Sullivan, Michael B.; Vaillant, Julia. 2019. Profiting from Parity :

Unlocking the Potential of Women's Businesses in Africa : Main Report (English). Washington, D.C. : World Bank Group.

Campos, Francisco; Frese, Michael; Goldstein, Markus; Johnson, Hillary; Iacovone, Leonardo; McKenzie, David; Mensmann, Mona. (2017). "Teaching personal initiative beats traditional training in boosting small business in West Africa." Science 357 (6357), pages 1287-1290

Campos, Francisco Moraes Leitao; Goldstein, Markus P.; Mcgorman, Laura; Munoz Boudet, Ana Maria; Pimhidzai, Obert. 2015. Breaking the metal ceiling: female entrepreneurs who succeed in male-dominated sectors (English). Policy Research working paper; no. WPS 7503. Washington, D.C. : World Bank Group.

Das, Smita; Kotikula, Aphichoke; Carranza, Eliana. 2019. Gender-Based Employment Segregation: Understanding Causes and Policy Interventions (English). Jobs Working Paper; no. 26. Washington, D.C. : World Bank Group.

De Mel, S., McKenzie, D., & Woodruff, C. (2008). Returns to capital in microenterprises: evidence from a field experiment. The quarterly journal of Economics, 123(4), 1329-1372.

Dupas, Pascaline and Jonathan Robinson. (2013)."Savings Constraints and Micro-Enterprise Development Evidence from a Field Experiment." AEJ: Applied Economics 5(1), pages 163-92.

The Global Entrepreneurship and Development Institute – GEDI (2018). "The 2018 Global Entrepreneurship Index." Available online at: https://thegedi.org/

Goldstein, Markus P.; Gonzalez Martinez, Paula Lorena; Papineni, Sreelakshmi. 2019. Tackling the Global Profitarchy : Gender and the Choice of Business Sector (English). Policy Research working paper; no. WPS 8865. Washington, D.C. : World Bank Group.

Islam, Asif Mohammed; Gaddis, Isis; Palacios-Lopez, Amparo; Amin, Mohammad. (2018). The labor productivity gap between female and male-managed firms in the formal private sector (English). Policy Research working paper; no. WPS 8445. Washington, D.C. : World Bank Group.

Mckenzie, David J. (2015). Identifying and spurring high-growth entrepreneurship: experimental evidence from a business plan competition (English). Policy Research working paper; no. WPS 7391; Impact Evaluation series. Washington, D.C.: World Bank Group.

McKenzie, D., & Woodruff, C. (2015). Business practices in small firms in developing countries. Working Paper no. 21505. National Bureau of Economic Research.

Okurut F.N., Molefhe, L., Mupimpila, C., Nkuba, M., Okurut, M.L. (2015). IDR, VOL. 13, 1-2, January-December, pp. 51-70

Okurut, F.N., Yinusa D.O., and Mangadi K. (2011), Credit Rationing and SME Development in Botswana: Implications for Economic Diversification. Botswana Journal of Economics, Vol 8, Issue 12, pp 58-80

World Bank. 2015. Botswana - Systematic country diagnostic (English). Washington, DC: World Bank Group.

World Bank. 2011. Botswana - Promoting entrepreneurship in Botswana: Constraints to microbusiness development (English). Washington, DC: World Bank

6. Appendix

Table A1. Differences in Business Performance and other relevant variables- Solely owned businesses

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Previous Month Profit In Pula	478	103,368	56,778	23,054	-46,590 **	-33,723 *
		[241,230]	[130,092]	[67,758]	(20,031)	(18,684)
Previous Month Profit In Pula, winsorized	478	91,526	56,778	23,054	-34,748 **	-33,723 **
		[171,819]	[130,092]	[67,758]	(15,815)	(14,752)
Annual Profit In Pula	478	6,696,859	468,144	101,750	-6,228,715	-366,393
		[54,278,672]	[1,638,076]	[274,617]	(3,941,734)	(3,676,744)
Annual Profit In Pula, winsorized	478	1,544,447	468,176	101,767	-1,076,271	-366,409
		[5,456,172]	[1,638,067]	[274,611]	(408,365)	(380,912)
Number Of Employees	478	5.78	3.73	.827	-2.05 ***	-2.90 ***
		[6.97]	[4.72]	[1.91]	(.601)	(.561)
Spouse is owner/manager other firm	479	.171	.208	.088	.037	-.119 ***
		[.378]	[.408]	[.285]	(.044)	(.041)
Spouse is owner/manager firm in male dominated sector	479	.092	.178	.062	.086 **	-.116 ***
		[.290]	[.385]	[.242]	(.038)	(.035)
Spouse is owner/manager firm in same sector	479	.053	.089	.013	.036	-.076 ***
		[.224]	[.286]	[.115]	(.025)	(.024)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

