Women Entrepreneurs’ Land Ownership and Performance of their Manufacturing Enterprises in Kenya

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Abstract

Despite the government's efforts to attract women into the manufacturing sector, ranging from legal, fiscal and affirmative actions, very few women entrepreneurs operate in this space. And yet manufacturing is a high-value sector where women can enjoy producing and trading opportunities for their products and earn more, leading to their economic empowerment. One of the hurdles to entry into this sector for women has been a lack of land ownership and other productive resources. The study aimed to contribute knowledge on how ownership of land by women entrepreneurs operating in the manufacturing sector has affected the performance of their enterprises. The specific objectives were to investigate the effect of women entrepreneur’s ownership of land on the performance of their manufacturing enterprises and determine the influence of control variables such as the number of employees, educational level, control of business earnings, credit utilisation and experience on the performance of the women-owned manufacturing enterprises. Primary data was collected using a structured questionnaire and complemented with published data from policy documents. Descriptive statistics and regression methods were used to analyse data. The study found that land ownership determines enterprises' performance, with those who owned the land performing better than those without. They make higher profits than those who do not own land. Experience gained by the woman entrepreneur, education level, networking, business size and control of business earnings were other factors that improved performance. The implications include incentivising women entrepreneurs to own land and appealing gender-insensitive laws, regulations, cultural practices and traditions prohibiting women entrepreneurs from owning and using land and other properties.

Keywords: Land, land ownership, woman entrepreneurs, manufacturing, enterprise.

1. INTRODUCTION

1.1 Background

The growth of micro, small, and medium enterprises (MSMEs) in Kenya has been notable over recent years, with these businesses increasingly establishing themselves across various sectors and locations throughout the country. MSMEs in Kenya engage in diverse types of business activities, contributing significantly to both local and national economies. Recognised as essential drivers of economic development, MSMEs play a critical role in fostering national progress by creating employment opportunities, promoting income generation, and enabling economic empowerment for lower-income segments of the population (Republic of Kenya, 2007). These enterprises are estimated to have created over 15 million jobs, which not only improves livelihoods but also helps to alleviate poverty through increased earnings. This broad economic engagement by MSMEs directly adds to approximately 30 per cent of the nation's total value addition, making their role pivotal in enhancing Kenya's economic resilience and supporting growth at the grassroots level (the Republic of Kenya, 2016).

Despite their significant contributions, MSMEs face substantial challenges, particularly in accessing adequate financing. Financial constraints limit their potential to scale operations, invest in new technology, and expand markets, which could otherwise increase their competitiveness and productivity. In addition to financial challenges, MSMEs often contend with regulatory and operational hurdles, particularly regarding licensing and compliance. A breakdown of ownership among licensed MSMEs indicates that men-owned businesses comprise 47.9 per cent of these enterprises, while 32.2 per cent are women-owned. Notably, most unlicensed MSMEs (approximately 60.7 per cent) are owned by women (Republic of Kenya, 2016). This data underscores the unique barriers women entrepreneurs face in obtaining formal recognition and compliance, likely influenced by disparities in access to resources, information, and institutional support.

Furthermore, MSME growth in Kenya has been supported by a robust domestic market demand driven by increased consumption and investment activities. As demand for locally produced goods and services rises, the need for stronger MSME support structures to sustain this momentum is reinforced. By addressing the financial and regulatory challenges that MSMEs face, Kenya can leverage this dynamic sector's potential to contribute even more significantly to national development and economic stability. Given the critical role of MSMEs in fostering national development, various government agencies in Kenya are actively working to support and strengthen this sector. A primary focus of these efforts has been on empowering MSMEs operated by women as part of a broader strategy to promote inclusive economic growth (Republic of Kenya, 2016). Recognising that women-led MSMEs face unique challenges, particularly regarding financial access, the Kenyan government has implemented specialised programs and financial products tailored to their needs. These initiatives include the Affirmative Action Funds (AAFs) and the Access to Government Procurement Opportunities (AGPO), both of which aim to enhance financial inclusion for women entrepreneurs and ensure they have access to capital necessary for business growth. Additionally, institutions like the Micro and Small Enterprise Authority (MSEA) have been established to provide targeted support, addressing both the financial and operational challenges MSMEs face.

Through these programs, the government aims to reduce the barriers women entrepreneurs encounter, allowing them to contribute more effectively to the economy. Women-owned enterprises currently account for an estimated 20 per cent of Kenya's Gross Domestic Product (GDP), underscoring their significance in driving economic growth (the Republic of Kenya, 2016). By fostering a supportive environment for these enterprises, the government not only promotes gender equality but also enhances the overall resilience and inclusivity of the national economy. This ongoing support for women-owned MSMEs reflects a commitment to economic empowerment and recognition of women's vital role in Kenya's entrepreneurial landscape.

In response to the need for supporting MSMEs and enhancing their performance, the Kenyan government has introduced a range of incentives designed to strengthen this vital sector. These incentives aim to alleviate financial burdens, increase access to resources, and encourage the growth of small businesses across the country. They include a mix of tax incentives, non-financial incentives, and targeted financial support. The tax incentives, often termed tax expenditures, provide relief to MSMEs by reducing their tax obligations, improving cash flow and allowing businesses to reinvest in expansion and innovation. Non-financial incentives, such as training programs, mentorship, and access to government contracts, further empower MSMEs by equipping them with the skills and opportunities needed to thrive.

