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**Analysis of Micro, Small and Medium Enterprises characteristics and performance across
Southern Africa: a cross-country comparative study**

Duncan Chandabemba Ngwenya

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ABSTRACT

This study examines Micro, Small, and Medium Enterprise (MSME) performance across Zimbabwe, South Africa, and Botswana using survey data from 1,161 businesses. The analysis focuses on owner income growth, employee salary structures, employment patterns, and access to financial assistance. The findings reveal substantial cross-country heterogeneity that challenges conventional assumptions about MSME financing. Zimbabwean MSME owners achieve the highest income growth (47.0 percent) despite having the smallest loan capacity (50,000 USD maximum), while Botswanan owners exhibit modest growth (8.0 percent) despite the largest loan capacity (1.11 million USD maximum). Employee salary growth is remarkably consistent across countries (29.5–32.5 percent), suggesting that government financial support programs benefit workers regardless of owner outcomes. Agriculture demonstrates the highest sectoral owner income growth (52.3 percent), and no statistically significant gender differences are found.

Keywords: MSMEs; Owner income; Employee salaries; Business types; Cross-country comparison; Southern Africa

JEL Classification: L25; L26; J31; O16

1 INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) constitute the backbone of African economies, accounting for approximately 90 percent of all businesses and contributing more than half of total employment across the continent (World Bank, 2026). In developing economies, MSMEs are central to economic diversification, productivity enhancement, and poverty reduction, serving as the primary source of livelihood for millions of households (Beck & Demircuc-Kunt, 2006). Despite their critical role, MSMEs in Sub-Saharan Africa face persistent and interconnected challenges that constrain their growth potential: limited access to formal finance, inadequate physical and institutional infrastructure, regulatory burdens, information asymmetries, and exposure to systemic risks (Making Finance Work for Africa, 2025; Nagler & Naudé, 2017).

These constraints are particularly acute in Southern Africa, where high unemployment, persistent inequality, and vulnerable economic conditions demand urgent policy attention (Kanyenze, 2011). Zimbabwe's prolonged economic instability has created an environment of extreme resource scarcity, while South Africa's developed yet unequal economy presents a contrasting context. Botswana, characterised by stable governance and diamond-driven growth, offers a third distinct environment.

Comparative design intentionally leverages this heterogeneity to examine how MSME performance and the effectiveness of Government Financial Support Programs (GFSPs) vary across distinct institutional and economic environments. Orbis and similar commercial databases do not capture informal MSMEs, which constitute the majority of enterprises in Sub-Saharan Africa, making primary data collection essential.

The academic literature on MSME performance in developing economies has produced several significant insights. First, research has demonstrated that marginal returns to capital are highest at low levels of capital stock, with financially constrained firms generating substantially higher marginal returns than their unconstrained counterparts, suggesting that credit constraints may be a primary barrier to growth (Dodlova et al., 2015; Beck & Demircuc-Kunt, 2006). Second, studies have shown that entrepreneurial capability, absorptive capacity, and adaptive strategies may be more binding constraints on enterprise growth than capital availability alone (Osei et al., 2025; Baker & Nelson, 2005). Third, evidence from randomised experiments has revealed that the form in which financial assistance is provided, cash versus in-kind grants, significantly affects enterprise outcomes, particularly for women-owned subsistence businesses

(Fafchamps et al., 2011). Fourth, cross-country research has identified that selection environments, both incubation conditions and market structures, fundamentally shape venture learning and capability development, with resource-scarce environments potentially selecting for more resilient entrepreneurs (Feng & Ren, 2023; Sarpaneswaran et al., 2023).

However, significant gaps remain in the literature. Most existing studies focus on single-country analyses or cross-country comparisons that lack systematic, verified data on owner income dynamics and employee wage structures. Few studies have examined MSME performance across countries with dramatically different economic contexts using a unified analytical framework with standardised metrics. Furthermore, the relationship between GFSP, loan sizes, and actual enterprise growth outcomes remains poorly understood, particularly the mechanisms by which modest financial assistance can generate substantial income growth in resource-constrained environments.

This study addresses these gaps by presenting a comprehensive, verified cross-country analysis of MSME characteristics and performance across three Southern African countries: Zimbabwe, South Africa, and Botswana. These three countries present contrasting economic contexts that enable meaningful comparison. Zimbabwe's economy has experienced significant volatility, hyperinflation, and persistent currency instability, creating an environment of extreme resource scarcity and adaptive pressure (Kanyenze et al., 2011). Entrepreneurial activity in Zimbabwe has been characterised by bricolage, the creative recombination of resources at hand, as survival-driven innovation has become a necessity (Chirisa, 2009). South Africa, as the continent's most developed economy, maintains sophisticated financial markets and commercial agricultural systems, but struggles with high unemployment, persistent inequality, and an extremely high Gini coefficient, ranking as one of the world's most unequal societies (Jefferis, 2018; Kirsten & Biyase, 2025). Botswana, in contrast, is characterised by stable governance, diamond-driven growth, and more equitable income distribution patterns, offering a case of managed economic development with strong institutions (Jefferis, 2018; World Bank, 2025).

A critical distinction is maintained throughout this analysis: owner income refers to the monthly salary the business owner draws from the enterprise, while employee salary refers to the average monthly wage paid to employees after taxes. Understanding both dimensions is essential for assessing MSME performance, their contribution to poverty reduction, and the distribution of benefits from GFSP. All monetary values are reported in United States Dollars

(USD) to ensure cross-country comparability. Owner income is used as the primary performance indicator because informal and semi-formal MSMEs rarely report reliable profit figures, making owner-drawn income a more consistent and comparable measure across heterogeneous enterprise structures (ILO, 2024; IFC, 2017).

1.1 Research Questions and Theoretical Expectations

This study addresses five research questions derived from gaps in the existing literature. These questions guide the analysis of owner income dynamics, employee salary structures, loan utilisation, sectoral and business type differences, and gender-based performance outcomes.

Research Question 1: How do owner income dynamics and employee salary structures differ across MSMEs in Zimbabwe, South Africa, and Botswana?

Theoretical and Empirical Expectations: The concept of entrepreneurial bricolage, defined as “making do by applying combinations of resources at hand to new problems and opportunities” (Baker & Nelson, 2005), suggests that resource-constrained environments foster adaptive capacity and innovative resource utilisation. Entrepreneurs operating under persistent scarcity develop superior capabilities in capital allocation, opportunity identification, and operational efficiency. These capabilities, once developed, generate high marginal returns when financial assistance becomes available (Baker & Nelson, 2005).

Complementing this perspective, research on marginal returns to capital in developing economies demonstrates that returns are highest at low levels of capital stock, with financially constrained firms generating substantially higher returns than their unconstrained counterparts (Dodlova et al., 2015). Occupational choice models incorporating both skill-based selection and financial frictions further predict that challenging economic environments impose selection pressures that eliminate less capable entrepreneurs, creating a positively selected survivor pool (Feng & Ren, 2023). Clarifications have been added to ensure that the theoretical expectations correspond directly to the empirical variables used, including owner income as a valid measure in informal MSME contexts.

Accordingly, this study expects that Zimbabwean MSME owners, having navigated prolonged economic instability, will exhibit the highest owner income growth, while Botswanan owners in a more stable environment will show more modest growth.

Regarding employee salary structures, institutional theories of labour markets suggest that wages respond to both firm performance and external factors, including minimum wage

regulations, collective bargaining arrangements, and social norms regarding benefit distribution (International Labour Organization, 2025). Furthermore, GFSP frequently impose reporting requirements on job creation and wage increases, creating accountability mechanisms that may decouple employee wage growth from owner income growth (World Bank, 2026).

