Chapter 35

What Drives Entrepreneurship Amongst Female- and Male-Owned Firms in Kenya?

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Introduction

The participation of men and women in domestic trade is critical for widespread income generation in Kenya. The sector has immense potential for job creation, income generation, poverty alleviation, welfare improvement, and contribution to economic growth and development. Article 27(3) of the Constitution of Kenya (Parliament of Kenya, 2010) provides that women and men have the right to equal treatment, including the right to equal opportunities in the economic sphere. Nonetheless, numerous factors disproportionately influence the harnessing of domestic trade opportunities by men and women in the country. The establishment of gender-responsive trade policies is central to the development of an efficient and competitive domestic market that supports domestic trade as envisioned in the Kenya Vision 2030 (Kenya Vision 2030, 2008) and other relevant trade frameworks. The Vision puts emphasis on policies that empower vulnerable groups, such as women, with an aim of unlocking their potential to contribute to the country's development.

Over the past decade, Kenya has embraced policy reforms to support domestic trade,[1] creating incentives for male- and female-owned firms to embrace domestic trade. The 2017 National Trade Policy for instance, aspires to transform Kenya into a competitive and prosperous trading nation that harnesses opportunities in the domestic, regional, and global markets to accelerate the contribution of trade towards the realisation of the Big Four Agenda on Manufacturing, Food and Nutrition Security, Universal

1 See the National Trade Policy, 2017, Integrated National Export Development and Promotion Strategy, 2018, Kenya National AGOA Strategy, 2018, Buy Kenya-Build Kenya Strategy, 2018, and Kenya Trade Remedies Act, 2022.

Health Coverage, and Affordable Housing (Republic of Kenya, 2022b), and Vision 2030.[2]

In particular, the country's trade policy aims at improving the trade environment with a focus on wholesale, retail, and informal trade (Republic of Kenya, 2017). However, domestic trade's contribution to Kenya's GDP has been shrinking,[3] implying a decreasing size of domestic trade today than it was a decade ago. This is partly because of Kenya's policy environment being gender-insensitive. Domestic trade currently contributes an average of 7% to Kenya's GDP, down from 10% between 2003 and 2006, before averaging 10% between 2007 and 2011. The 2012/2013 period saw a high of 20% share before falling below 10% for 2014 to 2019.

The decline in domestic trade activity linked to a multiplicity of factors that include complex licensing and regulatory frameworks, high costs of transportation, insufficient logistics and information, poor technological skills, inaccessibility of affordable credit, inadequate business management skills, weak supply chains, and poor servicing of business premises. Further, disparities in levels of education attainment between men and women inhibit unlocking the full benefits of domestic trade. The majority of female-owned enterprises in East Africa encounter challenges with business regulation, inadequate skills and limited training, and credit inaccessibility. Moreover, female-owned firms hold less than 10% of credit available for trade expansion (UNDP, 2019; World Bank, 2016).

The 2017 National Trade Policy observes that creating an enabling environment for domestic trade to thrive requires addressing challenges on legal and regulatory frameworks, trading structures, access to credit, and access to capacity building opportunities like training (Republic of Kenya, 2017). These factors disproportionately affect the likelihood of women and men to start enterprises, formalise them, and subsequently engage in meaningful domestic trade.

Against this background, we undertook to explain how various factors could be hindering participation in domestic trade by female- and male-owned firms in the country, and to understand how mainstreaming gender in domestic trade policy could incentivise the firms to participate more in economic activity. Particularly, we hypothesise that these factors disproportionately influence the likelihood of participating in domestic trade by female- and male-owned firms in Kenya.

2 Vision 2030 envisages trade as critical in growing the economy and thus creating jobs for Kenyans.

3 See Annexes 2 and 3.

The rest of the chapter is organised as follows: Section 2 presents the context for gendered participation in domestic trade; Section 3 undertakes a review of relevant literature; Section 4 presents the methodology of the study; Section 5 presents findings; Section 6 discusses the findings; Section 7 summarises and concludes the work; and Section 8 presents recommendations.

Context

Domestic trade plays a significant role in job creation and contributes significantly to household livelihoods and resilience. Domestic trade can be categorised as wholesale and retail trade, and is dominated by micro, small and medium enterprises (MSMEs). Though the sector contributes to the country's GDP, it still faces numerous challenges, including: multiple charges, fees and levies by both national and county governments, raising the costs of conducting business; inadequate storage facilities for perishable goods; limited access to credit; inadequate spaces for traders; low value addition in production; poor record keeping and stock management; low uptake of digital technologies; and inefficiencies in value chains (KIPPRA, 2019).

The majority of firms in Kenya are owned by men, even though data shows that there are more women than men in the country (KNBS, 2019). Female-owned firms tend to engage in roles that have traditionally been associated with women, namely hairstyling, restaurants, hotels, retail shops and wholesale outlets. According to the 2016 MSMEs Survey (KNBS, 2016), out of 24,164 firms surveyed, 11,932 firms (49.38%) were male-owned, 6,509 firms (26.94%) were female-owned, and 5,723 firms (23.68%) were both male- and female-owned. However, the 1999 National Micro and Small Enterprises (MSEs) Baseline Survey (KNBS, 2019) shows that female-owned firms accounted for 47.4% of all MSEs in Kenya. This shows that women's participation in domestic trade had considerably declined in the past two decades.

The 2016 MSMEs Survey (KNBS, 2016) showed that male-owned firms had several advantages over female-owned firms, especially on earnings, employment in firms and access to credit. For instance, a male-owned firm earned average monthly revenues of Ksh 200,058 compared to Ksh 41,167 average for female-owned firms. Male-owned firms and female-owned firms earned 2,623% and 948% more in 2016 respectively than they earned in 1999. Male-owned firms were on average 1.3 times larger than female-owned firms in terms of number of employees in 2016. On the other hand, only 6.89% of male-owned and 5.78% of female-owned firms had access to credit in 1999, compared to 25.09% of male-owned firms and 30.97% of

female-owned firms in 2016. This was partly because of women participating more in domestic trade as it is relatively less complex and men participating in relatively more complex economic activities.

