

## Women, entrepreneurship, and institutions



### In brief

- This project aims to investigate whether improving enforcement of rule of law benefits female entrepreneurs more than male entrepreneurs, thus serving to reduce the gender gap in entrepreneurship.
- The project builds upon previous work that collected data on the distribution of all businesses across Lusaka. This brief presents new analysis of this data which reveals that being close to important legal or quasi-legal institutions is associated with a reduced or eliminated gender gap.
- In addition to this analysis, this brief presents evidence from an experiment with entrepreneurs in Lusaka that replicated the opportunity for pairs of entrepreneurs to cooperate on a business idea either with or without legal institutions.
- The experiment's results show women trust their partner less in general compared to men, but introducing legal institutions reduces or eliminates this difference. This increased trust benefits both parties, so men do not lose out.
- Overall, this brief highlights that enforcing rule of law – even in a gender-blind way – appears to benefit female more than male entrepreneurs. This presents a new perspective on policies to address the gender gap in entrepreneurship. However, more research is needed on specific institutions.

*This project was funded  
by IGC Zambia*

## Background and context

In developing countries, entrepreneurship tends to be a male-dominated activity, and when female-led businesses do exist, they are typically smaller and less profitable than male-led businesses. Africa is rapidly urbanising, a trend that is often thought of as an engine for growth as the opportunities for trade and collaboration fuel a dynamic entrepreneurial sector. Yet these mutually-advantageous exchanges may not occur if potential female entrepreneurs prefer to avoid dealing with men for fear of expropriation or violence: women may prefer to deal only with other women or simply avoid creating a business altogether. This is typically not a problem in the developed world, where a strong rule of law mitigates these risks. Preliminary evidence from major data collection exercises and a “lab-in-the-field” experiment, both conducted in Lusaka, Zambia – one of Africa’s most dynamic cities – provide support for this idea, suggesting that female entrepreneurs may be disproportionately harmed (relative to men) by weak rule of law, thus hampering opportunities for economic growth.

## Summary of previous data collection work and census

In recent related IGC work, we conducted a complete census and spatial mapping of all 47,428 businesses in Lusaka. We also included a short survey with business owners with fewer than 20 employees belonging to manufacturing, mining, and construction. There were 2,216 respondents, which accounts for 58.3% of the firms in these sectors. Data was collected on business practices and history, levels of trust, collaborative behaviour with other businesses, and demographics. We found evidence of “clusters” of dense business activity supported by elevated trust and knowledge sharing between businesses, which is consistent with the idea that urbanisation is playing a role in facilitating trade and collaboration and thereby economic growth.

We focus on manufacturing firms for the following reasons:

1. **Economic importance:** Manufacturing has been shown to be one of the most important sectors for industrial development and growth (e.g., Jones, 2016; Hsieh & Klenow, 2009)
2. **Governmental importance:** The government of Zambia has been focusing its industrial strategy on clusters of manufacturers. For example, six Multi-Facility Economic Zones have been implemented to make Zambia internationally competitive through manufacturing.
3. **Economies of scale:** The possibility to exploit returns to scale makes collaboration – and thus trust – particularly important in this sector.

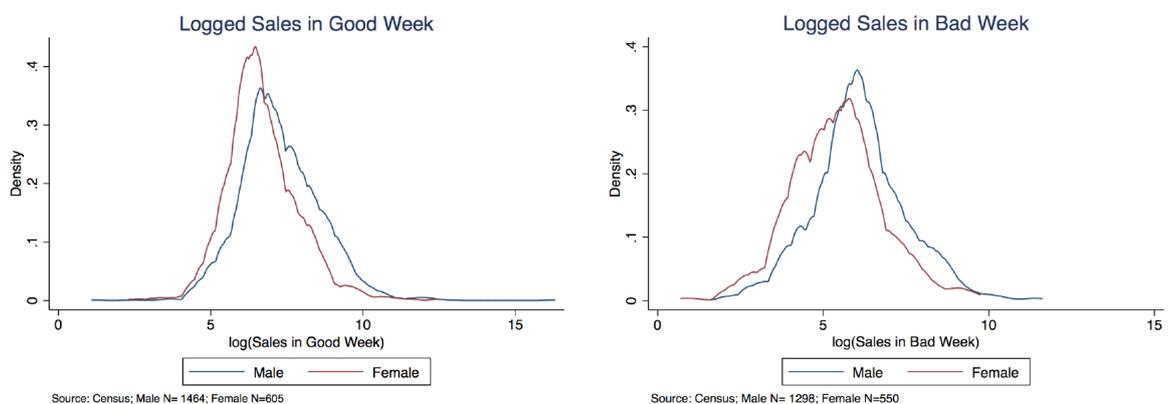
## Analysis of data from our census

### We confirm the presence of a gender gap in entrepreneurship and present a new perspective

Formalised in the National Gender Policy (NGP) in 2000 and updated in 2014, Zambian policymakers have documented gender gaps in many of the country's affairs and are seeking to address these. In our sample of manufacturing entrepreneurs, we also observe a stark gender gap: 27% of the entrepreneurs in manufacturing are women, and earnings of male-led manufacturing businesses are on average double those of female-led manufacturing businesses. Figure 1 below shows that the gender gap exists at all percentiles in the earnings distribution, and persists in both good and bad weeks.