Central to the government's financial incentives are the Affirmative Action Funds (AAFs), specifically designed to address the financial needs of groups who have historically faced economic disadvantages. The AAFs encompass key programs such as the Women Enterprise Fund (WEF), the Youth Enterprise Development Fund (YEDF), and the UWEZO Fund. These funds target women, youth, and persons with disabilities, providing them with affordable loans, grants, and business training to support their entrepreneurial efforts. The AAFs are grounded in the Kenyan Constitution, particularly Article 27(6), which mandates the State to "take legislative and other measures, including affirmative action programs and policies designed to redress any disadvantage suffered by individuals or groups because of past discrimination” (Republic of Kenya, 2010, p.38). This constitutional commitment underscores the government’s dedication to addressing past inequalities and supporting MSMEs as a means of achieving broader economic empowerment and inclusion. Through these incentives, the government aims to create a more equitable business environment, enabling MSMEs to grow, innovate, and contribute to the national development.

Recognizing that women in Kenya face significant barriers to involvement in governance and decision-making at various levels, including political and institutional spheres (UDA, 2022), the Government of Kenya has prioritized advancing women’s rights and empowerment as part of its national agenda. This commitment aligns with the President’s 9-point agenda on women, which seeks to address the multifaceted challenges that limit women’s participation and economic potential. This agenda is a core component of the Bottom-Up Economic Transformation Agenda (BETA) and encompasses a range of initiatives aimed at fostering gender equity and supporting women’s development across sectors.

The 9-point agenda includes: promoting women’s economic empowerment; implementing the two-thirds gender rule to ensure fair representation; strengthening gender desks in police stations to support women’s safety and access to justice; increasing funding for the Anti-FGM Board and advancing relevant legislation; establishing a social welfare fund specifically for Kenyan women living abroad; expediting community health work, particularly for maternal and child health; providing access to clean, safe, and affordable domestic energy sources; ensuring the provision of free sanitary towels to all women and girls in need; and safeguarding the land rights of women and children (UDA, 2022). Together, these initiatives represent a comprehensive approach to addressing the systemic issues that have long hindered women’s progress.

Central to this agenda is women’s economic empowerment, which is recognized as a foundational priority. Empowering women economically can drive broader social and economic improvements, not only for individual women but also for their families and communities. One of the primary avenues for achieving economic empowerment is through the establishment and operation of micro, small, and medium enterprises (MSMEs), which allow women to generate income, create employment, and contribute to economic growth. By supporting women in starting and scaling their own businesses, the government can help reduce poverty, enhance self-sufficiency, and promote gender equality, ultimately contributing to the nation's long-term economic transformation.

Access to resources is essential for the success and sustainability of any manufacturing enterprise, forming the foundation upon which businesses can grow and thrive. For women in the manufacturing sector, however, substantial barriers exist in obtaining and leveraging critical resources, particularly land. Land ownership is not only vital for production but also serves as a form of collateral necessary for securing capital from financial institutions. Unfortunately, due to long-standing societal and legal constraints, many women face challenges in obtaining clear ownership rights. In many cases, women acquire access to resources like land only through inheritance or marriage, often without the legal ownership or control needed to leverage these assets effectively. This lack of formal ownership limits their ability to secure loans and inhibits their business expansion and investment potential.

The disparity in resource ownership between men and women is stark. According to statistics, women own only 1 per cent of all resources and have access to only 10 per cent of natural resources in Kenya (Mbogo, 2017). This significant gap highlights the pervasive gender inequality that exists within resource ownership and access, directly impacting women's economic opportunities and their ability to grow sustainable businesses. Although Article 60 (f) of Kenya's Constitution calls for gender equality and specifically seeks to eliminate discriminatory customs and laws that prevent women from enjoying equal rights to land (Republic of Kenya, 2010), there remains a wide gap between policy and practice. Cultural norms, traditional inheritance practices, and slow implementation of gender-sensitive policies continue to hinder women's access to land and resources.

These land laws, on paper, are designed to promote gender equality by granting equal land rights to both women and men, regardless of marital status or societal position (Gaafar, 2014). However, enforcement mechanisms are often insufficient, leaving many women without the practical ability to own or control land. Many women remain unaware of their rights or lack the legal support needed to claim and protect their land ownership. The limited ownership and access to resources undermine women's economic empowerment and restrict their contributions to Kenya's manufacturing sector, ultimately impacting national economic growth. Bridging this gap between policy and practice is essential to ensure that women entrepreneurs in manufacturing can fully benefit from and contribute to the country's economic landscape. It is against this background that this study aimed to find out the effect of land ownership, number of employees, educational level of the owner, control of business earnings, credit utilization and experience on the establishment and sustainability of women-led manufacturing enterprises. It seeks to fill a gap in the literature by providing empirical evidence on how land impacts the profitability and growth of women-owned enterprises. The findings are expected to inform policymakers, financial institutions, and development organisations on the importance of asset ownership and decision-making autonomy as key enablers of women's entrepreneurial success.

This study aimed to advance the discourse on women's economic empowerment and underscore the transformative impact of equitable resource access on the performance of women-led manufacturing enterprises. The significance of this study was in its potential to provide insights into the unique challenges and opportunities faced by women entrepreneurs in the manufacturing sector. It highlights the need for policies and interventions that support women's asset ownership and promote equal access to productive resources. By addressing these critical issues, the study aims to contribute to a more inclusive understanding of economic empowerment, advocating for structural reforms that enable women entrepreneurs to overcome barriers and maximise their potential in the manufacturing industry.

2. Research Objectives

i. To investigate the effect of women entrepreneur's ownership of land on the performance of their manufacturing enterprises.

ii. To determine the influence of control variables such as number of employees, educational level, control of business earnings, credit utilisation, and experience on the performance of women-owned manufacturing enterprises.

2.0 **LITERATURE REVIEW**

Reardon, Barrett, Berdegué, and Swinnen (2009) identified numerous global barriers that women in the manufacturing sector face, which restrict their ability to compete and grow their businesses. Key among these challenges is limited access to credit, productive assets, information, technology, and social networks, all of which are essential for sustainable business operations. The study emphasized that access to these resources is fundamental for improving productivity and achieving competitive advantage. However, the restricted access for women entrepreneurs hinders their potential to scale operations, innovate, and remain resilient in the face of market fluctuations. Without access to sufficient financing, women entrepreneurs often struggle to invest in new technologies, optimize production processes, or maintain adequate inventory levels, which are crucial for staying competitive in manufacturing.