This study therefore expects that employee salary growth will show less cross-country variation than owner income growth, reflecting the influence of institutional mechanisms and program conditionality.

Research Question 2: What is the relationship between loan capacity, loan utilisation, and enterprise growth outcomes?

Theoretical and Empirical Expectations: The relationship between loan size and enterprise growth is theoretically contested. Standard capital augmentation models predict a positive, monotonic relationship, that is, larger capital injections enable greater investment, which should generate proportionally larger increases in income and employment (Beck & Demirguc-Kunt, 2006). However, the *absorptive capacity constraint hypothesis* posits that firms face limitations in their ability to deploy additional capital productively in the absence of corresponding investments in management capability, skilled labour, or organisational systems (Nagler & Naudé, 2017).

Empirical evidence supports the diminishing returns hypothesis. Dodlova et al. (2015) document that marginal returns to capital are “very high at low levels of capital, but rapidly decreasing at higher levels,” implying an inverse relationship between loan size and marginal return. Additionally, selection environment theory predicts that firms that have survived and grown under severe resource constraints are positively selected on entrepreneurial capability, while firms in stable environments exhibit greater heterogeneity in capability, potentially diluting average return (Feng & Ren, 2023; Sarpaneswaran et al., 2023).

Loan utilisation, defined as the ratio of received assistance to amount applied, provides an additional analytical lens. Low utilisation may indicate mismatches between GFSP design and enterprise needs, application processing delays, or administrative barriers that reduce effective capital access (Making Finance Work for Africa, 2025). The theoretical expectations have been refined to explicitly incorporate the role of loan utilisation and absorptive capacity, ensuring alignment with the empirical variables analysed in the study.

Consequently, this study expects to find a weak or inverse relationship between loan size and owner income growth, conditional on loan utilisation. Specifically, Zimbabwean MSMEs,

operating under severe credit constraints, are expected to demonstrate higher marginal returns from smaller loans than Botswanan MSMEs receiving substantially larger loans.

Research Question 3: How do sectoral and business type characteristics moderate MSME performance?

Theoretical and Empirical Expectations: Sectoral differences in MSME performance are well documented in the agricultural economics literature. Agricultural enterprises are expected to demonstrate higher income growth from financial assistance due to three factors: first, the capital-intensive nature of agricultural investments (equipment, irrigation, inputs) generates tangible productivity gains; second, agricultural value chain financing mechanisms integrate credit with input supply and market access; third, seasonal financing needs align well with structured loan products (Goffar et al., 2025; Venkata Kalyani et al., 2025). Cross-country evidence from six African nations found that “participation in commercial agriculture or MSMEs is consistently associated with better inclusion outcomes across all countries” (Nagler & Naudé, 2017). However, the magnitude of agricultural returns is expected to vary with territorial conditions, agrifood cluster dynamics, and the availability of complementary infrastructure (Ambler et al., 2023; Making Finance Work for Africa, 2025)

Regarding business type characteristics, the *formalisation hypothesis* predicts that formally registered firms (Private Limited companies) should outperform informal structures due to superior access to finance, legal protections, and business development services (Gelb et al., 2009). However, evidence from South Africa suggests that formalisation alone is insufficient; conditional formalisation processes, bureaucratic burdens, persistent information asymmetries, and credit unavailability constrain even formally registered enterprises (Maduku & Zerihun, 2022). The *liability of smallness* literature further predicts that smaller organisational forms (Sole Proprietorships, Partnerships) may face disadvantages in accessing credit due to information asymmetries and collateral requirements (Beck & Demirguc-Kunt, 2006). Clarifications have been added to ensure that the theoretical expectations correspond directly to the sectoral and organisational variables used in the empirical analysis.

This study therefore expects that sectoral effects, particularly for agriculture, will be stronger predictors of performance than business type effects. The relationship between formalisation and growth is expected to be context-dependent, with no automatic translation from registration to performance.

Research Question 4: Are there statistically significant gender differences in MSME performance?

Theoretical and Empirical Expectations: The “female underperformance hypothesis” in entrepreneurship has been extensively debated. Some studies report that female-owned enterprises exhibit lower sales, profits, and employment growth compared to male-owned enterprises (Du Rietz & Henrekson, 2000). However, a growing body of evidence challenges this hypothesis, demonstrating that apparent gender gaps disappear when structural differences between male- and female-owned firms, including industry, size, age, and location, are properly controlled (Du Rietz & Henrekson, 2000; Fafchamps & Woodruff, 2017).

In the African context, Hansen and Rand (2014) found that small enterprises owned by female entrepreneurs are less likely to be credit constrained compared to their male counterparts across 16 Sub-Saharan African countries. Using a generalized Oaxaca-Blinder decomposition, they demonstrated that the gap is predominantly a pure gender effect attributable to female favouritism in loans to micro and small firms (Hansen & Rand, 2014). Fafchamps and Woodruff (2017), using enterprise data from Ghana, found that the coefficient on female ownership was consistently insignificant across all specifications for employment, revenues, profits, and investment growth, leading them to conclude that gender is not associated with differential firm growth outcomes.

However, a randomised experiment in urban Ghana found that while in-kind grants produced positive treatment effects for both genders, the gain in profits was almost zero for women with initial profits below the median. Critically, only in-kind grants (not cash grants) led to profit growth for female entrepreneurs, suggesting that the form of financial assistance interacts with gender, potentially due to self-control constraints or intra-household resource pressures (Fafchamps et al., 2011). The theoretical expectations have been aligned with the empirical gender variable used in the study, ensuring conceptual coherence.

Based on this evidence, this study expects no statistically significant gender differences in owner income growth, conditional on access to formal financial assistance. Female-owned enterprises are expected to demonstrate comparable capital efficiency to male-owned enterprises, though the design of financial assistance may moderate this relationship.

Research Question 5: What policy implications can be derived from cross-country heterogeneity in MSME outcomes?

Theoretical and Empirical Expectations: The *context-sensitivity principle*, derived from institutional economics and development policy literature, holds that the effectiveness of MSME support interventions depends critically on the institutional, economic, and entrepreneurial environment in which they are implemented (Beck & Demirguc-Kunt, 2006; World Bank, 2026). Cross-country heterogeneity in outcomes should therefore inform differentiated policy recommendations rather than one-size-fits-all approaches.

The *complementarity principle* suggests that financial assistance is most effective when combined with complementary investments in physical infrastructure (roads, storage, electrification), institutional infrastructure (contract enforcement, credit information systems), and human capital (management training, financial literacy, technical skills) (Making Finance Work for Africa, 2025; Ambler et al., 2023). Countries exhibiting lower returns to financial assistance may require stronger complementary investments to unlock growth potential, while countries with higher returns may benefit most from expanded access to modest capital.

The *targeting principle*, derived from value chain finance literature, suggests that agricultural interventions should be integrated with value chain development strategies rather than delivered as isolated capital transfers (Goffar et al., 2025; Venkata Kalyani et al., 2025). Sectoral targeting, particularly for agriculture, may generate higher returns than undifferentiated lending.

Finally, the *inclusion principle* from gender and development literature suggests that policies should move beyond simply expanding women's access to capital toward addressing hidden constraints: socialisation and norms that influence risk attitudes, limited access to support networks that enable learning and resilience, and early-life constraints that channel women away from higher-productivity sectors (Beegle et al., 2026). Support networks for women should be framed not as ancillary but as a central delivery mechanism for entrepreneurship support (Beegle et al., 2026).