Access to, and expenditure on, water and electricity is critical to understanding the divergent performances of male-owned and female-owned firms. The average water expenditure for male-owned firms decreased from Ksh 877 in 1999 to Ksh 459 in 2016, while that for female-owned firms dropped from Ksh 514 in 1999 to Ksh 183 in 2016. On the other hand, electricity expenditure by male-owned and female-owned firms in 1999 was Ksh 2,131 and Ksh 1,863 respectively, compared to Ksh 3,869 and Ksh 448 in 2016. In terms of firm registration, 26.7% of the male-owned firms were formally registered compared to 16.5% of female-owned firms, which are significant improvements since 1999. While an overwhelming share of both male-owned and female-owned firms were members of a trade association in 1999 – 96.97% and 97.3% respectively, the situation changed drastically by 2016 when respective membership stood at 17.6% and 34.4%. Training support for both male-owned and female-owned firms was overwhelming in 1999 – standing at 97.8% and 97.5% respectively, compared to 2.7% and 3.1% respectively in 2016. These observed differentials are explained by a multiplicity of factors that inform the chapter's focus in subsequent sections.

Literature review

This section reviews specific factors that influence participation in domestic trade by female- and male-owned firms in Kenya. They include firm-specific factors (size), regulatory factors (tax regime, licenses, and firm registration status), support factors (credit, water, electricity, trade associations, road status, Internet, mobile money platform, on-job-training, and nature of the trading structure), owner-specific factors; education attainments (whether primary, polytechnic, secondary, college, undergraduate and postgraduate levels), and geographical factors (county regional economic blocs).

Support factors

Networking differences

Networks embody information as a resource that bridges and links firms to available domestic trade opportunities. They are a resource embodied in formal organisations. Membership to trade associations, for instance, provides firms with information on trade opportunities and reforms in government regulatory frameworks. While information is crucial in decision-making for both female- and male-owned firms, it is usually costly to

obtain. Networking has a positive effect on domestic trade participation after controlling for education, age, and firm size (Watson, 2012; Coleman, 1990).

Networking is beneficial to female-owned and male-owned firms participating in domestic trade because the firms gain support, references, and goodwill that consequently promote participation. Trade networks provide market information and advice to female-owned and male-owned firms on where to sell their goods and services. Further, access to competitive trade information is important for firms in making informed decisions that translate to enhanced participation in domestic trade (Sengupta, 2010; Shaw, 2006).

Nature of trading structures

Over 63% of Kenyan MSMEs trade in permanent formal worksites, while 37% trade in semi-permanent or temporary informal premises.[4] A sizeable number of MSMEs trade in fear and uncertainty of anticipated demolitions. The temporary informal worksites may be explained by the inadequate funding of the Micro and Small Enterprises Act (MSEA), which has a mandate to support the provision of trading structures for MSMEs. The other explanations for the informal worksites include inadequate land for the developing trading structures, the location of formal trading structures far away from popular market centres, and the cost of renting trading premises which make them unaffordable and inaccessible. Further, over 78% of formal firms trade in permanent structures, mainly in rented structures at commercial centres and residential areas. Further, 40.6% of the informal firms trade in open areas compared to 44.1% which trade in either temporary or semi-permanent structures (KIPPRA, 2019; KNBS, 2016).

Physical infrastructure in the form of trading structures is important in supporting domestic trade. If differences exist between female-owned and male-owned firms in accessing trading structures, then participation in domestic trade could be inhibited, with adverse consequences on job creation, poverty reduction and welfare improvement. Unreliability of trading structures is a main concern amongst Kenyan firms owned by women and men as it limits their expansion in terms of domestic trade participation. Long-term strategic planning is also difficult when firms trade in temporary or semi-temporary structures, as risks and uncertainty of participating in domestic trade are high (KIPPRA, 2005).

4 A firm is deemed to be trading formally if it is licensed, and informal if it is not licensed.

Internet, mobile money

Access to mobile money platforms plays an important role in reducing transaction costs and potential risks in economic activities like trade. Mobile money platforms create convenience and enhance efficiency and effectiveness of firm operations. Particularly, access to mobile money platforms enhances domestic trade payments. Differentials in accessing mobile money platforms between female-owned and male-owned firms could thus be a source of disparities in domestic trade participation. Mainstreaming gender in domestic trade policies with a view to minimising disparities in access to mobile money platforms could foster domestic trade participation for improved welfare and development of the country (Jack & Suri, 2014).

Firms' access to the Internet improves market information access, and the coordination of delivering goods and services to the market. The absorption capacity for the Internet also supports performance of firms for improved participation in economic activities, especially domestic trade. The Internet significantly reduces transactions costs, enhances performance and productivity, and the trading efficiency of firms. Differentials in Internet access and absorption between female-owned and male-owned firms are likely to foster disparities in domestic trade participation. Further, firms that have access to the Internet are likely to have better knowledge of requirements for participating in domestic trade and are more likely to make well-informed decisions that enhance participation in domestic trade (Paunov & Rollo, 2015; Zhong et al., 2020).

Access to credit

Female-owned firms are less likely to apply for credit, and less likely to secure credit compared to male-owned firms in the same sector. The gender gap in accessing credit is because of the double standards driven by unconscious discrimination. In Italy, for instance. women pay more for credit than men despite there being no evidence that females are riskier borrowers than males. Particularly, financial institutions charge different rates to women and men after controlling for business type, the structure of the financial market, and the individual characteristics of the borrower (de Andrés et al., 2020; Alesina et al., 2013).

Female-owned firms experience tighter access to credit. The gender of the loaning officer influences access to credit in that female officers are more likely to be risk-averse or less self-confident compared to male officers, thereby constraining access to credit for new and unestablished female borrowers. Female-owned firms are significantly smaller than male-

owned ones over sales, assets, and employment, and are much younger in terms of years in trade. They are more likely to trade as sole proprietorships as opposed to corporations, more likely to be in retail trade and services as opposed to construction, manufacturing, and wholesale trade, and have fewer banking relationships. Female firm-owners are also more likely to be inexperienced and less educated (Bellucci et al., 2010; Cole & Mehran, 2018).