We examine a new perspective: whether this gender earnings gap in entrepreneurship reflects limitations to rule of law in Zambia. Uncertainty over whether the law will be enforced can also be discriminatory, even if both the formal laws and any lack of enforcement are gender-blind. If men are more able to use violence than women, then they will naturally benefit from any weaknesses in rule of law, at the expense of women.

**Figure 1: Distribution of sales by gender in good and bad weeks**



*We see that in both graphs, the male distribution is shifted to the right of the female distribution. This indicates that the gender gap in entrepreneurship exists at all percentiles of the distribution.*

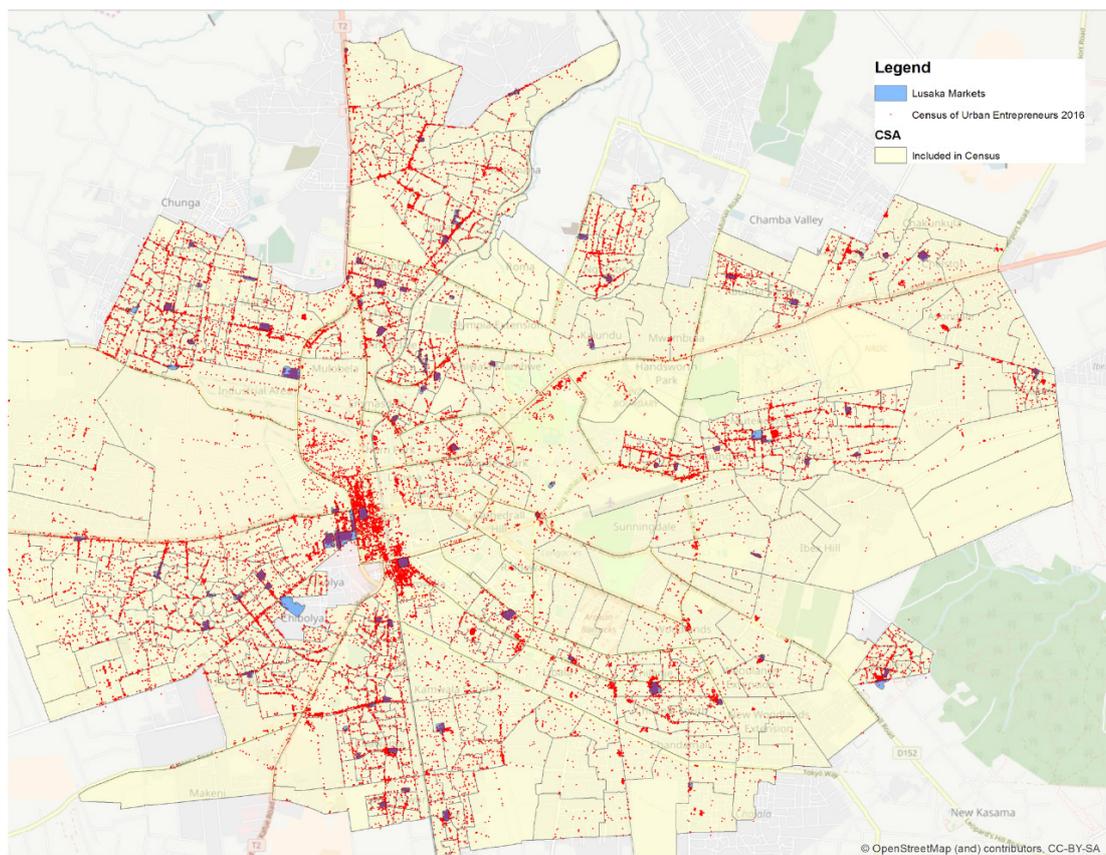
### There are two main institutions for small business owners in Lusaka

1. **Markets:** There are 80 formal markets in Lusaka, and 59% of the manufacturers in our sample are located within these markets. Markets have a system of rules and are typically led by a market officer (a "market chairman" or "chief"). Importantly, one of the chief's major roles is to resolve disputes that occur in the markets, which provides entrepreneurs with institutional or quasi-legal support against expropriation.