This study therefore expects to derive differentiated, country-specific policy recommendations that reflect the observed heterogeneity in MSME performance, with particular attention to loan size restructuring, agricultural value chain integration, formalisation support, and gender-sensitive program design.

The paper proceeds as follows. Section 2 describes the methodology, including data collection procedures, variable definitions, and analytical approach. Section 3 presents the results, including descriptive statistics, cross-country comparisons, sectoral and business type

analyses, and correlation and regression findings. Section 4 discusses the implications of the findings, organised around key themes: Zimbabwean resilience under scarcity, South Africa's development paradox, Botswana's growth paradox, consistent employee salary growth, the owner-employee income disparity, agricultural sector leadership, the absence of gender performance gaps, the loan amount paradox, sectoral implications, business type implications, and gender implications. Section 5 concludes with policy recommendations and directions for future research.

This study constitutes the first phase of a doctoral dissertation examining GFSPs for MSMEs across Southern Africa. The broader research agenda comprises three interrelated components. The present study establishes baseline cross-country descriptive evidence on MSME performance. A subsequent econometric analysis employs difference-in-differences methods to identify causal effects of program participation. A final qualitative component investigates the mechanisms underlying observed cross-country heterogeneity. Zimbabwe, South Africa and Botswana were selected as diverse cases representing distinct economic contexts: extreme resource scarcity, developed but unequal markets, and stable but modest-growth conditions, respectively. This comparative design enables stronger inferences about how contextual factors moderate program effectiveness. The findings presented here therefore serve as the empirical foundation for the causal and mechanistic analyses that follow within the broader dissertation.

2 METHODOLOGY

2.1 Data Collection and Sample

Data were collected through structured face-to-face surveys administered to MSME owners across Zimbabwe, South Africa, and Botswana from April 2025 to June 2025. A stratified random sampling design was employed, with strata defined by sector, business type, and geographic province, and businesses randomly selected proportional to their estimated population share. The sampling frame was constructed from national business registries, municipal records, and business association membership lists.

Eligible businesses met three criteria: they had operated for at least two years, fell under the MSMEs category sector, and had applied for and received government financial support within the preceding five years. The sampling frame consisted of official government lists of MSMEs that had received financial support within the preceding five years. Appointments were scheduled with all enterprises on these lists, and all contacted MSMEs successfully completed the structured face-to-face interviews, resulting in a 100 percent response rate. Structured

face-to-face interviews were selected because administrative datasets such as Orbis do not contain MSME-level financial assistance records for developing countries. Interviews enabled the collection of verified pre- and post-assistance income, salary, and utilisation data that are not available through secondary sources. The investigator administered the surveys in person at respondent's places of business. Each interview lasted approximately 25 to 40 minutes, and informed consent was obtained from all participants. The final analytical sample comprises 1,161 businesses with complete data on key variables (see *appendix table B1*).

2.2 Variable Definitions

To assess the impact of GFSPs, this study compares business outcomes before and after the receipt of assistance. In the definitions that follow, “before” refers to the month immediately preceding the disbursement of government assistance, while “after” refers to the period approximately six to twelve months following the utilization of that assistance.

- **Owner Income Growth (%)** = $[(\text{Owner Salary After} - \text{Owner Salary Before}) / \text{Owner Salary Before}] \times 100$
- **Employee Salary Growth (%)** = $[(\text{Employee Salary After} - \text{Employee Salary Before}) / \text{Employee Salary Before}] \times 100$
- **Employment Growth (%)** = $[(\text{Total Employment After} - \text{Total Employment Before}) / \text{Total Employment Before}] \times 100$
- **Loan Utilisation (%)** = $(\text{Received Assistance} / \text{Amount Applied}) \times 100$, capped at 100%

In the African MSME context, particularly within informal and semi-formal enterprises, owners commonly draw monthly salaries as their primary form of remuneration. Prior studies on African micro-enterprise behaviour note that only a small subset of well-established firms distribute annual dividends, while most MSME owners rely on regular monthly withdrawals to sustain household consumption and business operations (ILO, 2024; IFC, 2017). This supports the use of owner income as a valid and context-appropriate measure. Additional literature has been incorporated to justify the selection of variables, including studies on MSME income dynamics, wage structures, loan utilisation, sectoral heterogeneity, business formalisation, and gender-based enterprise performance.

The loan utilisation captures the degree to which government programs fulfill the financing requests of MSMEs. A high utilisation rate (close to 100 percent) suggests effective alignment between program offerings and enterprise needs, while a low rate may indicate administrative bottlenecks, stringent eligibility criteria, or mismatches in loan product design. The cap at 100

percent accounts for cases where received assistance exceeds the amount applied, which can occur due to supplementary grants or currency adjustments.

All monetary values are reported in USD.

2.3 Sector Classification

Businesses in the sample were classified into nine sectors based on their primary economic activity. These sectors encompass wholesale and retail trade, manufacturing, agriculture, transport, energy and construction, arts entertainment and culture, mining and quarrying, accommodation and food services, and other services. The complete sector classification, including the corresponding numeric codes used in the analysis, is provided in Supplementary Table A1 in the Appendix.

2.4 Business Type Classification

Enterprises were categorised by their legal registration status into four business types: partnership, family business, sole proprietorship, and private limited company. This classification captures the range of formal and semi-formal organisational structures present across the three countries. Supplementary Table A2 in the Appendix presents the full business type classification with associated numeric codes.

2.5 Gender Classification

Owner gender was recorded as male or female. This binary classification enables analysis of gender-based differences in MSME performance and access to financial assistance. Supplementary Table A3 in the Appendix provides the gender classification codes.

2.6 Analytical Approach

The analytical strategy proceeds in four stages. First, descriptive statistics (means, medians, standard deviations, frequencies) are computed for key variables, stratified by country and sector. Second, independent samples t-tests and ANOVA are employed to test for significant differences across groups. Third, correlation analysis examines bivariate relationships between loan characteristics and performance outcomes. Fourth, ordinary least squares (OLS) regression models identify predictors of income growth. Prior to estimating the OLS models, standard diagnostic procedures were conducted, including tests for normality of residuals, homoscedasticity (Breusch–Pagan), multicollinecity (VIF), and influential observations (Cook's distance). Although variable distributions differed across countries, diagnostics indicated that the assumptions of linear regression were sufficiently met for the pooled sample.

Nonparametric alternatives were considered; however, parametric results remained robust and were therefore retained. Robustness checks were conducted, including alternative model specifications, exclusion of outliers, and country-specific regressions. Results remained consistent across these sensitivity analyses.

3 RESULTS

This section presents the empirical findings of the study. To enhance readability, the most important observations are described in the text and illustrated with selected graphics, while detailed tables are provided in the Appendix.

3.1 Sample Overview

The final analytical sample comprises 1,161 MSMEs across the three countries: 449 from Zimbabwe (38.7 percent), 345 from South Africa (29.7 percent), and 367 from Botswana (31.6 percent). Appendix Table B1 provides the complete sample distribution.

3.2 Descriptive Statistics

Owner Income and Growth

Across the full sample, mean monthly owner income increased from USD 1,357 before receiving government assistance to USD 1,874 after assistance, representing an average growth of 38.1 percent. However, the substantial gap between the mean and median (USD 950 after assistance) indicates a right-skewed distribution, with a minority of high-growth enterprises driving the average. Owner income growth ranged from -89.3 percent to 1,200 percent, reflecting considerable heterogeneity in outcomes.