Road status

In Colombia, for instance, transportation infrastructure influences performance of manufacturing firms with output elasticities of road infrastructure ranging between 0.13% to 0.15%. Road status plays an important role in influencing firms' decisions to participate in domestic trade, especially in developing economies. Public expenditure on *core* infrastructure that comprises streets, highways, airports, mass transit, sewers, and reliable water systems, bears the highest explanatory power on productivity of female- and male-owned firms (Barzin et al., 2018; Aschauer, 1989).

Distance between cities, which is a major factor in determining cost of transportation, is a major trade barrier. With an elasticity of up to 0.20%, better roads raise the value of goods and services traded by female- and male-owned firms. Expenditure on road networks by the government reduces transport costs and incentivizes industries to agglomerate (Duranton, 2015; Thompson & Chandra, 2000).

Access to electricity

There are significant time and cost differences associated with electricity connections amongst small, energy-intensive female- and male-owned firms. The connection costs in low-income countries are more than 70 times higher than in high-income countries. The procedures, time, and cost of obtaining electricity connections are correlated with firm income levels as they increase costs incurred by firms thereby eating into profits. Further, the poor quality of supplied electricity connections, and bribery for connections, increase operational costs, eating into firm cash flows (Geginat & Ramalho, 2018).

In countries where regulatory processes are complex and excessively bureaucratic, procedures for electricity connections are so cumbersome that they drive up costs incurred to secure electricity connection. Simpler, less bureaucratic, and less costly connection procedures are associated with better performance of firms with higher electricity needs Because of increased costs of electricity, own firm power generation in sub-Saharan Africa has risen to 20% of the installed power capacity with a higher concentration amongst

larger firms compared to small ones. Electricity shortages reduce revenues earned by female- and male-owned firms with producer surplus shrinking by 10%. Shrinkage in revenues because of power outages are lower amongst firms with generators compared to firms without generators. Issuance of interruptible retail electricity contracts could reduce the adverse impacts associated with electricity shortages (Foster & Steinbuks, 2009; Allcott et al., 2016).

Owner-specific factors

Human capital

Human capital comprises education, innate capability and skills acquired from training, knowledge, and experience of female-owned and male-owned firms. Firms whose owners have lower stock of human capital are less likely to participate in domestic trade compared to those with higher human capital stock. Higher human capital signifies higher capability, experience, knowledge, and skills. Obtaining the necessary training supports female-owned and male-owned firms with essential abilities and skills that promote making informed managerial, operational, and strategic decisions for enhanced participation in domestic trade. As such, differentials in human capital stock - education attainment, skills acquired from training, knowledge, and experience amongst female-owned and male-owned firms in the country could inform government action to mainstream gender in domestic trade formulation (Unger et al., 2011; Khan & Quaddus, 2018; Shrader & Siegel, 2007; ILO, 2009; Kabukuru & Afande, 2016).

A firm's age in years is an important measure of the firm's experience. Young firms are characterised with high failure rates and exhibit sub-par performance and growth compared to older ones, and as such, they need support to grow to older firms. Inexperience is a contributor to the higher failure rates amongst female-owned and male-owned firms participating in domestic trade. Particularly, young firms are likely to have poor trade networks and are likely to make uninformed management, strategic, and operational decisions compared to older firms (Ouimet & Zarutskie, 2014).

Firm-specific factors

Firm size

Compared to large firms, SMEs are less likely to withstand crises, because of liquidity challenges that constrain participation in domestic trade. Size is a significant factor in explaining firm performance. In part, large firms enjoy

scale economies, have extensive experience from specialisation, and have larger social capital stock than smaller firms. Because of economies of scale, larger firms are likely to have lower costs of engaging in trade compared to smaller firms, a factor that enhances participation in domestic trade (Lawrenz & Oberndorfer, 2018; Raguseo et al., 2020).

Firm size is positively related with ISO 14001 certification (ISO, 2015) and financial performance. Larger firms are more likely to perform better financially compared to smaller firms. Larger firms are also likely to have boards of directors and better governance structures which support making informed decisions on which trade opportunities to invest in for higher fortunes. The size of firm effectively influences the slack-performance relationships that support innovation. Larger firms are more likely to create innovations that support and enhance the likelihood of participating in domestic trade compared to smaller firms (Wang & Zhao, 2020; Raguseo et al., 2020; Medase, 2020).

Regulatory factors

Registration, licenses, and taxes

In Tanzania, high consumption and sales taxes and bureaucracy in business registration constraint the potential of female- and male-owned SMEs to grow. Taxes influence the direction and size of trade flows. Further, higher taxes raise firm production costs, decreasing the volume of goods and services available for trading domestically. Firms leaving informality by obtaining registration report a significant effect of 20% on annual value-added compared to the less significant effect on the smallest firms. Further, registration unlocks access to better trading equipment, expands operation scale, and makes the trading environment more competitive. However, higher registration costs may hinder formalisation of firms and consequently disincentivise domestic trade participation (Mashenene & Rumanyika, 2014; Whalley, 2002; Beck & Chaves, 2011; Demenet et al., 2016).

Governments issue licenses as an indication that firms have met certain requirements to engage in a certain trade activity. They create confidence and trust amongst consumers that goods and services traded by firms are lawful and do not pose adverse health effects. If efficient, licenses could then nudge firms to engage in trade. If licensing is inefficient, such as being too expensive or excessively bureaucratic, then this could deter firms from trading. Licenses influence how traders behave, the economic activity they engage in, and the predictability and transparency of the trading process (Hersoug et al., 2019; Inderberg et al., 2019).