Onyango, Gorretty, and Thoruwa (2014) examined the essential elements required to ensure high-quality production in the manufacturing sector, particularly for women entrepreneurs. They emphasised the importance of a robust policy framework to provide the necessary support and structure for female entrepreneurs to thrive. Additionally, the study highlighted the significance of formal education and training as foundational tools for building the technical and managerial skills required in manufacturing. Enterprise support through government programs and collaborative partnerships was also noted as crucial in fostering a supportive environment. However, Onyango et al. found that adopting imported technologies by small and medium-sized enterprises (SMEs) often resulted in unintended consequences. While these technologies intended to improve productivity, they inadvertently raised unit production costs, reducing profit margins. This finding suggests that while technology can be beneficial, it must be carefully evaluated and adapted to SMEs' specific needs and capacities to avoid exacerbating operational expenses.

Anyango (2015) conducted a focused study on the challenges facing women-owned SMEs in Kasipul constituency, Homabay County, Kenya. The research employed both descriptive and inferential statistics to assess the significant barriers affecting these enterprises. The study found that access to finance emerged as the most critical obstacle, with 83 per cent of respondents indicating that they lacked access to adequate financing. This lack of financial support limited their ability to invest in their businesses, resulting in stunted growth and reduced profitability.

Additionally, the study revealed that 87 per cent of respondents did not have the necessary resources required as collateral to secure credit from financial institutions, thus further constraining their access to capital. Among those women who did own resources, a significant 73 per cent reported that they lacked decision-making power over these assets, which limited their ability to utilise them effectively for business purposes. This lack of autonomy over their resources underscores the persistent gender dynamics that disadvantage women in business, particularly in the manufacturing sector.

Wangari (2017) conducted a study investigating the factors influencing the performance of women-owned businesses in Kenya. Using interviews as the primary data collection method, Wangari's research employed both open-ended and structured questionnaires, complemented by discussions to gain deeper insights. The findings pointed to a positive and notable correlation between access to capital and business performance, underscoring the critical role of financial resources in supporting enterprise growth. Specifically, the study found that businesses with better access to capital were more likely to perform well, as they could invest in essential resources, upgrade equipment, and expand their operations. However, the study did not delve into the specific factors that affect the performance of women-owned businesses, suggesting an area for further research. Nonetheless, the findings highlight the necessity of improving women's access to financial resources to foster sustainable business performance.

In a study by Obebo et al. (2018), the researchers explored the participation of Micro and Small Enterprises (MSEs) in micro-finance and assessed its impact on their performance in Kenya. The study examined various segments of SMEs, including those owned by women, youth, and other age demographics, aiming to provide a nuanced understanding of the effects of micro-finance participation. The findings indicated that participation in micro-finance positively influenced the performance of MSEs overall, with enterprises benefiting from increased access to capital, which enabled them to invest in growth-oriented activities. However, the study also found that women and youth-owned businesses faced specific challenges in fully leveraging micro-finance opportunities. This observation led the researchers to recommend that microfinance providers should develop tailored policies targeting women and youth to enhance their participation in microfinance schemes. By creating customised products and support structures, financial institutions could better meet the unique needs of these groups, thereby enabling them to maximise the benefits of micro-finance.

A study by Mugyenyi, Nduta, Ajema, Afifu, Wanjohi, Bomett, Mutuku, and Yegon (2020) examined the representation and valuation of women in the manufacturing sector, highlighting that women were often inadequately represented and undervalued within this industry. The research attributed this under-representation to legal and policy frameworks that are largely gender-neutral, failing to address the specific challenges faced by women. The study found that women-owned manufacturing companies were often in operation for less than ten years, indicating that women had only recently started venturing into this sector. Moreover, a majority of women-owned enterprises were identified as MSMEs operating within the informal sector. The challenges faced by these women-owned MSMEs included limited growth, high production costs, transportation issues, and substantial capital requirements. The researchers suggested that these issues could be mitigated through the provision of Affirmative Action Funds (AAFs) and government incentives, which would help address the unique needs of women entrepreneurs in manufacturing and facilitate their entry and sustainability in the industry.

In Ethiopia, Alene (2020) conducted a study to explore the factors influencing the performance of women entrepreneurs who own Micro and Small Enterprises (MSEs). Using a cross-sectional survey questionnaire to collect primary data, the study adopted both explanatory and quantitative approaches, with a random sample of 180 women entrepreneurs. The results from the logit model analysis revealed a statistically significant positive correlation between land ownership and the performance of women-owned enterprises. The study found that women entrepreneurs who operated their businesses on land they owned reported higher profitability than those who did not own land. This finding suggests that land ownership provides a substantial advantage, allowing entrepreneurs to avoid rental costs and use land as collateral for credit. The study's findings corroborate similar conclusions drawn by Awoke (2019), which further validate the impact of land ownership on enterprise performance.

Tsuma, Kendagor, Otieno, Njuguna, Obando, Obebo, Korir, Maina, Makambi, Githuku, and Wawire (2023) researched the constraints to Women's Economic Empowerment in Kenya's manufacturing sector. Their study revealed that only 30 per cent of the women respondents owned a land title deed, while just 26 per cent had the autonomy to make independent land-use decisions. This land ownership and decision-making capacity limitation impacts women's economic empowerment, as access to and control over productive resources are critical for business success. In a related study, Tsuma and Wawire (2023) specifically analysed the effect of land ownership on women's enterprise performance. Their findings indicated that the coefficient for land ownership was positive and statistically significant at a 1 per cent level, implying that women who owned land and operated their businesses on it generated higher profits compared to their counterparts who did not have land ownership. This result aligns with prior research, further establishing land ownership as a fundamental determinant of business success for women in Kenya's manufacturing sector.