2. **The Small Claims Court (SCC):** Founded in 2008 by an act of Parliament, the SCC is intended to hear minor cases in a quick and accessible manner without the need for formal legal representation. Within a month of a case being served, the case is heard, and depending on the outcome, the losing party has seven days to pay the winning party.

Figure 2 presents a map showing the location of markets and the SCC, overlaid with density of business activity. In our study, we make use of this geographical variation to examine whether these two institutions can reduce the gender gap in entrepreneurship.

**Figure 2: Density of business activity and legal institutions in Lusaka**



*Markets, indicated by blue areas, are scattered throughout; the SCC is centrally located.*

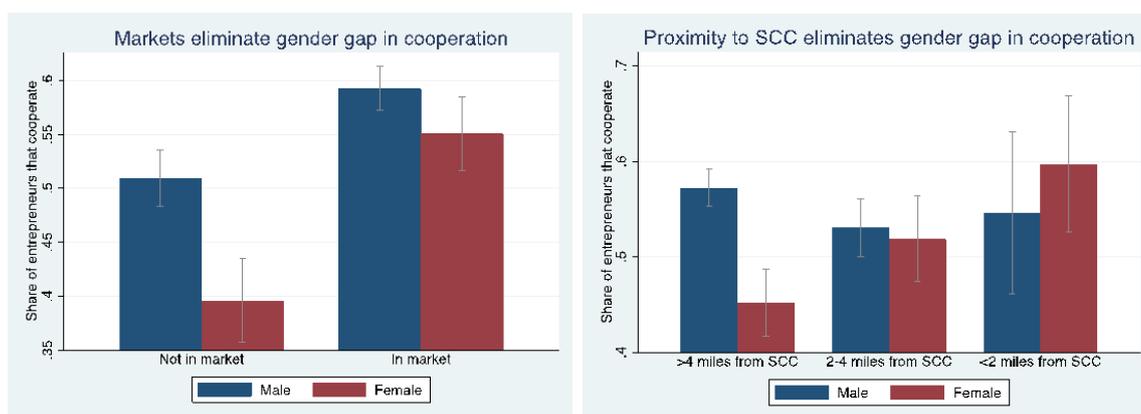
### **Results are consistent with the hypothesis that lack of rule of law disproportionately harms women**

First, we observe that while being in a market is associated with greater cooperation between entrepreneurs in general (connected to the “clusters” results we found previously), this effect is disproportionately large for women. That is, the gender gap in cooperation is eliminated within markets. This is consistent with the idea

that markets provide institutional support for women. Figure 3 illustrates this: we observe a large and statistically significant gender gap in cooperation outside of markets (left bars), but this gap shrinks to being insignificant within markets (right bars).

Crucially, we observe a similar result for measures of sales, which is indicative of better sales performance of women located within markets than their female counterparts located outside. Second, we observe that distance from the SCC is negatively correlated with cooperation and sales for women, with no effect for men. Thinking of distance from the SCC as a proxy for ease of access, this shows that women with less access to the SCC cooperate with other entrepreneurs less and is also consistent with our hypothesis of rule of law disproportionately benefiting women-led businesses. Figure 4 shows that there is a large and statistically significant gender gap in cooperation among businesses far from the SCC, but this gap also shrinks to insignificance among businesses close to the SCC.

**Figure 3 and 4: Gender gap in cooperation**



*Left: There is a large gender gap in cooperation outside of markets, but this reduces to insignificance within markets.*

*Right: There is a large gender gap in cooperation far from the SCC, but this reduces to insignificance when close to the SCC.*

## Beyond correlations: Experimental evidence from our “lab-in-the-field” games

**We designed an experimental game, played by pairs of entrepreneurs, to replicate the opportunity to cooperate in a business decision**

While the previous results are consistent with our hypothesis, they are only correlations and do not necessarily present causal evidence of the effect of rule of law. We thus conducted a “lab-in-the-field” experiment with a randomly selected

sample of 500 people from our manufacturers' survey that aimed to measure the role of institutions in a controlled setting. We re-visited these entrepreneurs directly in their shops and asked them to play a version of the "Trust Game". An entrepreneur was matched, electronically and anonymously, with a partner. Player 1 (the "investor") was given 10 tokens that could either be kept or invested in the business of Player 2 (the "trustee"). Player 2 received three times the number of invested tokens and then had to decide how many to send back to Player 1. This means that Player 1 is responsible for the total amount of tokens in the game and should send all 10 to maximise this (producing 30 tokens), but this strategy is risky as Player 2 may simply keep them rather than send a fair amount back. Entrepreneurs played the game for two rounds in total, switching roles between the first and the second round. After the game was complete, tokens were redeemable for real money. This game allowed us to measure both how trusting Player 1 is (by measuring how many tokens he/she sends) as well as how trustworthy Player 2 is (by measuring how many tokens he/she sends back).