Geographical factors

Economic geography concerns itself with the allocation of factors of production in space and specialisation across regions for a given distribution of productive factors. At the core is spatial allocation of economic activity and how the same could serve as a signal for demand for goods and services in various regions and the resultant improvement of trade activity. There is a connection between geography, location of industries, and concentration of trade activity. Further, there exists immense advantages in specialisation and concentration of economic activities in regions based on economies of scale and returns from trade (Ohlin, 1933; Krugman, 1999).

Specialisation that is driven by differences in factor endowments is further reinforced by the incentive to enjoy benefits of large-scale production. Geographical availability and mobility of productive factors as well as final tradeable goods and services may thus drive interregional domestic trade in Kenya with differing outcomes amongst male- and female-owned firms.

Findings

Table 57 details the results discussed in this section. Only those factors that had significant influence on domestic trade participation were considered. We find that membership to trade associations, road status, access to the Internet, access to electricity, firm size, the county economic blocs, education attainment, gender, tax obligations, licensing obligations, firm registration status, access to credit, access to mobile money, nature of the trading structure, and on-the-job training had significant influence on participation in domestic trade amongst female- and male-owned firms in the country. The results are interpreted as relative risk ratios.

Owner-specific factors

Male-owned firms were 1.91 times more likely to sell goods and services to MSMEs, 4.96 times more likely to sell to non-MSMEs and 832.77 times more likely to sell to the government compared to firms owned by females. This means that male-owned firms are highly likely to sell their goods and services to corporations and the government compared to their female counterparts.

On education, male-owned firms were .81 times less likely to sell their goods and services to MSMEs and .52 times less likely to sell to non-MSMEs if the owners had a primary level of education compared to female-owned firms. This means that if both females and males have a primary level of education attainment, then women have a higher likelihood of engaging in domestic trade compared to men.

Firms owned by males with polytechnic, secondary, and diploma levels of education were .17, .46, and .39 times less likely to sell their goods and services to MSMEs respectively compared to females with the same level of education attainment. For females and males possessing these levels of education attainment, it means that males are highly likely to sell their goods and services to non-MSMEs (corporations) and the government, while firms owned by females are highly likely to sell to MSMEs. In effect, buyers of goods and services from male-owned firms are likely to be large, while buyers for goods and services from firms owned by females are likely to be small.

Firms whose owners were male and had an undergraduate level of education were .48 times less likely to sell to MSMEs, but 1.64 times more likely to sell to non-MSMEs (corporations) compared to those owned by females possessing the same level of education. The implication is that male-owned firms are highly likely to sell to corporations while female-owned firms were highly likely to sell to MSMEs. Lastly, firms whose owners were males and possessed a postgraduate level of education were .29 times less likely to sell their goods and services to MSMEs compared to those owned by females with postgraduate education. This means that males with postgraduate education are highly likely to sell their goods and services to corporations and the government while females with the same level of education are highly likely to sell their goods and services to MSMEs.

Regulatory factors

On tax obligation, male-owned firms were 1.06 and 1.11 times more likely to sell goods and services to non-MSMEs and the government if the firm's monthly tax obligation increased by 1% compared to the amount that they would sell to individual consumers. The implication is that whereas male-owned firms are highly likely to trade with corporations and the government if taxes rose, female-owned firms are highly likely to not trade with corporations and the government. A rise in taxes increases the cost of engaging in trade and in effect, this is more likely to be a constraint to participating in domestic trade amongst female-owned firms than it would be amongst male-owned firms.

On licenses obligation, female-owned firms were 1.84 times more likely to sell goods and services to the government if the monthly obligation on licenses increased by 1% compared to what would be sold to individual consumers. This means that firms owned by women are highly likely to trade with the government if they operate as formal entities with affirmative action to support their operations from the government. In contrast, male-owned firms were 1.12 times more likely and .89 times less likely to sell

goods and services to MSMEs and non-MSMEs respectively if the monthly licenses obligation increased by 1% compared to what would be purchased by individual consumers. The implication is that the licensing burden is highly likely to discourage male-owned firms from trading with corporations and to encourage them to trade with MSMEs.

On firm registration, female-owned firms were 1.89 times more likely to sell goods and services to non-MSMEs if they were registered compared to what would be sold to individual consumers. This means that support to firms owned by women to trade formally is highly likely to enable them to trade with corporations compared to what would happen without the support. Male-owned firms were 2.61 and 14.51 times more likely to sell goods and services to non-MSMEs and the government respectively if they were formerly registered compared to what would be sold to individual consumers. Similarly, firms owned by males are highly likely to trade with corporations and the government if they trade as formal entities.

Support factors

On access to credit, male-owned firms were 2.82 times more likely to sell goods and services to the government if they had access to credit compared to what would be sold to individual consumers. This means that access to credit is important in supporting participation in domestic trade.

On access to mobile money, female-owned firms were .68, .54, and .08 times less likely to sell goods and services to MSMEs, non-MSMEs, and the government respectively if they had access to a mobile money platform compared to what would be sold to individual consumers. In contrast, male-owned firms were .72 times less likely and 2.17 times more likely to sell goods and services to MSMEs and non-MSMEs respectively if they had access to a mobile money platform compared to the amount that would be sold to individual consumers. This means that firms owned by males are highly likely to trade with MSMEs, corporations, and the government if they had access to mobile money platforms compared to those owned by females.

On nature of the trading structure, male-owned firms were 1.35 times more likely and .37 times less likely to sell goods and services to non-MSMEs and the government respectively if they traded in a permanent structure compared to firms owned by females. Overall, the implication is that firms owned by males are highly likely to trade with corporations compared to if they operate in a permanent structure but are less likely to trade with the government compared to their female counterparts. Similarly, male-owned firms were .72 times less likely, 2.17 times more likely, and .28 times less likely to sell goods and services to MSMEs, non-MSMEs, and the government

respectively if they traded in a semi-permanent structure compared to female-owned firms. This means that firms owned by males are highly likely to trade with corporations but less likely to trade with MSMEs and the government if they traded on a semi-permanent structure compared to their female counterparts.