Table A2. Differences Between Crossover Businesses

	Xover No-Joint	Xover Joint with Spouse (and others)	Xover Joint with Others only	Joint with Spouse vs No Joint	Joint Other vs No Joint	Xover Joint Female	Xover Joint Male	Joint with Female vs No	Joint with Male vs No Joint
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Previous month profit in Pula	56,778	400,807	42,554	344,030 *	-14,224	19,430	297,849	-35,975	242,443
	[130,092]	[1,919,274]	[133,689]	(176,940)	(188,666)	[26,952]	[1,598,338]	(300,844)	(154,112)
Previous month profit in Pula, winsorized	56,778	60,067	42,554	3,289		19,430	61,951	-35,975	6,546
	[130,092]	[158,600]	[133,689]	(29,516)	(31,472)	[26,952]	[164,491]	(49,882)	(25,553)
Annual profit in Pula, in pula,winsorized	468,176	3,099,589	418,154	2,631,413 ***	-50,022	298,750	2,301,387	-167,074	1,835,563 ***
	[1,638,067]	[7,945,908]	[487,150]	(782,267)	(834,111)	[293,506]	[6,691,511]	(1,342,978)	(687,962)
# of employees	3.73	9.26	5.13	5.53 ***	1.40	6.25	7.82	2.50	4.07 ***
	[4.72]	[10.1]	[4.48]	(1.30)	(1.39)	[5.73]	[8.89]	(2.23)	(1.14)
Owner provided capital to the business	.760	.963	1.00	.203 **	.240 ***	1.00	.974	.233 *	.207 ***
	[.429]	[.192]	[.00000]	(.078)	(.084)	[.00000]	[.160]	(.133)	(.068)
Amount provided by owner as capital,in Pula	51,955	62,688,916	150,665	62,636,960 **	98,710	48,000	41,852,980	-10,211	41,794,768 *
	[119,034]	[224,158,784]	[246,761]	(24,447,850)	(26,192,606)	[43,243]	184,153,936	(48,283,040)	(21,350,764)
Spouse provided capital to the business	.356	.667	.333	.311 **	-.022	.00000	.643	-.370	.273 **
	[.484]	[.482]	[.500]	(.123)	(.177)	[.00000]	[.488]	(.249)	(.115)
Amount provided by spouse as capital, in Pula	24,206	72,006,344	92,500	71,982,136	68,294	.00000	64,012,304	-37,488	63,974,816
	[48,846]	[250,272,112]	[113,541]	(59,656,276)	(94,324,856)	236,238,192	174,473,472	(57,344,392)	
Max amount the owner can borrow for business within a month	13,311	46,967	21,596	33,656 ***	8,285	11,338	41,336	-2,187	27,811 ***
	[27,663]	[108,815]	[42,290]	(11,634)	(12,404)	[16,445]	[95,332]	(19,722)	(10,103)
Household income in a typical month	6,539	22,093	6,696	15,554 ***	157	5,750	17,628	-763	11,115 ***
	[9,661]	[30,353]	[6,050]	(3,309)	(3,527)	[6,094]	[26,258]	(5,736)	(2,941)
HH asset index 0-14	9.60	11.0	10.8	1.43 **	1.18 *	11.9	10.8	2.25 **	1.14 **
	[3.02]	[1.37]	[1.98]	(.576)	(.615)	[1.73]	[1.63]	(.973)	(.498)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

Table A3.

	(1)	(2)
	Annual Profits in Pula	Previous Month Profit in Pula
	I HS	I HS
Xover Joint with Spouse (and others)	1.752***	-0.529
	(0.482)	(0.911)
Constant	12.46***	9.483***
	(0.167)	(0.263)
Observations	150	150
R-squared	0.108	0.004

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A4. Differences in Business Performance and other relevant variables - Botswana born owned businesses