### **In some versions of the game, we allowed entrepreneurs to call a legal institution if they felt that their partner was not being fair**

We randomly assigned the 500 pairs to three different groups. In Groups 1 and 2, Player 1 had the option of calling a legal institution if he/she felt that Player 2's choice of how much to send back was unfair. Group 3 did not have this option and served as a control group. The legal institution would then review what Player 2 sent back and decide whether or not to re-allocate the final amounts.

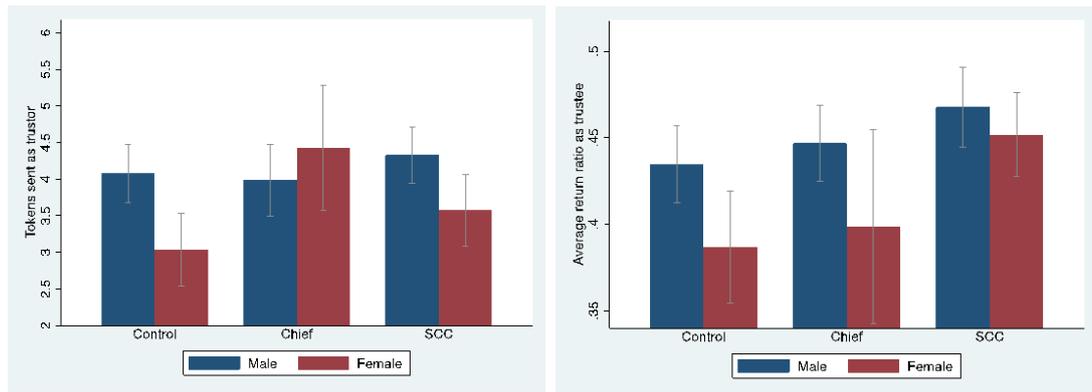
We replicated the two local institutions mentioned above in this controlled setting: the market chief in Group 1 and the SCC in Group 2. To make the ruling mechanism as realistic as possible, we worked closely with the SCC and market chiefs to determine how they would make such allocations, without them knowing anything about the identity of the players. The aim of this modification was to investigate whether participants were more trusting and/or trustworthy if they knew that they could call one of these institutions.

### **The results indicate that female entrepreneurs are in general less trusting than male entrepreneurs, but that providing access to unbiased legal institutions reduces or eliminates this gap**

*"...the threat of a legal institution induces entrepreneurs to be more trustworthy."*

Figure 5 shows that in pairs without access to institutions, women do send around 25% less tokens than men. This is consistent with earlier evidence that female entrepreneurs in these environments cooperate less, and are less trusting in general than male entrepreneurs. We also find that the institutions do help reduce this gender gap in trust: in the SCC groups it is reduced, and in the Chief groups it is eliminated altogether. Looking at the behaviour of the trustee, we see in Figure 6 that both forms of institutions increase the average share that trustees (of both genders) return to the investor, which is consistent with the idea that the threat of a legal institution induces entrepreneurs to be more trustworthy. Overall, in the pairs with institutions, the earnings of the investor increase on average (especially for women) and the earnings of the trustee are constant, indicating that everyone is made better off through mutual collaboration, but women especially so.

**Figure 5: Share of tokens that Player 1 sends to Player 2**  
**Figure 6: Share of tokens that Player 2 sends back**



*Left: There is a gender gap in the amount of tokens sent, but providing access to institutions either reduces or eliminates it.*

*Right: Both genders send back more tokens when there is a legal institution available.*

## Conclusion

Our results provide suggestive evidence that weak rule of law may hinder women disproportionately from engaging in mutually beneficial collaboration with other entrepreneurs. This may help explain why there are relatively few female entrepreneurs and, among those that exist, why they tend to deal primarily with other women rather than men. This is important for understanding gender inequality, but also has strong implications for economic growth. Such gender segregation and lack of trade blocks the dynamism of entrepreneurship that usually accompanies rapid urbanisation. Yet our experiment suggests that introducing stronger rule of law can help alleviate this problem and potentially eliminate these gender gaps.

The main policy implication of this research is that the gender gap in entrepreneurship may be reduced by ensuring that legal institutions are available and effective at enforcing contracts, even in a gender-blind manner. While the SCC was founded for a related purpose in 2009, in our sample, only 21% of entrepreneurs have heard of it, and of these, 56% believe it is not designed for them. This suggests that there is scope for policy to expand knowledge and accessibility to the SCC. However, further research is needed before this is recommended. In particular, more detailed qualitative and quantitative information is needed from female entrepreneurs about their relationship with institutions in Lusaka.

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