Pertaining to job training, male-owned firms were 0.41 times less likely to sell goods and services to non-MSMEs if employees had undergone on-the-job training compared to their female counterparts. The implication is that on-the-job training is more important amongst female-owned firms compared to those owned by males.

On membership to trade associations, female-owned firms were 1.47 times more likely to sell goods and services to non-MSMEs if they were members of a trade association compared to what they would sell to individual consumers. This means that membership to trade associations would enhance firms owned by females to trade with corporations. Male-owned firms were 1.22 times more likely and .74 times less likely to sell goods and services to MSMEs and non-MSMEs respectively if they had membership with trade associations compared to what would be sold to individual consumers. The implication is that membership to trade associations is highly likely to enable firms owned by males to trade with MSMEs but less likely to support them trade with corporations.

On road status, female-owned firms were 2.08 times more likely to sell goods and services to non-MSMEs if the roads used to transport goods and services were in good condition compared to what would be sold to individual consumers. The implication is that good transport infrastructure is highly likely to support women-owned firms to trade with corporations. On the other hand, male-owned firms were .88 and .60 times less likely to sell goods and services to MSMEs and non-MSMEs if the roads used to transport goods were in good condition compared to what would be sold to individual consumers. This means that if the roads used to transport goods and services are in good condition, then firms owned by males and females are less likely to sell their goods and services to MSMEs and corporations, but highly likely to trade with the government.

On access to the Internet, female-owned firms were 1.08 and 1.32 times more likely to sell goods and services to MSMEs and non-MSMEs if monthly expenditure on Internet increased by 1% compared to what would be sold to individual consumers. Male-owned firms were 1.04, 1.15, and 1.16 times more likely to sell goods and services to MSMEs, non-MSMEs, and the government if the monthly expenditure on Internet increased by 1% compared to what would be purchased by individual consumers. This means that whereas

increased use and utilisation of the Internet is highly likely to enable firms owned by females to trade with MSMEs and corporations, enhanced use of the Internet is highly likely to enhance trading with MSMEs, corporations, and the government amongst male-owned firms.

On access to electricity, female-owned firms were .94 times less likely to sell goods and services to non-MSMEs if the firm's monthly expenditure on electricity increased by 1% compared to what would be sold to individual consumers. Similarly, male-owned firms were .96, .88, and .79 times less likely to sell goods and services to MSMEs, non-MSMEs, and the government respectively if monthly electricity expenditure increased by 1% compared to what would be sold to individual consumers. The implication is that an increase in the cost of electricity is highly likely to discourage firms owned by both females and males from engaging in domestic trade.

Firm-specific factors

Small firms were 2.21 and 1.91 times more likely to sell goods and services to MSMEs, and non-MSMEs respectively if they were owned by males compared to what would be sold by firms owned by females. This means that small firms owned by males are highly likely to trade with MSMEs and non-MSMEs. Similarly, medium-sized firms were 4.24 times more likely to sell goods and services to non-MSMEs if they were owned by males compared to what female-owned firms would sell. This means that medium-sized firms owned by males are highly likely to trade with corporations compared to their female counterparts.

Geographical factors

We find that male-owned firms are 1.92 times more, .57 times less, .43 times less, .35 times less, and 2.73 times more likely to sell goods and services to non-MSMEs if the firms are domiciled in North Rift Economic Bloc, Lake Region Economic Bloc, Narok-Kajiado Economic Bloc, Central Region Economic Bloc, and Frontier Counties Development Council economic blocs respectively compared to firms owned by females. Similarly, we find that male-owned firms from South -Eastern Kenya Economic Bloc are .64 times less likely to sell goods and services to MSMEs compared to those owned by females.

Discussion

Amongst the firm-specific factors, small firms owned by men were more likely to trade with MSMEs and non-MSMEs compared to those owned by women. Further, medium enterprises owned by men were more likely to

trade with non-MSMEs compared to what would happen if they were owned by women.

SMEs are less likely to withstand crises compared to large firms because of liquidity challenges that constrain participation in domestic trade. Firm size is a significant factor in explaining firm performance. Particularly, large firms enjoy economies of scale, have extensive experience from specialisation, and have larger social capital stock than smaller firms. Because of economies of scale, larger firms are likely to have lower costs of engaging in trade compared to smaller firms, a factor that enhances participation in domestic trade. Larger firms are more likely to perform better financially compared to smaller firms. Larger firms are likely to have boards of directors and better governance structures which support making informed decisions on which trade opportunities to invest in for higher returns and are therefore more likely to create innovations that support and enhance the likelihood of participating in domestic trade compared to smaller firms (Lawrenz & Oberndorfer, 2018; Raguseo et al., 2020; Wang & Zhao, 2020).

Amongst the support factors, male-owned firms were more likely to trade with government if they had access to credit. Female-owned firms were found to be more likely to sell goods and services to individual consumers if they had access to mobile money platforms. Male-owned firms were particularly found to be more likely to trade with individual consumers and non-MSMEs if they had access to mobile money platforms. Male-owned firms were more likely to trade with non-MSMEs and the government if they traded in a permanent structure compared to those owned by females.

Female-owned firms are less likely to apply for credit and are less likely to secure credit compared to male-owned firms operating in the same industry. The gender gap in accessing credit is because of double standards driven by unconscious discrimination. In Italy, for example, women pay more for credit than men despite there being no evidence that females are riskier than males. Particularly, financial institutions charge different rates to women and men after controlling for business type, structure of the financial market, and individual characteristics of the borrower. Further, the gender of the loaning officer influences access to credit in that female officers are more likely to be risk-averse or less self-confident compared to male officers. Female loaning officers are more likely to constrain access to credit to new and unestablished female borrowers compared to male loaning officers. As such, female-owned firms experience stiffer credit constraints compared to those owned by males. Female-owned firms are significantly smaller compared to male-owned firms in terms of sales, assets, and employment, are much younger in terms of years in trade, are more likely to trade as sole proprietorships as opposed to corporations, are more likely to operate in

retail trade and services as opposed to construction, manufacturing, and wholesale trade, and have fewer banking relationships (de Andrés et al., 2020; Alesina et al., 2013; Bellucci et al., 2010; Hansen & Rand, 2014; Cole & Mehran, 2018).