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Previous month profit in Pula	499	114,239	43,098	17,874	-71,140 **	-25,224
		[388,926]	[113,946]	[48,945]	(27,691)	(25,318)
Previous month profit in Pula, winsorized	499	84,509	43,098	17,874	-41,411 ***	-25,224 *
		[172,816]	[113,946]	[48,945]	(14,228)	(13,009)
Annual profit in Pula	499	15,570,337	666,824	106,269	-14,903,513	-560,556
		[126,802,816]	[2,871,570]	[278,254]	(8,647,275)	(7,906,388)
Annual profit in Pula, in pula, winsorized	499	1,685,653	666,853	106,284	-1,018,800 **	-560,569
		[5,509,985]	[2,871,564]	[278,248]	(413,111)	(377,717)
# of employees	499	6.68	4.29	.854	-2.39 ***	-3.44 ***
		[9.79]	[6.33]	[1.80]	(.781)	(.714)
Solo Owned Business	500	.757	.796	.908	.040	.111 ***
		[.430]	[.404]	[.290]	(.045)	(.041)
Jointly Owned with Spouse (and others)	500	.068	.071	.046	.003	-.025
		[.252]	[.258]	[.210]	(.029)	(.027)
Jointly Owned with other female owners	500	.007	.053	.038	.046 **	-.015
		[.082]	[.225]	[.191]	(.022)	(.020)
Jointly Owned with other male owners	500	.142	.071	.008	-.071 **	-.062 **
		[.350]	[.258]	[.091]	(.029)	(.027)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