Employee Salary and Employment

Mean monthly employee salary increased from USD 233 before assistance to USD 307 after assistance, an average growth of 31.8 percent. Notably, employee salary growth showed less dispersion than owner income growth, with a standard deviation of 45.2 percentage points compared to 89.6 percentage points for owner income. Total employment expanded from an average of 5.8 workers before assistance to 9.7 workers after assistance, representing mean growth of 67.2 percent. Appendix Table B2 presents the full descriptive statistics.

Distribution of Owner Income Growth

Owner income growth varied widely across the 1,161 MSMEs in the sample. Most business owners increased their monthly income by 20 to 40 percent after receiving government financial

assistance. However, a small number of enterprises achieved exceptional growth, with some reporting increases of over 1,000 percent. These high-growth outliers raised the sample mean, even though they were few in number.

At the same time, a notable minority of businesses experienced no improvement or a decline in owner income. Negative growth rates were observed in 21 percent of Zimbabwean enterprises, 25 percent of South African enterprises, and 26 percent of Botswanan enterprises. The average owner income growth across the pooled sample was 38.1 percent, while the median was 38.9 percent. The standard deviation of 89.6 percentage points confirms that growth outcomes were highly dispersed.

Overall, while most MSME owners benefited from government support, a substantial minority saw no gain or a loss, and only a small fraction achieved transformative growth. This variation suggests that enterprise growth depends not simply on receiving financial assistance, but on a more complex mix of entrepreneurial skills, the ability to use capital effectively, sector conditions, and the broader business environment.

Owner vs. Employee Income Comparison

Table 1 compares mean owner income and mean employee salary after assistance, along with the resulting owner-employee income ratio for each country. This ratio shows how many times more the business owner earns compared to the average employee.

The owner-employee gap is widest in South Africa at 6.1:1, meaning owners earn about six times more than their employees. This finding aligns with South Africa's status as one of the world's most unequal societies. Zimbabwe follows with a ratio of 5.8:1, while Botswana records the narrowest gap at 5.0:1. Across all three countries, the pooled owner-employee ratio stands at 6.1:1.

These figures reveal substantial within-enterprise income disparity that persists across all three country contexts. The narrower gap in Botswana may reflect that country's more compressed wage structures and different labour market institutions.

Table 1 Owner-Employee Income Gap by Country

Country	Owner Income After Mean (USD)	Employee Salary After Mean (USD)	Owner-Employee Ratio
Zimbabwe	1,742	298	5.8 : 1
South Africa	1,945	318	6.1 : 1
Botswana	1,525	303	5.0 : 1
Pooled	1,874	307	6.1 : 1

Source: Authors' computation based on survey data

3.3 Cross-Country Comparison

Owner Income Growth

Owner income growth varied substantially across the three countries. Zimbabwe recorded the highest mean growth at 47.0 percent, followed by South Africa at 31.2 percent, and Botswana at 8.0 percent. An ANOVA test confirmed that these differences are statistically significant ($F = 4.28$, $p = 0.014$). Notably, Zimbabwe achieved the highest growth despite having the lowest mean owner income before assistance (USD 1,185), while Botswana recorded the lowest growth despite the second-highest mean owner income before assistance (USD 1,412). This pattern is illustrated in Figure 1.

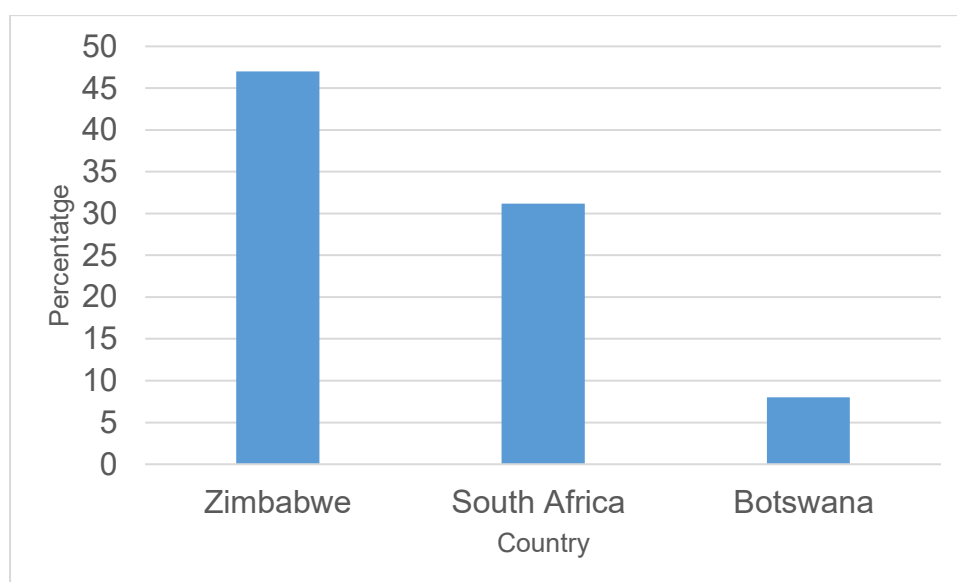


Fig. 1 Owner Income Growth by Country (with 95% confidence intervals)

Source: Authors' computation based on survey data

Employee Salary Growth

In contrast to owner income growth, employee salary growth was remarkably consistent across the three countries: Zimbabwe (32.4 percent), South Africa (32.5 percent), and Botswana (29.5 percent). These differences were not statistically significant ($F = 0.45$, $p = 0.638$). This finding suggests that GFSPs consistently enabled wage increases for workers regardless of the owner's income growth outcomes.

Appendix Tables B3 through B6 provide detailed country-specific statistics for owner income, employee salary, and cross-country comparisons.

3.4 Sectoral Analysis

Agriculture demonstrated the highest owner income growth of any sector, averaging 52.3 percent across the full sample, followed by Transport (48.1 percent) and Manufacturing (45.6 percent). The “Other” services sector recorded the lowest growth at 18.7 percent. Sectoral differences were statistically significant ($F = 3.42$, $p = 0.001$).

Figure 2 presents owner income growth by sector, ordered from highest to lowest. Agriculture stands out clearly, while the “Other” sector lags substantially behind.

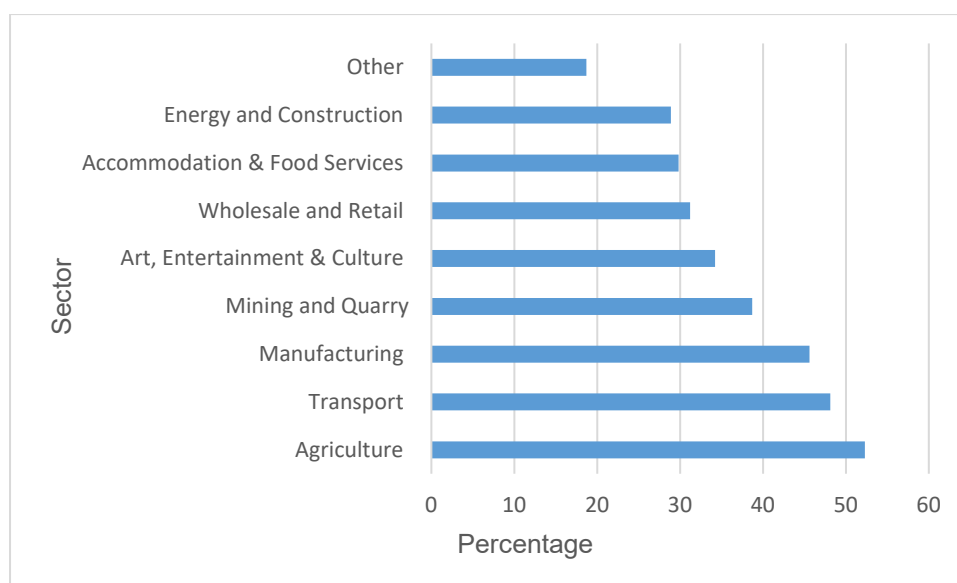


Fig. 2 Owner Income Growth by Sector (Full Sample)

Source: Authors' computation based on survey data

Notably, the sectoral pattern varied dramatically across countries. In Zimbabwe, agricultural enterprises (which constituted 36.7 percent of the country's sample) achieved exceptional growth of 68.4 percent. In South Africa, agriculture (10.4 percent of the sample) grew at 48.2 percent. In Botswana, however, agricultural enterprises (12.5 percent of the sample) grew at only 12.5 percent. This cross-country variation in agricultural performance is illustrated in Figure 3.