Collectively, these studies paint a comprehensive picture of the challenges faced by women entrepreneurs in the manufacturing industry. Limited access to financial resources, lack of ownership over productive assets, and restricted decision-making power hinder the growth and sustainability of women-owned enterprises. While access to credit and micro-finance services has been shown to impact business performance positively, the studies highlight the need for tailored policies that address the specific barriers women face. Moreover, the under-representation of women in formal manufacturing underscores the importance of policy interventions that promote gender equity and ensure that women have equal opportunities to thrive in the sector. To bridge these gaps, a combination of government support, affirmative action funds, and gender-sensitive policy frameworks are essential for empowering women entrepreneurs and enhancing their economic contributions.

In conclusion, the literature underscores the importance of addressing structural barriers that limit women's participation and success in manufacturing. By promoting access to capital, supporting land ownership, and fostering decision-making autonomy, stakeholders can create a more enabling environment for women-owned businesses. This comprehensive support structure is vital for achieving inclusive economic growth and realising the full potential of women in Kenya's manufacturing industry.

3.0 METHODOLOGY

The study focused on women entrepreneurs in the manufacturing sector across three distinct regions of Kenya: Nairobi, Coast, and Nyanza. These regions were purposefully selected for the study due to the significant number of women-owned manufacturing enterprises located in these areas and the need to ensure a broad geographical representation. As the capital city, Nairobi serves as a major hub for business and industrial activity. At the same time, the Coast and Nyanza regions offer diverse insights into the entrepreneurial landscape in Kenya, particularly within the context of women-led enterprises.

A total of 55 women entrepreneurs were selected through a simple random sampling method, ensuring that each entrepreneur had an equal chance of being included in the study. The list of these women-owned enterprises was compiled from various reputable sources, including the Kenya National Bureau of Statistics (KNBS), the Ministry of Industry, Trade and Investment, the Ministry of Cooperatives and Micro, Small, and Medium Enterprises (MSMEs), and the Kenya National Chamber of Commerce and Industry (KNCCI). These institutions provided comprehensive and up-to-date records of women-owned businesses in the manufacturing sector, enabling a robust sampling process.

Data collection for the study was conducted using a structured questionnaire administered to the selected women entrepreneurs. This primary data was supplemented with secondary data drawn from relevant policy documents, which provided additional context and insights into the entrepreneurial environment in Kenya. To analyse the collected data, the study employed a combination of both quantitative and qualitative research designs. Descriptive statistics were used to summarize the data, while regression analyses were performed to examine the relationships between different variables. This approach enabled a comprehensive understanding of the factors affecting women entrepreneurs in the Kenyan manufacturing sector.

3.1 Theoretical Framework

This study is based on the concept of profit maximisation, which serves as a fundamental framework for understanding business behaviour. For the sake of simplification and maintaining practical relevance, it is assumed that women-owned businesses operate within competitive markets for both their products (outputs) and the resources (inputs) they require. A key assumption is that the female business owner seeks to maximise her business's performance, with success defined as profit (π). Let us assume the woman's business has the following production function:

$$y = f(x, \mu) \tag{3.1}$$

Where y = Output, x is a set of inputs, and μ is a vector of factors representing the environment in which production occurs.

The business faces constraints in production and constraints in profit maximisation as follows:

$$\text{Max } \pi = pfx, \mu - s=1Swsxs \qquad \text{such that } f(x, \mu) \geq y \tag{3.2}$$

Where w_s is the price of input s.

The optimisation of equation (3.2) yields the supply and input demand functions for the woman-owned enterprise. Output and input demands are functions of the output, the prices of inputs used by the enterprise, and characteristics, μ, such as decision-making regarding productive resources.

3.2 Model Specification

The profit model is specified as follows:

$$i=0+j=1Kjji+i \tag{3.3}$$

Where i is the performance measure for i^{th} woman-owned enterprise and includes output (sales), profit, skills, decision making and access and use of resources. ji is j^{th} observed characteristics of the i^{th} individual woman entrepreneur (such as age, education, household size, marital status, land ownership, among others), or attributes of women-owned business (such as business age, number of employees, credit access, type of ownership, business location, among others) in manufacturing. The ji is a control variable, and several characteristics were included. The specific equation estimated from equation (3.3) was as follows:

Profit = f (land ownership, number of employees in the business, education level of the entrepreneur, control of business earnings, loans/credit utilisation and experience of the entrepreneur.

4.0 KEY FINDINGS

4.1 Descriptive Statistics

Broad manufacturing sectors engaged in:

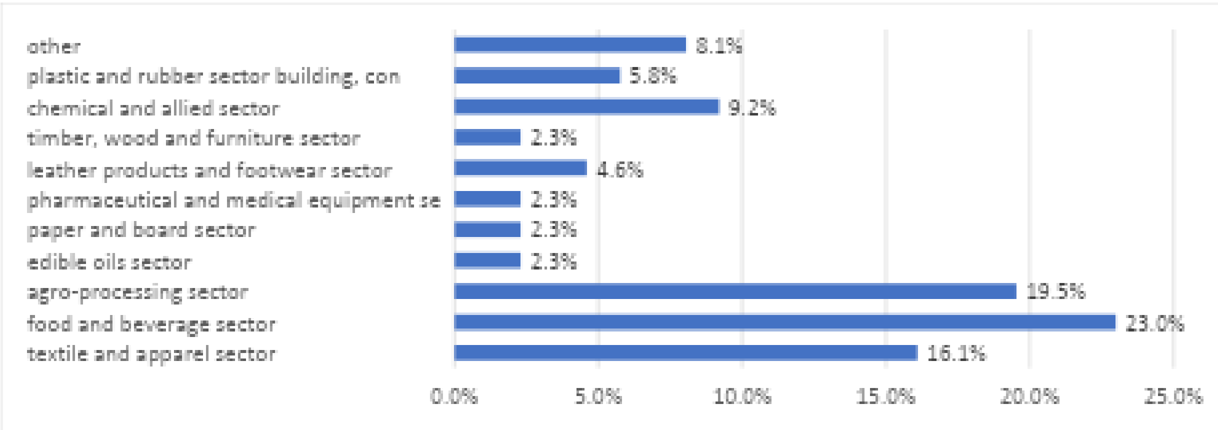


Figure 1: Distribution of businesses across manufacturing Sectors

The study reveals that women's involvement in the manufacturing industry is primarily centered in a few key sectors. The food and beverage sector holds the highest concentration, with 23.0 per cent of women-owned enterprises, highlighting it as a major area of focus for female entrepreneurs. Following this, the agro-processing sector accounts for 19.5 per cent, and the textile and apparel sector makes up 16.1 per cent, showing substantial engagement in these areas as well. Notably, the chemical and allied sector includes 9.2 per cent of women-owned manufacturing enterprises. In contrast, all other manufacturing sectors show limited representation, each comprising less than 5 per cent of enterprises, indicating a narrower spread of women's participation across these industries. This distribution suggests a strong preference and specialisation in sectors closely related to consumer goods and daily essentials, likely due to their accessibility and market demand.

Land ownership and decision on use of land: Land ownership is important as it may provide security in case of separation or divorce. It also positively influences women in their homesteads and reduces their susceptibility to violence and discrimination (KNBS and ICF, 2023). The following figures show land ownership, type, and the type of decision taken on its use.

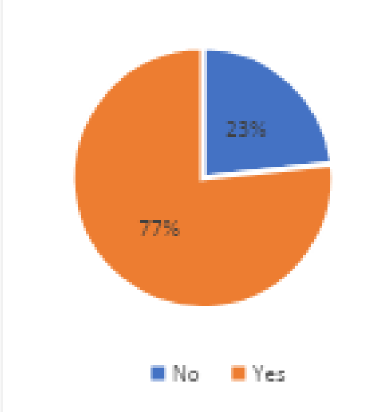


Figure 2: Household having land

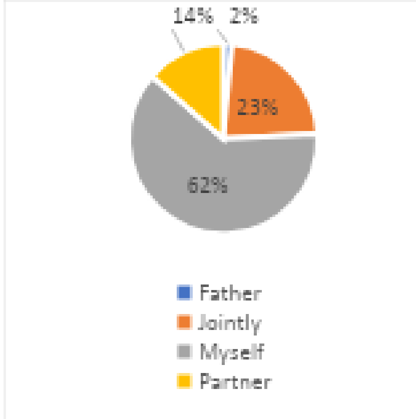


Figure 3: Type of land ownership

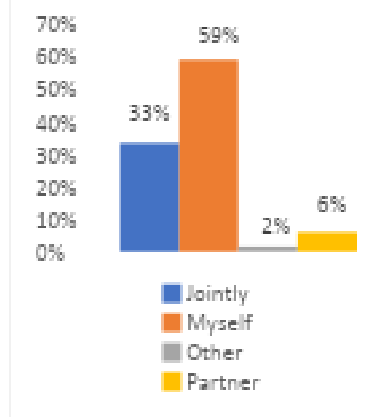


Figure 4: Decision on Use of Land

Majority of the respondent's (77 %) reported that their households owned productive assets such as land. In Kenya, only about 31.6 percent of the population owned land, out of which 4.5 percent own land alone, 24.5 own land jointly with spouse/partner only while 2.6 percent owned land jointly with another party (KNBS and ICF, 2023). Among the individuals who owned land, 62 percent had their own title deed while 23 percent jointly owned land with their partners/spouses, one (1) percent had land ownership was under their father and 14 percent ownership was under their spouse/partner alone.

The majority of respondents, 59 percent, expressed that they make decisions on the use of land on their own, while 33 percent said that decision-making on the use of land is done jointly with the spouse/partner. Six percent of respondents indicated that the decision on the use of land was made by their partner/spouses on their behalf, while 2 percent did not disclose who made the decision on the use of land.

Employment and Remuneration

The majority of participants (61 per cent) who were interviewed operated micro enterprises; 29 per cent were small enterprises, while 10 per cent were large enterprises. Notably, none of the businesses were medium enterprises (having 50 to 99 employees). Most businesses employed more males (71 per cent) than females (29 per cent). The finding conforms to Mugyenyi et al. (2020), who noted the limited number of women employed in the manufacturing sector. The businesses had, on average, KES 8,805,253.33, KES 656,181.58 and KES162,620.63 annual wage, monthly wage and sub-sector wage, respectively. The findings indicated that the average monthly wage superseded the average sub-sector wage cost, stipulating expensive costs incurred in the operating manufacturing sector. Further interrogation through analysis of Variance (ANOVA p=0.000) revealed that there was a significant variation in the performance of the businesses based on the type of enterprise.