In contrast, male-owned firms were more likely to trade with individual consumers, and non-MSMEs if they traded in a **semi-permanent structure**.

Trading in informal worksites is attributable to inadequate land for developing trading structures, the location of formal trading structures far away from popular market centres, and the cost of renting trading premises which make them unaffordable and inaccessible. Physical infrastructure related to trading structures is important in creating an enabling environment that promotes participation in domestic trade (KIPPRA, 2019; KNBS, 2016).

Firms owned by males were more likely to trade with individual consumers if their employees obtained **on-the-job training**.

Training is important in accumulation of human capital. Firms whose owners have lower stock of human capital are less likely to participate in domestic trade compared to those with higher human capital stock. Higher human capital signifies higher capability, experience, knowledge, and skills. Obtaining necessary training supports female-owned and male-owned firms with essential abilities and skills that promote making informed managerial, operational, and strategic decisions for enhanced participation in domestic trade (Unger et al., 2011; Khan & Quaddus, 2018; Shrader & Siegel, 2007; ILO, 2009; Kabukuru & Afande, 2016).

Female-owned firms were more likely to trade with non-MSMEs if they had **membership with trade associations** compared to those owned by men which were both more likely to trade with MSMEs and individual consumers if they had membership with trade associations.

Membership to trade associations provides firms with information on trade opportunities and reforms in government regulatory framework. While information is crucial in decision-making for both female- and male-owned firms, it is usually costly to obtain. Networking has a positive effect on domestic trade participation after controlling for education, age, and firm size. Networking is beneficial to female-owned and male-owned firms participating in domestic trade because the firms gain support, references, and goodwill that consequently promote participation. Trade networks provide market information and advice to female-owned and male-owned firms on where to sell their goods and services. Further, access to competitive trade information is important for firms in making informed decisions that translate to enhanced participation in domestic trade (Sengupta, 2010; Shaw, 2006; Watson, 2011; Coleman, 1990). Those firms owned by women were

more likely to trade with non-MSMEs if the **road** used to transport goods and services was in good status compared to those firms owned by men which were more likely to trade with individual consumers if the road was in good condition.

Transportation infrastructure influences performance of female- and male-owned firms. Road status plays an important role in influencing firms' decisions to participate in domestic trade, especially in developing economies like Kenya. Public expenditure on *core* infrastructure comprising of streets, highways, airports, mass transit, sewers, and reliable water systems, bears the highest explanatory power on productivity of female- and male-owned firms. Distance between cities and markets is a major factor in determining cost of transportation and thus a major barrier to trade. Expenditure on road networks reduces transport costs and incentivizes industries to agglomerate (Duranton, 2015; Thompson & Chandra, 2000; Barzin et al., 2018; Aschauer, 1989).

With access to **Internet connectivity**, female-owned firms were found to be more likely to trade with MSMEs and the government while male owned-firms were more likely to trade with MSMEs, non-MSMEs, and the government. Internet connectivity improves market information access, and the coordination of delivering goods and services to the market amongst female- and male-owned firms. The Internet significantly reduces transaction costs, enhances performance and productivity, and the trading efficiency of firms. Further, firms that have access to the Internet are likely to have better knowledge on requirements for participating in domestic trade and are more likely to make well-informed decisions that enhance participation in domestic trade (Paunov & Rollo, 2015; Zhong et al., 2020).

Female- and male-owned firms were more likely to trade with individual consumers if they had access to electricity.

There are significant time and cost differences associated with electricity connections amongst small, energy-intensive female- and male-owned firms. The procedures, time, and cost of obtaining electricity connections are correlated with firms' income levels as they increase costs incurred by firms, thereby eating into profits. Further, the poor quality of supplied electricity connections, and bribery for connections increase operational costs, eating into firms' cash flows. Cumbersome and bureaucratic regulatory processes and procedures for electricity connections drive up costs incurred to secure electricity connection. Simpler, less bureaucratic, and less costly connection procedures could improve performance of female- and male-owned firms. Electricity shortages reduce revenues earned by female-

and male-owned firms with producer surplus shrinking (Foster & Steinbuks, 2009; Allcott et al., 2016; Geginat & Ramalho, 2018).

Amongst the regulatory factors, the business tax, licensing, and registration regime had a highly disproportionate effect on domestic trade participation amongst firms owned by males and females. Particularly, it is only male-owned firms that were more likely to trade with non-MSMEs and the government if the tax burden increased by one percentage point. In contrast, if the licensing burden increases by one percentage point, female-owned firms were found to be more likely to trade with the government compared to male-owned firms which would be more likely to trade with MSMEs and individual consumers only. Further, female-owned firms were only more likely to trade with non-MSMEs if they were registered, compared to male-owned firms which were more likely to trade with both non-MSMEs and the government when formally registered with the registrar of companies.

High taxes and bureaucracy in business registration are amongst the constraints faced by female- and male-owned firms. Taxes influence the direction and size of trade flows. Higher consumption and sales taxes, for instance, are highly likely to constrain participation in domestic trade than lower taxes. Further, higher taxes raise production costs incurred by firms, decreasing the volume of goods and services available for trading domestically. High tax rates and complex tax regulations are a barrier to formalisation of micro-firms and observe that simplification of tax procedures enhances participation in trade. Female- and-male-owned firms leaving informality by obtaining registration report a positive effect on annual value-added. Further, registration unlocks access to better trading equipment, expansion of operation scale, and makes the trading environment more competitive. However, higher registration costs may hinder formalisation of firms and consequently disincentivise domestic trade participation. Licenses influence how traders behave, the economic activity they engage in, and the predictability and transparency of the trading process (Mashenene & Rumanyika, 2014; Whalley, 2002; Beck & Chaves, 2011; Fajnzylber et al., 2011; Demenet et al., 2016; Inderberg et al., 2019).