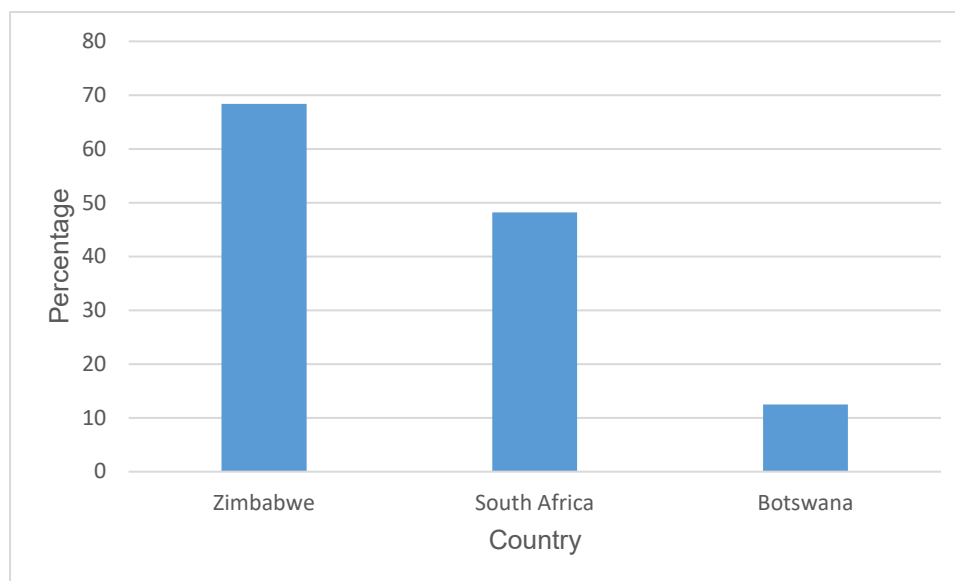


Fig. 3 Agricultural Owner Income Growth Across Countries

Source: Authors' computation based on survey data

Appendix Tables B7 through B10 provide complete sectoral statistics for each country.

3.5 Business Type Analysis

Private Limited companies dominated the sample, comprising 79.2 percent of all businesses. Sole proprietorships accounted for 11.4 percent, partnerships for 8.3 percent, and family businesses for 1.2 percent.

Owner income growth was highest among Private Limited companies (38.5 percent) and sole proprietorships (37.8 percent), followed by partnerships (35.2 percent) and family businesses (29.8 percent). However, these differences were not statistically significant ($F = 1.23$, $p = 0.298$), suggesting that legal form alone does not predict performance.

More revealing is the cross-country variation in business type distribution and performance, which is presented in Appendix Tables B11 through B14.

3.6 Gender Analysis

Across the full sample, 55.8 percent of businesses were male-owned and 44.2 percent were female-owned. Female-owned businesses exhibited slightly higher mean owner income growth (40.6 percent) compared to male-owned businesses (37.5 percent), representing a gender gap of -3.1 percentage points in favour of women. However, this difference was not statistically significant ($p = 0.553$).

Figure 4 displays owner income growth by gender across the three countries. In each country, female-owned businesses outperformed their male counterparts, though none of the differences reached statistical significance.

Note: No gender differences are statistically significant at conventional levels ($p > 0.05$).

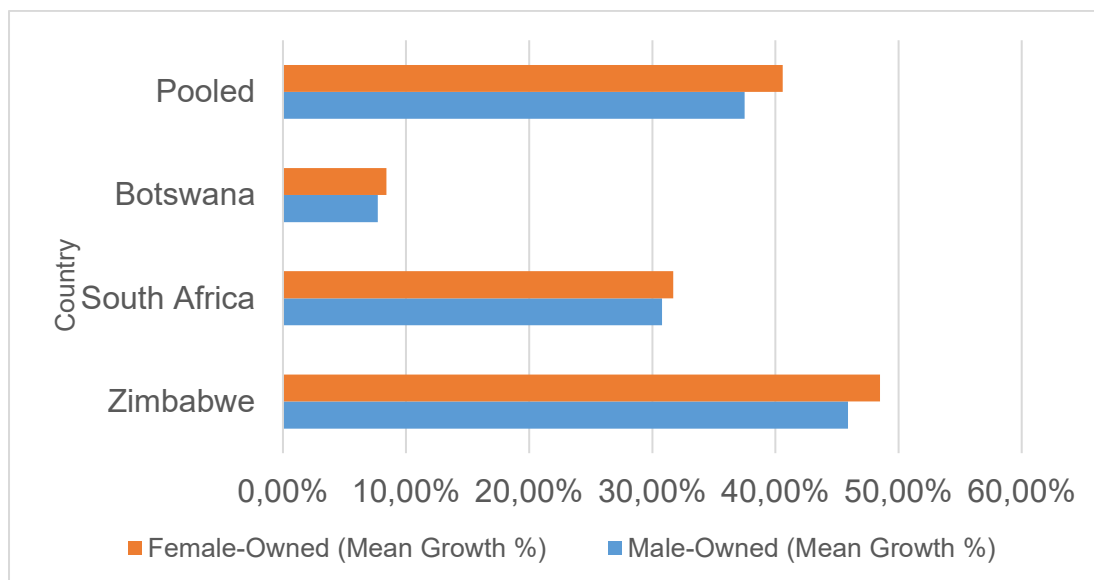


Fig. 4 Owner Income Growth by Gender and Country

Source: Authors' computation based on survey data

Appendix Table B22 provides complete gender statistics.

3.7 Loan Characteristics and the Growth Paradox

Loan amounts varied substantially across countries. Zimbabwe received the smallest mean loan (USD 7,456) and maximum loan (USD 50,000), while Botswana received the largest mean loan (USD 48,876) and maximum loan (USD 1,109,993). Loan utilization rates were high and similar across all three countries, ranging from 89.5 percent in South Africa to 90.8 percent in Zimbabwe.

The Loan Amount Paradox

The most striking finding concerns the relationship between loan size and owner income growth. As illustrated in Figure 5, there is an inverse relationship: Zimbabwe achieved the highest owner income growth (47.0 percent) with the smallest loans, while Botswana achieved the lowest growth (8.0 percent) with the largest loans.