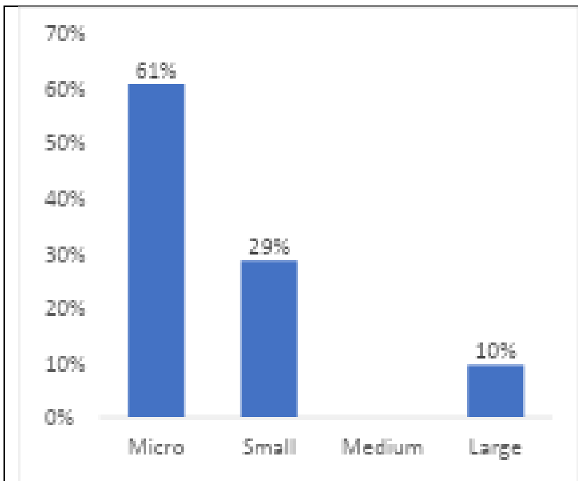


Figure 5: Type of the enterprise

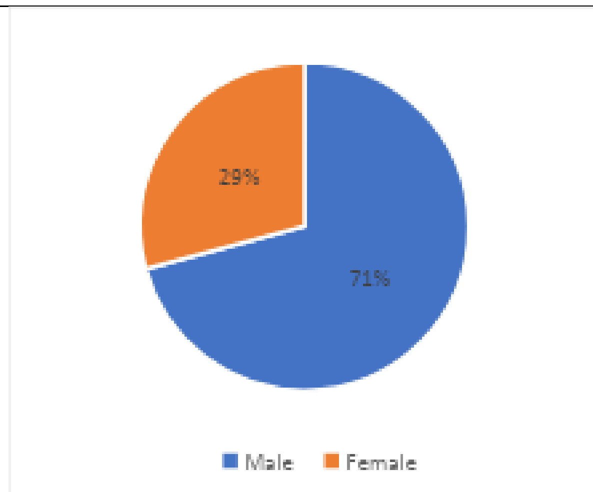


Figure 6: Proportion of male and female employed

Level of education:

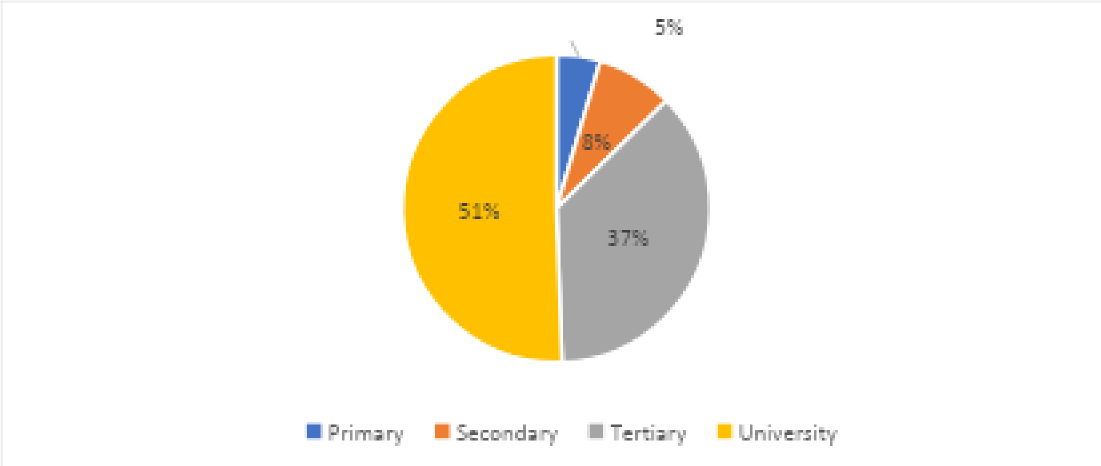


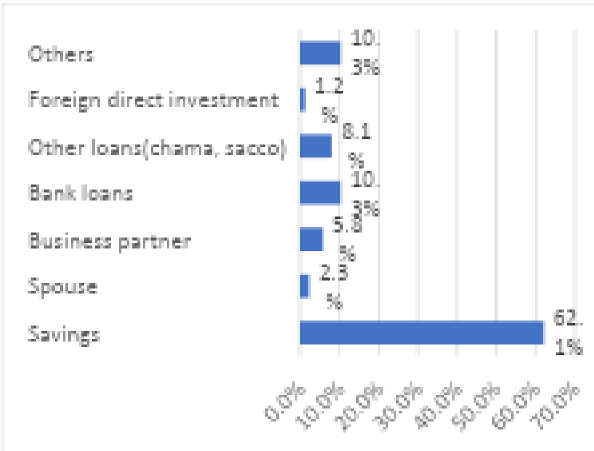
Figure 7: Education level

The study's findings highlight that educational attainment among women owners in the manufacturing sector is notably high. Half of the women business owners (50 per cent) had achieved a university-level education, indicating a strong representation of higher education within the sector. Additionally, 37 per cent of the participants had completed tertiary education, showing further advancement in educational qualifications. A smaller percentage, 8 per cent, had completed only secondary education, while 5 per cent had primary education as their highest level of schooling. Overall, an impressive 87 per cent of the women business owners had education levels above secondary school, underscoring a high literacy rate among these respondents.

This high literacy level is essential for manufacturing productivity, as education equips these entrepreneurs with valuable skills, including critical thinking, problem-solving, and efficient management practices. Such skills are vital for navigating the complex challenges within the manufacturing sector and contribute significantly to improved business performance and growth.

Credit utilisation (Sources of capital): Initial capital for setting up manufacturing businesses mostly came from one's own savings. Six out of ten businesses indicated that they used little savings to start the businesses as cottage and grew organically over time (Figure 8). Formal sources like bank loans were only used by 10% of the firms. In contrast, this source was key for plugging the working capital shortage for 23 per cent of the businesses (Figure 9). Savings and loans from SACCOs and 'chamas' are just as important for this function. Access to working capital can minimise business closures and ensure sustainability (Republic of Kenya, 2012). Meanwhile, 17.3

per cent of the respondents confirmed that they had accessed credit or borrowed funds in a year, with a loan range between KES 700 and 400 million.



