Women's Enterprises: Infrastructure, Transportation and Communications

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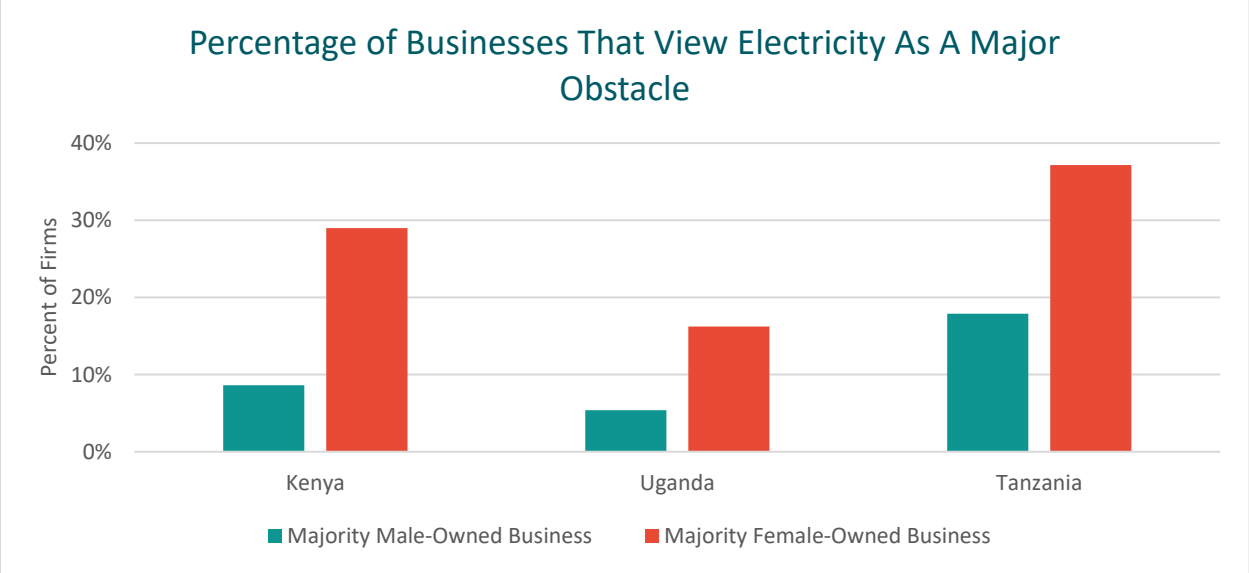
Cities are traditionally nests for small businesses and entrepreneurship to grow and thrive in large groups. Clusters of ambitious, creative and driven individuals work in partnership and trade goods and services with each other. Businesses generate taxes, which fund investments in infrastructure and public goods. One might also assume that the high concentration of people and businesses in an urban environment would lead to public services like water, electricity, transportation and communications networks being readily available and cost-efficient.[1] However, in many Low- and Middle-Income Country (LMIC) contexts, for various reasons, this is not the case. Insufficient infrastructure affects both entry to the workforce and private sector growth. Evidence suggests that business owners in Nigeria, for instance, see poor infrastructure as a major factor constraining the growth of small and medium enterprises (SME), second only to a lack of finance.[2] Moreover, because men and women interact with and use infrastructure in different ways, women and the establishments that employ female entrepreneurs are disproportionately affected by shortages. **The development of sustainable, affordable, safe and reliable infrastructure has huge potential for reducing the barriers to entry and growth that prevent female-owned businesses from thriving.**

Water and Electricity

The availability of water and electricity for households and businesses affects women's ability to earn income. Globally, women are responsible for the lion's share of household work, including caring for children, preparing meals and cleaning the home. **In almost every country, women spend more time than their male partners on domestic tasks, performing an average of 75 percent of that work.** When infrastructure limitations at home, such as a lack of piped water and electricity connections, force women to also gather water and fuel from a distance, there is even less time for their paid employment. Evidence from Bangladesh suggests that access to affordable electricity could reduce the time women spend on household tasks by up to 70 percent.[3] In part, the need for flexibility may drive women to self-employment, the informal sector and entrepreneurship, giving them the ability to set their own hours and manage their professional and domestic responsibilities. Indeed, female entrepreneurs are more likely than their male counterparts to cite the need to balance work and family demands as a factor driving their career choices, while men select entrepreneurship much more frequently because of its high-earning potential.[4] Yet these women tend to work less than full-time, capping their earning potential well below that of men and suggesting that they still forego additional income because of other demands on their time.[5]