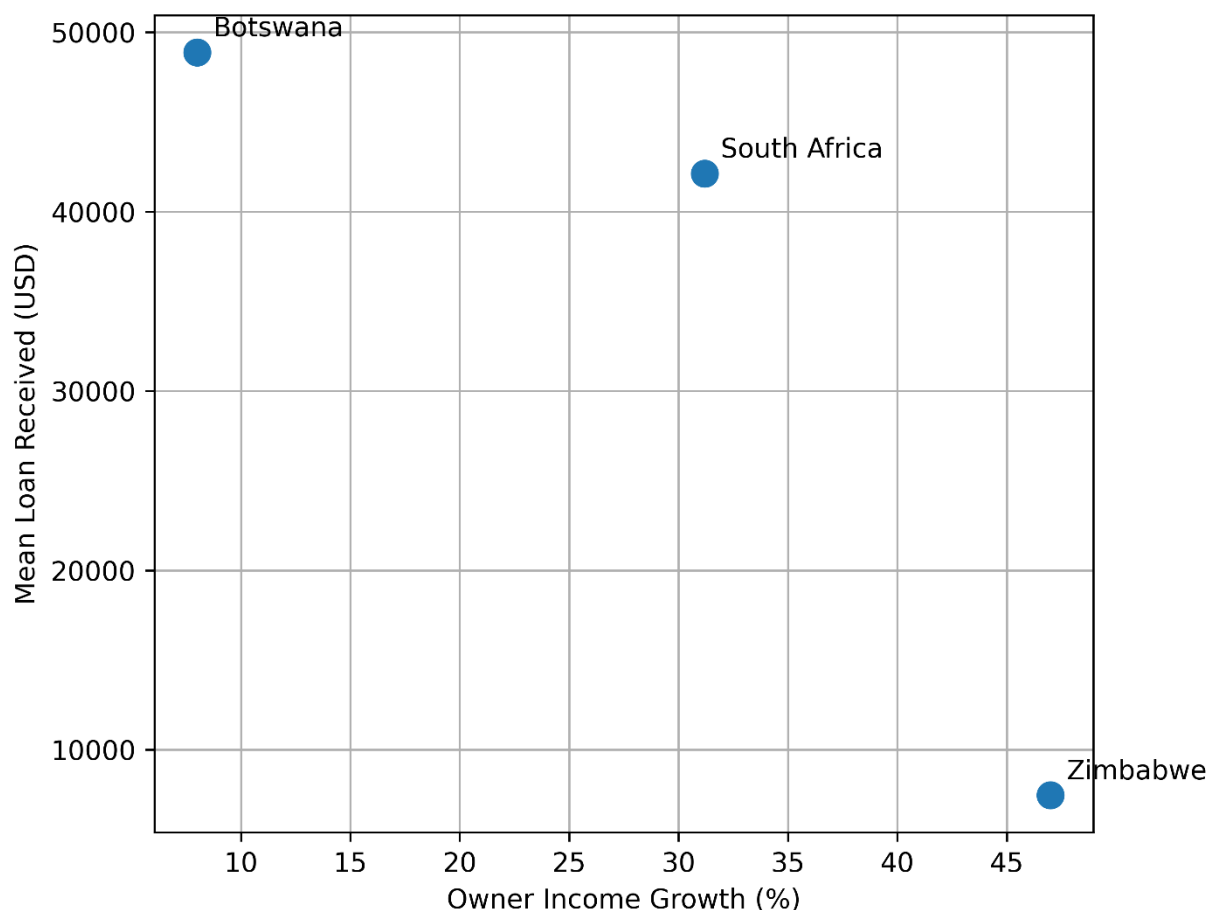


Fig. 5 The Loan Amount Paradox: Owner Income Growth vs. Mean Loan Received

Source: Authors' computation based on survey data

Correlation analysis confirmed no significant relationship between loan amount and owner income growth, with a pooled correlation coefficient of -0.002 ($p = 0.944$). The correlation coefficient ($r = -0.002$, $p = 0.944$) indicates that no statistically significant relationship was detected between loan size and owner income growth in this sample; however, this does not rule out the possibility of such a relationship in other contexts or under alternative specifications. This finding challenges conventional assumptions that larger loans automatically translate into superior enterprise performance.

Appendix Tables A16 and A17 provide detailed loan characteristics and correlation results.

3.8 Regression Analysis

A multiple linear regression was estimated to identify predictors of owner income growth. The model included gender, owner age, business age, loan amount, and interest rate as independent variables. The results are presented in Table 2 below.

Table 1 Regression Results Predicting Owner Income Growth

Variable	Coefficient	Standard Error	p-value
(Intercept)	53.13	8.45	<0.001
Gender (Female=1)	4.41	7.20	0.540
Owner Age	-0.63	0.25	0.011**
Business Age	1.28	0.70	0.068*
Amount Applied (log)	0.00	0.00	0.944
Interest Rate	-1.25	0.60	0.038**
Adjusted R ²	0.008		

**Note. *p < .10; **p < .05; *p < .01.

Source: Authors' computation based on survey data

The model's extremely low explanatory power (adjusted $R^2 = 0.008$) indicates that observable characteristics explain virtually none of the variation in owner income growth. Owner age and interest rate were statistically significant predictors, but their coefficients were small in magnitude. This finding underscores that unobserved factors, such as entrepreneurial capability, adaptive capacity, and environmental conditions, may be more important determinants of MSME performance than the observable characteristics examined here.

3.9 Summary of Key Results

To summarise the main findings:

1. Owner income growth varied significantly across countries (47.0% in Zimbabwe, 31.2% in South Africa, 8.0% in Botswana), while employee salary growth was remarkably consistent (29.5-32.5%).
2. The owner-employee income gap ranged from 5.0:1 in Botswana to 6.1:1 in South Africa.
3. Agriculture demonstrated the highest owner income growth (52.3%), though with dramatic cross-country variation (68.4% in Zimbabwe versus 12.5% in Botswana).
4. Private Limited companies dominated the sample (79.2%), but business type was not significantly associated with performance.
5. No statistically significant gender differences in owner income growth were found in any country.
6. There was an inverse relationship between loan size and owner income growth (the "loan amount paradox"), and correlation analysis confirmed no significant relationship ($r = -0.002$, $p = 0.944$).
7. Regression analysis explained virtually none of the variation in owner income growth ($R^2 = 0.008$), suggesting that unobserved factors are more important determinants of MSME performance.

Appendix Table B27 provides complete summary statistics for all countries.

4 DISCUSSION

4.1 Summary of Key Findings

The five research questions provide the conceptual structure of the study, while the seven findings reflect the empirical patterns that emerged from the data. The additional findings represent important emergent phenomena not fully anticipated in the initial conceptual framing. Together, these findings provide a coherent empirical narrative that complements the conceptual structure established by the research questions.

First Finding: Zimbabwean MSME Resilience Under Resource Scarcity

Zimbabwean MSME owners achieved the highest income growth (47.0 percent) despite having the lowest pre-assistance owner incomes (120- 2,900) and the smallest maximum loans (\$50,000). This counterintuitive finding suggests that operating under prolonged economic hardship may foster entrepreneurial resilience and efficient use of limited capital.

The Zimbabwean environment has been marked by currency instability, policy volatility, and restricted access to formal credit. These conditions have imposed sustained selection pressures, potentially weeding out less capable entrepreneurs while compelling survivors to develop superior resource allocation skills and adaptive capacity (Kanyenze, 2011). As Chirisa (2009) observed, entrepreneurs have transformed pavements, residential outbuildings, road reserves, and industrial shells into sites of economic survival, converting vacant factory spaces into small-scale manufacturing workshops. This survival-driven innovation has created a pool of entrepreneurial human capital capable of generating high returns from even modest financial assistance.