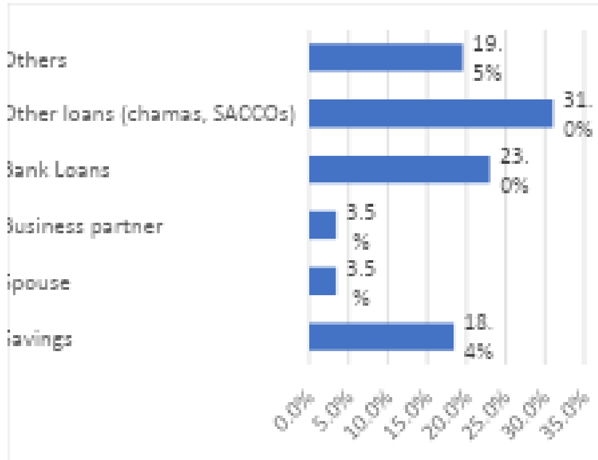


Figure 8: Main source of initial capital

Figure 9: Main source of working capital

Marital Status: The following figure illustrates that a significant portion of women entrepreneurs, 45 percent, were married, indicating a majority status, while only a small fraction, 2 percent, were divorced, representing the lowest percentage among participants.

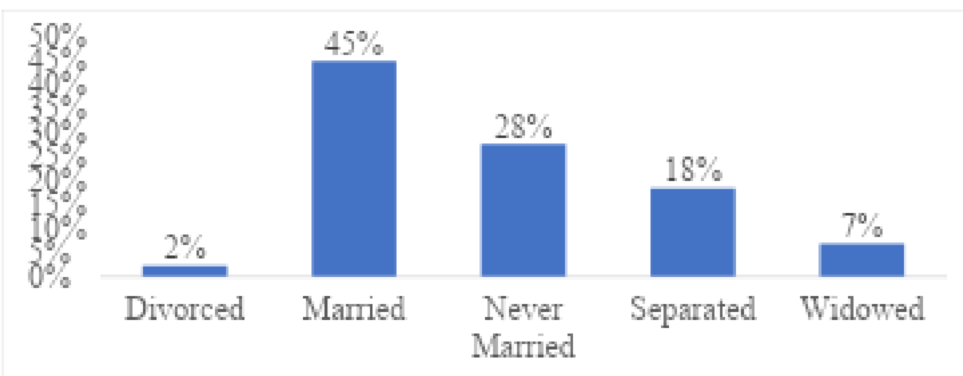


Figure 10: Marital Status

The study's findings also reveal marital status distribution among women entrepreneurs. Specifically, 28 per cent of the women were never married, 18 per cent were separated, and 7 per cent were widowed. The data highlights that most of these enterprises are owned by married women, suggesting that marriage may play a significant role in the lives of many women in the manufacturing sector, potentially influencing their personal and business experiences.

4.2 Regression Results and Discussion

Results from regression analysis are presented in the table that follows.

Table 1: Regression Results

Dependent Variable: Log of Profit				
Variable	**Coefficient**	**Std. Error**	**t-statistic**	**P-value**
Log of No. of Employees	0.367***	0.125	2.94	0.006
Education Level	0.286**	0.123	2.33	0.027
Control Business Earnings	0.195**	0.061	3.19	0.015
Loans/ Credit Utilization	0.237**	0.512	0.46	0.025
Land Ownership	0.625***	0.158	3.95	0.001
Log of Experience	0.534**	0.207	2.58	0.019
Constant	11.359***	1.099	10.63	0.000
Adjusted R-Squared	0.799		Prob(F-statistic)	0.0000

*****, **, *** implies that the coefficient is statistically significant at 1%, 5% and 10 % respectively.

The regression results indicate a strong model fit, with an adjusted R^2 of 0.799, suggesting that the independent variables can explain approximately 79.9% of the variability in profits. The probability of the F-statistic is 0.0000, which indicates that the model is statistically significant at a 1% level.

The positive and highly significant coefficient 0.367, significant at 1 per cent for the log of the number of employees, implies that as the business size grows (measured by the number of employees), profits increase. Specifically, a 1 per cent increase in the number of employees is associated with a 0.367 per cent increase in profit. This relationship underscores the importance of business size in driving profitability, possibly due to increased production capacity, enhanced labour division, and operational efficiencies achieved through a larger workforce.

The positive coefficient of 0.286, significant at 5, indicates that higher education levels are associated with increased profitability. This suggests that education enhances women entrepreneurs' skills in critical thinking, strategic decision-making, and effective communication. These skills likely contribute to improved business management and performance. As women become more educated, they may be better positioned to navigate challenges, adopt innovative practices, and optimise resource allocation.

The positive (0.195) and significant (at 5 per cent) coefficient for control over business earnings shows that businesses where the owner has independent control over financial decisions tend to be more profitable. This finding highlights the role of autonomy in financial decision-making, allowing entrepreneurs to reinvest earnings, control costs, and strategically plan for growth without external constraints, ultimately improving business performance.

The coefficient for loans/credit utilisation was 0.237, which is significant at 5 per cent. Access to loans or credit has a positive impact on profits. The availability of credit facilities allows women entrepreneurs to make critical investments in inventory, equipment, and other business operations. This funding access supports growth opportunities and enables businesses to scale, especially in capital-intensive sectors, including manufacturing. However, the relatively high standard error (0.512) suggests variability in how effectively loans are utilized across different enterprises, which may be an area for further study.

Land ownership had the highest positive coefficient of 0.625 among the variables, with a 1% significance level. Owning land provides a critical advantage, as it reduces operational costs, such as rent, and offers collateral for obtaining additional financing. This asset security facilitates investment in business expansion and operational stability. The significant effect of land ownership aligns with prior research indicating that property ownership is a crucial determinant of business success.

Experience in the industry positively correlates with profitability, as suggested by the coefficient of 0.534, significant at 5 per cent. This result implies that experienced entrepreneurs have gained practical knowledge, business acumen, and industry-specific skills, which improve decision-making and operational efficiency. A 1 per cent increase in experience translates to a 0.534 per cent increase in profit, demonstrating the compounding benefits of industry familiarity and accumulated expertise.