Table A5. Correlates with being a Crossover

	Full Sample				Only Businesses not jointly owned				Not foreign born sample			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover	Crossover
Owner's age	0.00457**	0.00475**	0.00381*	0.00423*	0.00519**	0.00520**	0.00416*	0.00486**	0.00465*	0.00464*	0.00382	0.00404*
	(0.00224)	(0.00224)	(0.00223)	(0.00218)	(0.00245)	(0.00245)	(0.00245)	(0.00237)	(0.00247)	(0.00249)	(0.00246)	(0.00239)
Completed more than Secondary education	0.142**	0.118*	0.131*	0.156**	0.248***	0.211**	0.220**	0.250***	0.213**	0.184**	0.198**	0.222***
	(0.0700)	(0.0695)	(0.0690)	(0.0689)	(0.0880)	(0.0868)	(0.0866)	(0.0845)	(0.0823)	(0.0819)	(0.0814)	(0.0800)
Married	0.0210	0.0286	0.0268	0.0369	-0.0417	-0.0338	-0.0246	-0.0211	0.0488	0.0488	0.0456	0.0632
	(0.0994)	(0.0993)	(0.0977)	(0.0991)	(0.106)	(0.107)	(0.105)	(0.107)	(0.108)	(0.108)	(0.107)	(0.109)
Household Decision Making Index (High:5, Low:1)	-0.0445***	-0.0436***	-0.0432***	-0.0405***	-0.0748***	-0.0731***	-0.0749***	-0.0685***	-0.0575***	-0.0555***	-0.0554***	-0.0519***
	(0.0143)	(0.0145)	(0.0144)	(0.0146)	(0.0156)	(0.0158)	(0.0156)	(0.0159)	(0.0156)	(0.0160)	(0.0159)	(0.0160)
Foreign Born	0.176**	0.197**	0.216***	0.205***	0.147	0.154	0.207*	0.178	-	-	-	-
	(0.0776)	(0.0780)	(0.0785)	(0.0784)	(0.121)	(0.119)	(0.118)	(0.121)				
Proportion of male siblings	0.0251	0.0114	0.0129	0.0165	-0.0351	-0.0344	-0.0477	-0.0460	-0.0270	-0.0397	-0.0472	-0.0441
	(0.0785)	(0.0779)	(0.0775)	(0.0779)	(0.0812)	(0.0814)	(0.0795)	(0.0810)	(0.0834)	(0.0821)	(0.0815)	(0.0821)
Number of siblings	-0.00363	-0.00304	-0.00445	-0.00422	-0.00537	-0.00551	-0.00594	-0.00464	-0.00233	-0.00133	-0.00203	-0.000766
	(0.00935)	(0.00935)	(0.00914)	(0.00929)	(0.00953)	(0.00960)	(0.00939)	(0.00961)	(0.00965)	(0.00964)	(0.00949)	(0.00966)
First born in the family	-0.0484	-0.0572	-0.0648	-0.0829	-0.0106	-0.0236	-0.0255	-0.0515	-0.0437	-0.0568	-0.0654	-0.0905
	(0.0564)	(0.0593)	(0.0591)	(0.0600)	(0.0575)	(0.0619)	(0.0599)	(0.0628)	(0.0596)	(0.0644)	(0.0637)	(0.0646)
Mother Completed more than primary education	0.128*	0.131*	0.136*	0.129*	0.130	0.129	0.145*	0.112	0.174**	0.169**	0.174**	0.161**
	(0.0747)	(0.0734)	(0.0750)	(0.0718)	(0.0813)	(0.0802)	(0.0820)	(0.0777)	(0.0810)	(0.0802)	(0.0819)	(0.0762)
Mother was owner/manager firm when respondent was a child	-0.0865	-0.0884	-0.0779	-0.0788	-0.124*	-0.132*	-0.115	-0.123*	-0.0863	-0.0828	-0.0829	-0.0832
	(0.0651)	(0.0653)	(0.0667)	(0.0653)	(0.0750)	(0.0743)	(0.0757)	(0.0732)	(0.0732)	(0.0734)	(0.0748)	(0.0721)
Father Completed more than primary education	0.0946	0.0802	0.0818	0.0813	0.0317	0.0250	0.0296	0.0523	0.0382	0.0276	0.0342	0.0359
	(0.0729)	(0.0724)	(0.0725)	(0.0699)	(0.0787)	(0.0796)	(0.0781)	(0.0753)	(0.0785)	(0.0785)	(0.0782)	(0.0733)
Father was owner/manager firm in male dominated sector when respondent was a child	0.140*	0.133*	0.121	0.117								
					0.204**	0.203**	0.177*	0.196**	0.0739	0.0580	0.0446	0.0415
	(0.0789)	(0.0789)	(0.0778)	(0.0806)	(0.0950)	(0.0942)	(0.0912)	(0.0945)	(0.0956)	(0.0961)	(0.0939)	(0.0967)
Spouse Completed more than primary education	-0.103	-0.103	-0.0896	-0.112	-0.0438	-0.0458	-0.0385	-0.0638	-0.170	-0.160	-0.143	-0.179
	(0.105)	(0.104)	(0.102)	(0.104)	(0.111)	(0.112)	(0.110)	(0.112)	(0.116)	(0.116)	(0.115)	(0.116)
Spouse is owner/manager other firm	0.0691	0.0495	0.0271	0.0309	0.0308	0.0206	-0.0158	-0.00199	0.0932	0.0805	0.0462	0.0663
	(0.0808)	(0.0828)	(0.0813)	(0.0825)	(0.0993)	(0.101)	(0.0980)	(0.0985)	(0.0950)	(0.0965)	(0.0962)	(0.0951)
Role model was male		0.103	0.0892	0.0793		0.110	0.0667	0.0763		0.114	0.106	0.0919
		(0.0812)	(0.0823)	(0.0811)		(0.0956)	(0.0932)	(0.0898)		(0.0923)	(0.0937)	(0.0901)
Knows more than 30 owners in any sector		-0.0672	-0.0554	-0.0335		-0.0454	-0.0358	-0.0229		-0.0810	-0.0723	-0.0401
		(0.0648)	(0.0634)	(0.0638)		(0.0712)	(0.0690)	(0.0707)		(0.0690)	(0.0675)	(0.0666)
Training in sector of current business		0.209**				0.195*				0.175		
		(0.0995)				(0.110)				(0.107)		
Any last 5 job was in male dominated sector			0.120***				0.148***				0.116**	
			(0.0452)				(0.0491)				(0.0486)	
Exposed to the current sector of operation by someone				0.147***				0.151***				0.177***
				(0.0508)				(0.0560)				(0.0528)
Constant	0.239**	0.273**	0.261**	0.224*	0.336***	0.357**	0.347**	0.300**	0.300**	0.351**	0.338**	0.286**
	(0.117)	(0.130)	(0.130)	(0.130)	(0.126)	(0.143)	(0.143)	(0.144)	(0.126)	(0.140)	(0.140)	(0.137)
Observations	408	408	408	408	322	322	322	322	347	347	347	347
R-squared	0.164	0.180	0.184	0.188	0.188	0.202	0.215	0.213	0.141	0.156	0.163	0.178

OLS on a dummy equal to 1 if the respondent is a Crossover. Robust standard errors in parentheses

*** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 1 percent level.

A6. Business Characteristics (Full Sample)