In the workplace, a lack of water and electricity connections present barriers to entry for new businesses and challenges to expansion for existing enterprises. Perhaps unsurprisingly, Ndiaye et al. find that better infrastructure, including reliable electricity or owning a generator, improves the performance of both small and medium firms.[6] **Clean water, cooking fuel, heating and cooling equipment and lighting are critical for many businesses to function properly, and these may also disproportionately affect women, as they engage in the food sector more frequently and may face more personal security issues operating after dark.**[7] Indeed, businesses with majority-female ownership are more likely to report poor or no electricity as a major obstacle to their operation (see Figure 1). A female entrepreneur operating in an unlit space may opt to protect herself by limiting her working hours to daylight. Access to electricity would allow her to extend her working hours significantly. Similarly, women are more likely than men to start their businesses at home or nearby because of time constraints and transportation concerns, especially within informal settlements. These settlements are also the least likely to have state-provided water and electricity connections, and as a result, women, more often than men, have no choice but to conduct business in poorly-served spaces.[8]

Figure 1. Percentage of firms that view electricity supply as a major obstacle to their operations
Source: Enterprise Surveys (2013, 2018).



This view of social protection sits well with earlier work by Holzmann and Jorgensen (2000) which showed that social protection ballasts households, communities and economies against risk and may even encourage more risk taking and innovation. **Social protection can potentially prevent, mitigate and smooth risks for small entrepreneurs and own-account workers, protecting basic livelihoods and encouraging risk-taking**.

This is likely to be particularly important for women, who typically have less cash and seed capital to start businesses and take economic risks.

Forced to turn to other non-public sources of power, firms must bear the costs, such as purchasing and operating a generator. However, purchasing energy privately instead of through a public grid is extremely expensive and can be a massive barrier to entry, particularly for fledgling enterprises. Because female entrepreneurs more often self-select into lower-revenue, female-dominated sectors, such as food, retail and services,[9] they may be less able to overcome that barrier, as the cost of a generator represents a far larger percentage of their revenue. Thus, when public services are not available, women may have limited ability to adjust or purchase goods and services privately.