The analysis reveals that business size, education, control over earnings, access to loans, land ownership, and experience are all significant determinants of profitability for women-owned manufacturing enterprises. These findings align with previous studies, including Tsuma and Wawire (2023), Rono (2009), Kiriti et al. (2008), Alene (2020), Awoke (2019), and Obebo et al. (2018), suggesting consistent themes in the literature. Education and experience enhance profitability by equipping women with the necessary skills and insights for effective business management. Similarly, access to credit and property ownership empowers entrepreneurs with financial security, thereby driving growth. The high adjusted R^2 and significant F-statistic further validate the strength and reliability of the model.

This regression analysis highlights critical levers that can be targeted to support the profitability and sustainability of women-owned enterprises. It suggests that policies and interventions focusing on land, educational programs, financial independence, land, and asset ownership would be highly beneficial.

5.0 CONCLUSION

The findings suggest that land ownership, access to credit, and decision-making autonomy are pivotal to the profitability of women-owned manufacturing enterprises. Policies that facilitate land ownership for women improve access to credit, and promote financial independence in decision-making would, therefore, be instrumental in supporting women entrepreneurs in the manufacturing sector. These results align with previous studies and reinforce the importance of resource ownership and autonomy as drivers of sustainable business success among women entrepreneurs in the manufacturing sector.

5.1 Recommendations

i. Reduce bureaucratic barriers, provide incentives for land ownership, and establish legal frameworks that support women's property rights.
ii. Reappealing gender-insensitive laws, regulations, cultural practices, and traditions prohibiting women entrepreneurs from owning and using land and other properties.
iii. Educate women on the legal processes involved in land acquisition and ownership and the long-term financial benefits of asset ownership. Training sessions or workshops can empower women with the knowledge needed to navigate these processes and secure productive assets.

iv. Review the industrialisation policy with a view to mainstreaming gender aspects hampering the growth of women-owned enterprises.

v. Continuously researching and collecting data on the challenges faced by women-owned manufacturing enterprises can help design policies and programs that address evolving needs.

References

Alene, E. T. (2020). Determinants that influence the performance of women entrepreneurs in micro and small enterprises in Ethiopia. *Journal of Innovation and Entrepreneurship*, *9*(1), pg. 1-20. https://doi.org/10.1186/s13731-020-00132-6

Anyango, J. (2015). Constraints Affecting Women in Micro and Small Enterprises in Kasipul Constituency Homabay. Research Project of Master of Business Administration of University of Nairobi.

Awoke, F. (2019). Determinants of women entrepreneurs' performance in Ethiopia (evidence from Hawassa City Administration). *European Journal of Business and Management*, *11*(22), 18–30. https://doi.org/10.7176/EJBM

Gaafar, R. (2014). *Women's Land and Property Rights in Kenya*. https://www.landesa.org/wp-content/uploads/LandWise-Guide-Womens-land-and-property-rights-in-Kenya.pdf

Kenya National Bureaus of Statistics and ICF. 2023. Kenya Demographic and Health Survey 2022. Nairobi, Kenya, and Rockville, Maryland, USA: KNBS and ICF.

Kiriti – Ng'ang'a T. and Wangulachi, S. (2008). "Determinants of Expansion of Small-Scale Enterprises in Kenya: A Case Study of SMEs in Three Informal Settlements in Kenya" *International Journal of Afro- Asian studies*. Vol 1.No 1. New Delhi: ASMT Publications pp 119-134.

Mbogo, G. (2017). KAM Launches Women in Manufacturing Program. Kenya Association of Manufacturers. https://kam.co.ke/kam-launches-women-in-manufacturing-programme/

Mugyenyi C., Nduta N., Ajema C., Afifu C., Wanjohi J., Bomett M., Mutuku C., & Yegon E. (2020). Women in Manufacturing: Mainstreaming Gender and Inclusion. Nairobi, Kenya. International Centre for Research on Women (ICRW) and Kenya Association of Manufacturers (KAM).

Obebo, F. M., Wawire, N. H. W., & Muniu, J. M. (2018). Effects of Participation of Micro and Small Enterprises in Microfinance on Their Performance in Kenya. *International Journal of Economics and Finance*, *10*(7), 78. https://doi.org/10.5539/ijef.v10n7p78

Onyango, M., Gorretty, O., & Thoruwa, T. (2014). Analysis of Determinants of Competitive Performance for Kenyan Small and Medium Enterprises (SMEs). International Journal of Advanced Research, 2(5), 250–269. http://www.journalijar.com/uploads/875_IJAR-3227.pdf

Reardon, T., Barrett, C. B., Berdegué, J. A., & Swinnen, J. F. M. (2009). Agrifood Industry Transformation and Small Farmers in Developing Countries. World Development, 37(11), 1717–1727. https://doi.org/10.1016/j.worlddev.2008.08.023

Republic of Kenya (2016). Micro, Small and Medium Establishments: Basic Report Nairobi: Kenya National Bureau of Statistics. http://academia-ke.org/library/download/knbs-micro-small-and-medium-establishments-basic-report-2016/

Tsuma, F. A., & Wawire, N. (2023). Effects of Collective Action on Performance of Women-Owned Manufacturing Enterprises in Selected Counties in Kenya. European Journal of Economic and Financial Research, 7(2). https://oapub.org/soc/index.php/EJEFR/article/view/1510/2087

Tsuma, F., Kendagor, R., Otieno, J., Njuguna, A., Obando, J., Obebo, F., Korir, J., Maina, M., Makambi, S., Githuku, S., & Wawire, N. (2023). Constraints to Women Economic Empowerment in the Manufacturing Sector in Kenya. Kenyatta University Women's Economic Empowerment (KU-WEE) Journal, 1(1), 21–34. https://journal.ku.ac.ke/index.php/KUWEE/article/view/397

United Democratic Alliance. (2022). Manifesto. https://uda.ke/downloads/manifesto.pdf

Wangari, R. W (2017). Factors affecting the performance of businesses owned by female entrepreneurs in Kenya, Unpublished Thesis, United States International University