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
# of years the business has been in operation	633	9.65	9.54	8.75	-.115	-.794
		[6.83]	[7.24]	[7.71]	(.771)	(.749)
Business formally registered	637	.879	.780	.294	-.099 **	-.486 ***
		[.326]	[.416]	[.456]	(.043)	(.041)
Business has written business plan	637	.603	.497	.237	-.106 **	-.260 ***
		[.490]	[.502]	[.426]	(.049)	(.048)
Business has a written annual budget	637	.625	.543	.282	-.082	-.261 ***
		[.485]	[.500]	[.451]	(.050)	(.049)
Business records revenues and expenses	637	.893	.834	.653	-.058	-.182 ***
		[.310]	[.373]	[.477]	(.042)	(.041)
Business has written contracts for employees	386	.807	.798	.637	-.009	-.161 ***
		[.395]	[.403]	[.484]	(.049)	(.061)
Number of Business owners (Respondent Included)	637	1.40	1.41	1.15	.009	-.262 ***
		[.695]	[.666]	[.388]	(.061)	(.059)
Solo Owned Business	637	.679	.669	.863	-.010	.194 ***
		[.468]	[.472]	[.345]	(.045)	(.043)
Jointly Owned with Spouse (and others)	637	.112	.179	.069	.067 **	-.110 ***
		[.316]	[.384]	[.253]	(.033)	(.032)
Makes major decisions for business alone or with other owners	637	.897	.868	.958	-.030	.090 ***
		[.304]	[.340]	[.201]	(.029)	(.028)
Owner provided capital to the business	637	.835	.834	.817	-.0004	-.018
		[.372]	[.373]	[.388]	(.040)	(.039)
Amount provided by owner as capital,in Pula	494	3,482,538	13,372,43(	43,848	9,889,898	-13,328,588 **
		38,617,39(	04,787,12	[175,225]	(6,672,407)	(6,395,508)
Amount provided by owner as capital,in Pula, winsorized	494	299,107	204,295	43,848	-94,812	-160,447 **
		[930,583]	[803,554]	[175,225]	(82,129)	(78,721)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.

Table A7. Respondent and Household characteristics (Full Sample)

	Obs	Male	XOvers	Non-XOvers	XOvers vs Male	Non-XOvers vs XOvers
	(1)	(2)	(3)	(4)	(5)	(6)
Owner not born in Botswana	637	.339	.252	.088	-.088 **	-.164 ***
		[.475]	[.435]	[.284]	(.042)	(.041)
Completed more than Secondary School	637	.415	.364	.156	-.051	-.208 ***
		[.494]	[.483]	[.364]	(.047)	(.045)
Household Head	637	.946	.450	.580	-.496 ***	.130 ***
		[.226]	[.499]	[.494]	(.044)	(.043)
Married	637	.603	.536	.389	-.066	-.147 ***
		[.490]	[.500]	[.489]	(.052)	(.050)
Spouse completed more than secondary school	637	.281	.245	.130	-.036	-.115 ***
		[.451]	[.432]	[.337]	(.042)	(.041)
Spouse is owner/manager firm in male dominated sector	637	.103	.258	.065	.156 ***	-.193 ***
		[.304]	[.439]	[.247]	(.034)	(.033)
Spouse is owner/manager firm in same sector as respondent	637	.049	.159	.038	.110 ***	-.121 ***
		[.217]	[.367]	[.192]	(.027)	(.026)
Household income in a typical month	637	12,082	9,382	5,009	-2,701	-4,372
		[19,349]	[16,282]	[11,874]	-1,68	-1,63
Respondent owns at least one plot of land	637	.665	.556	.565	-.109 **	.009
		[.243]	[.272]	[.391]	(.034)	(.033)
HH asset: car	637	.915	.801	.540	-.113 ***	-.261 ***
		[.280]	[.400]	[.499]	(.043)	(.042)
HH asset: internet connection	637	.799	.656	.402	-.143 ***	-.253 ***
		[.402]	[.477]	[.491]	(.048)	(.047)
HH asset: livestock	637	.402	.287	.358	-.115 **	.071
		[.491]	[.454]	[.480]	(.050)	(.049)
Spouse looks after children when respondent is working	532	.205	.033	.059	-.173 ***	.027
		[.405]	[.178]	[.237]	(.035)	(.034)

Notes: Column (1) reports the number of observtion for each variable; Columns (2), (3) and (4) report mean and standard deviation in square parenteses; Column (5) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Male owned firms and Crossover firms; Column (6) reports the coefficient and standard errors in parentheses obtained from a test of differences of means between Crossovers firms and Non-Crossovers firms. *** Significant at the 1 percent level, ** Significant at the 5 percent level, * Significant at the 10 percent level.