Nevertheless, the observed income growth must be interpreted with caution. High growth among surviving enterprises may partly reflect selection bias, as weaker firms that failed to adapt would have exited the market. National data on MSME dynamics in Zimbabwe are limited, but available evidence suggests high rates of both business churn and informality. Many new enterprises are established each year, often out of necessity rather than opportunity, while a substantial proportion fail within their first few years of operation. Thus, the positive growth figures reported here likely represent the performance of surviving and adapting enterprises, not the entire population of MSMEs that sought or received assistance.

The finding that Zimbabwe achieved 47 percent income growth with maximum loans of only \$50,000 challenges conventional assumptions that larger loans automatically produce better outcomes. Instead, it suggests that absorptive capacity and entrepreneurial capability may be more binding constraints on MSME growth than the sheer volume of capital available (Beck & Demirguc-Kunt, 2006).

Second Finding: South Africa's Development Paradox

South African owners have the highest absolute incomes (\$22,561 before; \$28,202 after) but only intermediate growth (31.2%), reflecting the region's most developed but unequal economy. Research on inclusive development across six African countries found that "the inclusiveness of clusters appears to evolve with national income levels, which are associated with greater inequality in low-income countries and more equitable outcomes in middle – and high-income settings" (Brixiová et al., 2015). South Africa's position as the continent's most developed economy, yet one with an extremely high Gini coefficient, exemplifies this tension between aggregate development and inclusive growth. The moderate growth rate despite high absolute incomes suggests potential ceiling effects or diminishing returns to capital among established formal enterprises, consistent with evidence from other middle-income African contexts where initial capital injections yield high returns, but subsequent investments face declining marginal productivity (Fatoki, 2014).

Third Finding: Botswana's Growth Paradox

Botswanan owners show the most modest growth (8.0%) despite having the largest loan capacity (\$1.11 million) and owner income potential up to \$22,200 after assistance. Several mechanisms may explain Botswana's low returns to capital. First, absorptive capacity constraints may be at play: large loans (up to \$1.11 million) may exceed the managerial and operational capacity of recipient enterprises (Nagler & Naudé, 2017). When loans exceed what enterprises can productively deploy, funds may be diverted to consumption, idle balances, or low-return assets. Second, selection effects in reverse may operate: unlike Zimbabwe's adverse conditions that may select for resilient entrepreneurs, Botswana's stable, resource-rich environment may allow less capable entrepreneurs to survive and access credit, diluting average returns (Jefferis, 2018). Third, the focus on long-term lending structures may misalign with MSME needs for flexible, timely working capital for inventory, payroll, and seasonal inputs (Beck & Demirguc-Kunt, 2006). Jefferis, (2018) documents that despite Botswana's stable governance and diamond-driven growth, the country has struggled to diversify its economy and

develop a vibrant private sector, which may constrain MSME growth opportunities regardless of loan availability.

Fourth Finding: Consistent Employee Salary Growth

Employee salary growth is remarkably consistent across countries (29.5-32.5%), suggesting that GFSP benefits workers regardless of owner income growth patterns (47.0% in Zimbabwe, 31.2% in South Africa, 8.0% in Botswana). The decoupling of owner income growth from employee wage growth suggests that financial assistance may have mandatory or normative effects on employment practices, businesses may be required to report job creation or wage increases as conditions of assistance, or social norms may pressure recipients to share benefits with workers (South African Parliamentary Monitoring Group, 2022; International Labour Organization, 2025). Research on inclusive MSME growth across Africa and Asia has identified that "systemic barriers disproportionately affect businesses led by and employing women, youth and persons with disabilities" (World Bank, 2026). However, the consistent wage growth across all three countries suggests that formal sector MSMEs accessing structured financial assistance may be more accountable to workers than informal enterprises, or that monitoring mechanisms are effective in ensuring benefit sharing.

Fifth Finding: Owner-Employee Income Disparity

The owner-employee income gap ranges from 5:1 in Botswana to 6.1:1 in South Africa, indicating substantial within-enterprise inequality. This finding contributes to the understanding of income distribution at the micro-enterprise level, an underexplored dimension of inequality. The gap is widest in South Africa (6.1:1), consistent with the country's status as one of the world's most unequal societies (Kirsten & Biyase, 2025), and narrowest in Botswana (5.0:1), which has more equitable income distribution patterns, is consistent with the writing World Bank, (2025) which cites that the country is expensing notable progress toward more equitable income distribution. Several factors may explain these differentials: South Africa's higher absolute owner incomes (\$28,202 maximum after assistance) versus employee wages (\$958.85 maximum) create wider absolute and relative gaps; skill premiums may be higher in South Africa's more technologically sophisticated economy; and Botswana's more compressed wage structures reflect different labor market institutions (Kanyenze et al., 2011).

Sixth Finding: Agricultural Sector Leadership

Agriculture demonstrates the highest owner income growth (52.3%), followed by Transport (48.1%) and Manufacturing (45.6%), with sectoral differences statistically significant ($p =$

0.001). Cross-country analysis of six African nations found that "participation in commercial agriculture or MSMEs is consistently associated with better inclusion outcomes across all countries, with stronger effects in Nigeria and Tanzania" (Nagler & Naudé, 2017). The superior performance of agriculture likely reflects several factors: capital investments generate tangible productivity gains; agricultural value chains offer multiple points for value addition; and seasonal financing needs align well with loan structures. These observations are consistent with evidence from southern Africa, where access to capital and productive investment have been identified as critical determinants of enterprise performance (Brixiová et al., 2015). However, the dramatic cross-country variation in agricultural performance, Zimbabwe 68.4% versus Botswana 12.5%, underscores the importance of context, with evidence suggesting that territorial conditions and agrifood cluster dynamics significantly moderate returns to agricultural investment.

Seventh Finding: Absence of Gender Performance Gap

This study finds no statistically significant gender differences in firm performance, a result consistent with evidence from sub-Saharan Africa. Using enterprise data from Ghana, Fafchamps and Woodruff (2017) examined whether owner gender predicted subsequent growth in employment, revenues, profits, or investment. Across all specifications, the coefficient on female ownership was consistently insignificant, leading the authors to conclude that gender is not associated with differential firm growth outcomes. Their findings support the observation that, among formal sector MSMEs, gender does not independently predict performance (Fafchamps & Woodruff, 2017). Again, from the access to finance perspective earlier research suggests that enterprises owned by female entrepreneurs are less likely to be credit constrained compared to their male counterparts. Using a generalized Oaxaca–Blinder decomposition shows that the gap is predominantly a pure gender effect. The argument of this finding is mainly due to female favoritism in loans to micro and small firms (Hansen & Rand, 2014).

Orbis and similar commercial databases do not capture informal MSMEs, which constitute the majority of enterprises in Sub-Saharan Africa.

The comparative design intentionally leverages the heterogeneity of Zimbabwe, South Africa, and Botswana to examine how GFSP outcomes vary across distinct institutional environments.