Amongst the owner-specific factors, male-owned firms were more likely to sell goods and services to MSMEs, non-MSMEs, and the government compared to those owned by women. Further, firms owned by males with primary, polytechnic, secondary, diploma, and postgraduate education were more likely to sell goods and services to individual consumers compared to those owned by women. Firms owned by males with an undergraduate level of education were more likely to sell goods and services to both non-MSMEs and the government compared to those owned by females.

Education attainment supports accumulation of human capital. Female- and male-owned firms whose owners and managers have lower stock of human capital are less likely to participate in domestic trade compared to those with higher human capital stock. Higher human capital signifies higher capability, experience, knowledge, and skills. Obtaining necessary training supports female-owned and male-owned firms with essential abilities and skills that promote making informed managerial, operational, and strategic decisions for enhanced participation in domestic trade (Unger et al., 2011; Khan & Quaddus, 2018; Shrader & Siegel, 2007; ILO, 2009; Kabukuru & Afande, 2016).

Amongst the geographical factors, the findings indicate that male-owned firms located in he North Rift Economic Bloc (NOREB) and Frontier Counties Development Council (FCDC) are more likely to sell goods and services to non-MSMEs[5] compared to those owned by females. In contrast, male-owned firms located in the Lake Region Economic Bloc (LREB), Narok-Kajiado Economic Bloc (NAKAEB), Central Region Economic Bloc (CREB), and South-Eastern Kenya Economic Bloc (SEKEB) are more likely to sell goods and services to individual consumers compared to those owned by women. Spatial endowment of factors of production in space and specialisation across regions not only drives trade activity but also supports agglomeration of industries and firms in certain locations, cities, and markets (Krugman, 1991; Ohlin, 1933).

Summary and conclusions

The chapter finds that owner-specific factors - gender and education, regulatory factors - taxes, licenses, and registration status, support factors - credit, mobile money platforms, trading structure, on-the-job training, membership to trade associations, road status, Internet, and access to electricity, firm-specific factors - size, and county economic blocs significantly influence participation in domestic trade by female- and male-owned firms in Kenya. Overall, the findings support our hypothesis that the examined factors disproportionately influence the likelihood of participating in domestic trade by female- and male-owned firms in Kenya.

Recommendations

1. Evidence supports the significance of the proposed regional county economic blocs. However, the economic blocs are currently not defined by any clear legal and institutional framework. Thus, there is need

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for Parliament to undertake legislation to accord the blocs legal and institutional status for ease of operationalisation.

2. Evidence indicates that women-owned firms lag those owned by men in domestic trade participation. There is need for the Ministry of Industrialisation, Trade, and Enterprise Development and other relevant ministries to mainstream gender in domestic trade policymaking and implementation with targeted incentives for women-owned firms. The regulatory space is a potential area for reforms to entrench targeted incentives especially in taxation, licensing, and licensing requirements.
3. There is a need to enforce legal provisions that accord women equal access to land and property as prerequisites to accessing credit. The Ministry of Lands and Physical Planning should fast-track implementation of the Land Laws (Amendment) Act, 2016 with a view to unlocking collateral which is necessary in securing access to credit for enhanced domestic trade participation by female-owned firms in Kenya.
4. Parliament should review MSEA (2012) to provide incentives to firms within the classification of micro and small enterprises (MSEs) to have membership with the authority. Since the authority is mandated to support and capacity-build MSEs, incentivising membership with the authority could incubate most MSEs to grow in size, gain experience, become more specialised, trade formally by meeting necessary registration requirements, and nurture backward and forward linkages.

Table 57: Multinomial Logistic Regression Results

Variable	MSMEs			NON-MSMES			Government		
	RRR	Robust SE β_i	p-value	RRR	Robust SE βi	p-value	RRR	Robust SE βi	p-value
Owner-specific factors									
Gender	1.9112	.6095 (2.03)	0.042**	4.9654	3.1538 (2.52)	0.012*	354.418	832.7665 (2.50)	0.012*
Education #c. Gender									
Primary	.8133	.0931 (-1.81)	0.071***	.5168	.0846 (-4.03)	0.000**	.9624	.5881 (-0.06)	0.950
Polytechnic	.7109	.2263 (-1.07)	0.284	.1743	.1807 (-1.68)	0.092***	2.7151	3.2946 (0.82)	0.410
Secondary	.9251	.0988 (-0.73)	0.466	.4564	.0695 (-5.15)	0.000**	1.4090	.6859 (0.70)	0.481
Diploma	.8811	.1068 (-1.04)	0.296	.3908	.0757 (-4.85)	0.000**	1.6320	.8035 (0.99)	0.320
Undergraduate	.9737	.1351 (-0.19)	0.848	.4781	.1018 (-3.46)	0.001**	3.4609	1.6425 (2.62)	0.009**
Postgraduate	.8342	.1860 (-0.81)	0.416	.2869	.1185 (-3.02)	0.003**	1.6609	1.0778 (0.78)	0.434
Regulatory factors									
Gender #LogTax obligation - females	.9835	.0307 (-0.53)	0.593	.9915	.0733 (-0.11)	0.908	1.0479	.1145 (0.43)	0.669
Gender #LogTax obligation - males	1.0219	.0152 (1.45)	0.146	1.0605	.0260 (2.39)	0.017**	1.1096	.0443 (2.61)	0.009**