Box 1. Solar Energy Increases Entrepreneurship and Incomes in Ghana

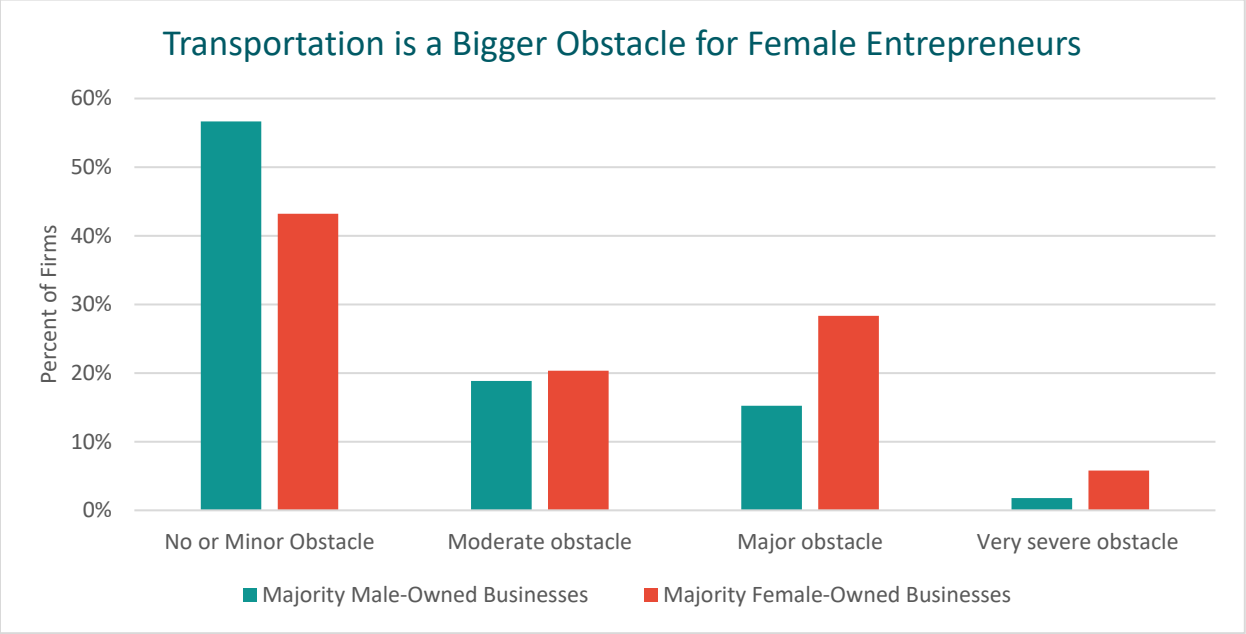
In 2017, Black Star Energy installed solar mini-grids in a rural Ghanaian community. Before the installation, female would-be entrepreneurs were dissuaded from starting businesses by the lack of electricity and related costs of doing business, and those who did struggled with debilitatingly low incomes – 90 percent of entrepreneurs in the community made less than $2.00 per day. Solar-powered electrification, however, sent women in droves to the world of entrepreneurship – the number of female entrepreneurs rose by 29 percent. At the same time, existing businesses expanded and incomes boomed – increasing by up to 11 times, with over 75 percent earning more than $2.00 per day, compared to just 10 percent before the installation.

Source: Black Star Energy. (2018). Solar Mini-Grids Boost Women Entrepreneurship and Increase their Income by Up to 11 Times. (Blog). Energicity. http://energicitycorp.com/solar-mini-grids-boost-women-entrepreneurship.

Transportation

The prevalence and quality of roads and public transit systems have significant implications for the success of SMEs. Transportation systems determine the level of interaction between economic actors, including partners, input providers and consumers.[10] Where transport linkages are weak, businesses are constrained by the ability of their employees and customers to reach their doors. Like electricity, transportation shortages affect female and male businessowners differently, and men may have more freedom to adjust to missing transit links. Transportation schedules are frequently designed to cater to traditionally male work schedules, ignoring the specific transport needs of women who need to make more frequent, shorter trips to tend to domestic tasks. **Indeed, evidence suggests that female entrepreneurs view transportation limitations as a more significant obstacle to their economic activities than male entrepreneurs.**

Figure 2. Extent to which firms view transportation as an obstacle in Tanzania, Uganda and Kenya
Source: Enterprise Surveys (2013, 2018).



While men may be content to wait for unreliable or infrequent buses or trains or travel long distances on foot, women's household responsibilities may not allow them to spend as much time in transit. Men are also more likely than women to have access to private transportation. Therefore, a male entrepreneur might see missing transport links as an inconvenience, whereas to his female counterpart it is an insurmountable barrier because of her disproportionate reliance on public transportation. Additionally, informal or poorly-designed transportation systems may present unique dangers to women. Poorly-lit stations, all-male staff, inadequate or nonexistent public toilets and long or unpredictable wait times increase women's risk of sexual and gender-based violence while traveling between work and home.[11] This threat can be a major factor in discouraging women from traveling during certain hours or to certain locations, which has implications for their access to employment.

Both the required time and the threat of exposure to violence can inhibit women's ability and willingness to travel and force female entrepreneurs to keep their businesses ultra-local, even at home. Evidence from Nairobi suggests that residents of the city's slums cope with unaffordable transportation by limiting their movements outside of the slum, and that women in particular bear this burden.[12] This can confine women to certain kinds of jobs, reduce their productive hours, restrict their bargaining power with employers and limit the customer pool if the woman's home is not in a well-trafficked district. It also reinforces the challenge of providing electricity, as described above.