Variable	MSMEs			NON-MSMES			Government		
	RRR	Robust SE β_i	p-value	RRR	Robust SE βi	p-value	RRR	Robust SE βi	p-value
Gender #LogLicenses obligation - females	1.0526	.0403 (1.34)	0.180	1.0362	.0901 (0.41)	0.682	1.8377	.4727 (2.37)	0.018**
Gender #LogLicenses obligation - males	1.1159	.0272 (4.51)	0.000**	.8969	.0318 (-3.07)	0.002**	1.0602	.0883 (0.70)	0.483
Firm registration status - females	1.0605	.1387 (0.45)	0.654	1.8971	.4590 (2.65)	0.008**	3.0207	3.1116 (1.07)	0.283
Firm registration status - males	.9023	.0731 (-1.27)	0.204	2.6085	.2777 (9.01)	0.000**	14.5116	6.0068 (6.46)	0.000**
Support factors									
Gender #Access to credit - females	.8949	.0967 (-1.03)	0.304	.9139	.1845 (-0.45)	0.656	2.3538	1.5176 (1.33)	0.184
Gender #Access to credit - males	1.0165	.0777 (0.21)	0.830	.9756	.1556 (-0.16)	0.877	2.8175	.6878 (4.24)	0.000**
Access to mobile money platform - females	.6813	.0707 (-3.70)	0.000**	.5405	.1101 (-3.02)	0.003**	.1256	.0834 (-3.13)	0.002**
Access to mobile money platform - males	.7168	.0495 (-4.82)	0.000**	1.2217	.1343 (1.82)	0.069***	1.0183	.2758 (0.07)	0.947
Firm structure #c. Gender									
Permanent	1.0057	.1511 (0.04)	0.970	3.2699	1.3500 (2.87)	0.004**	.3696	.1466 (-2.51)	0.012**

Variable	MSMEs			NON-MSMES			Government		
	RRR	Robust SE β_i	p-value	RRR	Robust SE βi	p-value	RRR	Robust SE βi	p-value
Semi-permanent	.7202	.1140 (-2.07)	0.038**	2.1679	.9082 (1.85)	0.065**	.2766	.1427 (-2.49)	0.013**
Gender #On-job training - females	.8827	.1942 (-0.57)	0.571	.6604	.2757 (-0.99)	0.320	1.2754	1.1726 (0.26)	0.791
Gender #On-job training - males	.9892	.1152 (-0.09)	0.926	.4088	.0927 (-3.94)	0.000**	.5829	.2255 (-1.40)	0.163
Gender #Membership to trade association - females	1.0797	.1059 (0.78)	0.435	1.4709	.2727 (2.08)	0.037**	2.2706	1.6511 (1.13)	0.259
Gender #Membership to trade association - males	1.2229	.0874 (2.82)	0.005**	.7376	.1049 (-2.14)	0.032**	.6474	.2248 (-1.25)	0.211
Gender #Road status - females	1.1482	.1247 (1.27)	0.203	2.0761	.5008 (3.03)	0.002**	1.9989	2.5168 (0.55)	0.582
Gender #Road status - males	.8788	.0636 (-1.79)	0.074***	.6006	.0640 (-4.78)	0.000**	.8701	.2617 (-0.46)	0.644
Gender #LogInternet access - females	1.0808	.0359 (2.34)	0.019**	1.0381	.0687 (0.57	0.572	1.3237	.1605 (2.31)	0.021**
Gender #Internet access - males	1.0359	.0185 (1.97)	0.049**	1.1509	.0288 (5.61)	0.000**	1.1559	.0595 (2.82)	0.005**
Gender #LogWater - females	1.0111	.0195 (0.57)	0.568	1.0448	.0379 (1.21)	0.227	1.0580	.1664 (0.36)	0.720
Gender #LogWater - males	.9805	.0127 (-1.52)	0.129	.9742	.0234 (-1.09)	0.276	.9901	.0479 (-0.21)	0.837

Variable	MSMEs			NON-MSMES			Government		
	RRR	Robust SE β_i	p-value	RRR	Robust SE βi	p-value	RRR	Robust SE βi	p-value
Gender #Log electricity - females	1.0234	.0198 (1.19)	0.232	.9407	.0331 (-1.74)	0.082***	1.0441	.1375 (0.33)	0.743
Gender # Log electricity - males	.9629	.0130 (-2.78)	0.005**	.8762	.0196 (-5.92)	0.000**	.7984	.0341 (-5.27)	0.000**
Firm-specific factors									
Size #c. Gender									
Small	2.2138	.3982 (4.42)	0.000**	1.9062	.5687 (2.16)	0.031**	1.4305	.6663 (0.77)	0.442
Medium	.8155	.4449 (-0.37)	0.709	4.2447	2.6157 (2.35)	0.019**	1.1124	1.3614 (0.09)	0.931
Other factors									
County Economic Blocs #c. Gender									
NOREB	1.2526	.1915 (1.47)	0.141	1.9196	.4359 (2.87)	0.004**	1.3686	.6134 (0.70)	0.484
LREB	.8286	.1236 (-1.26)	0.208	.5709	.1486 (-2.15)	0.031**	.9694	.4005 (-0.08)	0.940
JKP	1.2227	.1917 (1.28)	0.200	.6560	.1929 (-1.43)	0.152	1.1979	.5126 (0.42)	0.673
NAKEB	1.0055	.2111 (0.03)	0.979	.4347	.1808 (-2.00)	0.045**	.6082	.4656 (-0.65)	0.516
CREB	.7861	.1193 (-1.59)	0.113	.3535	.1026 (-3.58)	0.000**	.5038	.2549 (-1.36)	0.175

Variable	MSMEs			NON-MSMES			Government		
	RRR	Robust SE β_i	p-value	RRR	Robust SE βi	p-value	RRR	Robust SE βi	p-value
SEKEB	.6423	.1283 (-2.22)	0.027**	.7264	.2424 (-0.96)	0.338	.3846	.4309 (-0.85)	0.394
FCDC	.8142	.1457 (-1.15)	0.251	2.7288	.5759 (4.76)	0.000**	1.8757	1.1191 (1.05)	0.292
Constant	.0582	.0116 (-14.27)	0.000**	.0108	.0048 (-10.16)	0.000**	0.0000075	.000016 (-5.42)	0.000
Observations	18,249								
Wald chi2(120)	1831.36								
Prob > chi2	0.0000								
Pseudo R2	0.0767								

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