Improving transportation infrastructure can encourage information exchange and partnerships that support business growth and improve women's mobility and access to business opportunities. [13,14] It can reduce women's time burden and allow them to seek stable, sustainable employment. New transportation systems must be affordable, efficient, safe and reliable and account for the needs of both men and women.[15]

Box 2. Transportation Shortages Limit the Movement of Women and Girls in the Favelas of Sao Paulo

ActionAid reports that the densely populated favelas of Sao Paulo are grossly underserved by the city's public transit system, forcing residents to walk long distances to the nearest bus terminal. And once they reach the terminal, buses are unreliable and not scheduled to meet their off-hours needs. Because women are more likely to make frequent, short journeys, this translates into significant waiting time, and a heightened risk of violence. Approximately 58 percent of residents surveyed in one district report a lack of lighting at bus and train stations. Across Sao Paulo, a growing number of women report sexual abuse while using public transportation, a key reason women and girls report being afraid to use it. Where women's mobility is restricted or relatively costly, they are confined to local markets for employment and production. This reduces their ability to earn and increases their likelihood of working in the informal economy.

Source: ActionAid. (2016). *Freedom to Move Women's experience of urban public transport in Bangladesh, Brazil and Nigeria, and how lost tax revenues can pay to improve it.*

Internet and Communications Network

Women can benefit uniquely from digital communications tools and internet access. Female businessowners are less likely than their male counterparts to have a pre-existing network of business contacts, so it is critical for them to have the means to develop partnerships with other entrepreneurs and with service providers, including financial service providers. [16,17] **Furthermore, in contexts where social norms or household responsibilities restrict women's mobility or access to employment, these tools can give them access to opportunities for e-businesses, allowing them to overcome the restrictions.**[18]

However, although women stand to gain the most from the development of strong and reliable communications infrastructure, they are also the least likely to have access to it, even where it already exists. Across LMICs, 184 million fewer women than men own a mobile phone, leaving a total of 390 million women unconnected. [19] In sub-Saharan Africa specifically, women are 14 percent less likely than men to own a mobile phone, well above

the LMIC average of 10 percent.[20] Women are also less likely to use mobile internet—1.2 billion women do not use mobile internet, and in sub-Saharan Africa they are 34 percent less likely than men to do so—suggesting that even those who own phones are not taking full advantage of them.[21]

Recommendations

Equitable, reliable water and electricity, transportation and internet and communications infrastructure are critical to supporting the full economic empowerment of women. **Policies that work to improve existing infrastructure and address shortages and gaps could drastically reduce women's barriers to entry in various sectors, allowing them the increased agency to seek employment outside the home, expand business operating hours, travel safely between work and home and build market connections and social and economic capital.** This choice is a critical pillar of women's empowerment.[22]

Stable and reliable water and electricity access, in both homes and businesses—it may well be the same for women—would reduce the time needed for daily household tasks and decrease the cost of doing business, stimulating the creation and growth of women-owned SMEs.[23] Likewise, safe, affordable transportation systems would give women the freedom needed to enter the workforce or expand their economic activities, while protecting them from sexual and gender-based violence.[24] Additionally, increasing the use of mobile technology, by both building awareness and improving communications infrastructure, would enable the development of crucial social and business networks. These would, in turn, allow women to reach more customers and engage potential partners. However, this demands not only the development of infrastructure, but also the strategic and intentional engagement of female would-be users to understand and break down the gender norms that constrict women's use of technology. Moreover, women should be actively engaged in developing solutions at all phases of infrastructure development, including design, construction and management to ensure that their particular patterns of usage and unique needs are taken into account and fully addressed by the new systems.[25]

Prominent WEE initiatives should take these recommendations on board, ensuring that infrastructure, transport and communications resources are available to foster the growth of women's businesses. Unlocking capital and providing loans without paying attention to the enabling environment will not work to dynamize women's businesses. Attention must also be paid to the public goods and services that crowd-in employment and entrepreneurship and improve the terms and conditions of employment and production.

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