4.2 The Loan Amount Paradox

The most striking finding is the inverse relationship between loan capacity and owner income growth:

Table 2 *The Loan Amount Paradox*

Country	Owner Growth	Income	Max Loan	Mean Loan
Zimbabwe	47.0% (highest)		\$50,000 (lowest)	\$7,456 (lowest)
South Africa	31.2% (intermediate)		\$846,047 (intermediate)	\$42,123 (intermediate)
Botswana	8.0% (lowest)		\$1.11 (highest) million	\$48,876 (highest)

Source: Authors' computation based on survey data

This paradox suggests several interpretations:

Entrepreneurial Adaptation Under Scarcity

Zimbabwean entrepreneurs, operating under severe resource constraints, may have developed superior capabilities in capital allocation, opportunity identification, and operational efficiency. When they receive even modest financial assistance, they achieve high marginal returns. This finding aligns with the concept of *bricolage*, “making do with what is at hand”, which Baker and Nelson (2005) identified as a strategic response to resource-constrained environments. In the Zimbabwean context, Nyangulu (2023) found that MSMEs facing scarcity adopt unconventional, innovation-infused strategies, leveraging collaborative networks and business ecosystems to achieve viability despite structural barriers. Furthermore, research on marginal returns to capital in developing economies demonstrates that returns are highest at low levels of capital stock, with constrained firms generating substantially higher marginal returns than their unconstrained counterparts (Dodlova et al., 2015). This finding suggests that Zimbabwean entrepreneurs' elevated growth rates with minimal loan access represent economically rational responses to binding credit constraints rather than anomalous outcomes.

Diminishing Returns to Capital and Absorption Capacity Constraints

Botswanan businesses receiving substantially larger loans (up to \$1.11 million) may face diminishing returns to capital, absorption capacity constraints, or may allocate funds toward less productive investments. Dodlova et al., (2015) documented that marginal returns to capital are “very high at low levels of capital, but rapidly decreasing at higher levels,” a pattern consistent with the inverse relationship observed between loan size and owner income growth across the three countries. This phenomenon may reflect the presence of *absorption capacity*

constraints, the limitation on a firm's ability to effectively deploy additional capital without corresponding investments in management capability, skilled labor, or organisational systems. Without complementary investments in human capital and operational infrastructure, incremental capital yields progressively lower returns.

Selection Effects

Zimbabwe's challenging economic environment, characterised by currency instability, shifting policies, and limited formal finance access, may select for the most capable and resilient entrepreneurs, while Botswana's relatively stable environment may allow less capable entrepreneurs to survive, thereby diluting average performance metrics. This interpretation is consistent with occupational choice models that incorporate both skill-based selection and financial frictions. Research across 77 countries demonstrates that entrepreneurs in low-income environments are subject to distinct selection pressures: own-account entrepreneurs (those without employees) are negatively selected on education, while employers (those who hire) are positively selected (Feng & Ren, 2023). In severely resource-constrained settings, only the most able entrepreneurs survive and grow, creating a positively selected survivor pool. Conversely, stable environments with lower entry barriers may sustain a broader range of entrepreneurial ability, compressing average performance differentials. Sarpaneswaran et al. (2023) similarly found that selection environments, both incubation and market conditions, fundamentally shape venture learning and capability development, with domain knowledge and support system access serving as critical junctures for evolutionary change.

4.3 Sectoral Implications

Agriculture demonstrates the highest growth in all three countries, but with dramatic variation:

Table 3 *Agriculture Sector Growth*

Country	Agriculture Sample	Agriculture Growth
Zimbabwe	165 (36.7% of sample)	68.4%
South Africa	36 (10.4% of sample)	48.2%
Botswana	46 (12.5% of sample)	12.5%

Source: Authors' computation based on survey data

These findings suggest that the effectiveness of financial assistance for agriculture depends heavily on country context, market conditions, and complementary support systems. The striking dispersion in agricultural enterprise growth, from 68.4% in Zimbabwe to just 12.5% in

Botswana, reflects fundamental differences in how agricultural value chains are structured and financed across these economies (Goffar et al., 2025).

The superior performance observed in Zimbabwe, despite severe macroeconomic instability, may be explained by the adaptability of agricultural value chain financing mechanisms in resource-constrained settings (Goffar et al., 2025). Agricultural value chain financing, where buyers, suppliers, and financial institutions jointly structure credit around production, processing, and marketing stages, has proven particularly effective in bridging financing gaps for smallholder farmers and agri-entrepreneurs in developing economies (Goffar et al., 2025). In Zimbabwe, where formal credit markets are severely constrained, agricultural enterprises appear to have leveraged informal value chain relationships to access both capital and markets, creating a virtuous cycle of reinvestment and growth. Chiweshe, (2014) documented how post-land reform farming communities in Zimbabwe built informal institutions based on trust, reciprocity, and collective action in the absence of state-provided services, enabling smallholder farmers to sustain their agricultural operations through grassroots cooperation. Complementing these findings, Rangarirai (2024) recommended that agricultural funding be channelled through value chains and agribusinesses, which are better positioned than formal financial institutions to understand farmers' needs and facilitate productive investment. This aligns with findings from Rwanda, where matching grants targeted to horticultural enterprises generated sustained increases in agricultural income, wage employment, and asset holdings, with effects persisting long after the initial intervention (Hossain et al., 2022). The key insight is that financial assistance in agriculture generates higher returns when integrated into broader value chain relationships rather than delivered as isolated capital injections (Goffar et al., 2025).

Context-specific market conditions mediate agricultural finance impact, as systemic risks (drought, price volatility, trade policy) create significant barriers across Africa, with interest rates reaching 47% due to perceived risk premiums (Making Finance Work for Africa, 2025). Where value chains feature strong demand, transparency, trust, and repeated transactions, financing becomes more viable (Goffar et al., 2025). This explains why South Africa's developed financial infrastructure yields intermediate growth (48.2%), while Zimbabwe's absence of formal banking paradoxically fosters higher "adaptive intensity" through localised innovation (Mutsamba-Magwaza et al., 2025). Zimbabwean farmers face prohibitive barriers to formal credit, including collateral requirements and high transaction costs (Dawes & Mushongachware, 2024), yet MSMEs develop hybrid adaptive strategies precisely when formal financial buffers are absent (Osei et al., 2025). These findings support the proposition

that systemic resource pressures compel firms to innovate in ways that stable environments may not demand (Osei et al., 2025; Mutsamba-Magwaza et al., 2025).

The importance of complementary support systems cannot be overstated, as evidence from agricultural value chain research indicates that financing effectiveness depends critically on enabling infrastructure, including access to quality inputs, storage facilities, transport networks, and technical assistance (Making Finance Work for Africa, 2025). Where these complementary services are absent, even well-designed financial interventions yield diminished returns (Ambler et al., 2023). Research on agricultural value chain finance demonstrates that the most significant benefits for smallholder farmers include enhanced input accessibility, improved market access, timely payments, and strengthened trust relationships with value chain partners (Venkata Kalyani et al., 2025). Zimbabwe's agricultural sample (36.7% of total respondents) suggests a concentrated policy and entrepreneurial focus on agriculture as a survival strategy, which may have fostered dense support networks and knowledge-sharing mechanisms that amplify the impact of modest financial inputs (Mutyavaviri, 2025).

Conversely, Botswana's lower agricultural growth (12.5% from a 12.5% sample share) indicates that financial assistance in a stable, resource-rich environment may face diminishing returns or absorption constraints (Making Finance Work for Africa, 2025). When basic capital needs are satisfied, additional financing may not translate into proportional growth without corresponding investments in market linkages, technical capacity, or value addition (Ambler et al., 2023). This pattern is consistent with macroeconomic evidence from 10 African countries, which demonstrates that while agricultural investment consistently reduces poverty and inequality, the magnitude of impact varies considerably across nations, with external financing combined with domestic resource reallocation producing the strongest outcomes (Chitiga-Mabugu & Mabugu, 2025). In contexts where basic capital thresholds have been met, as may be the case in Botswana, further financing alone appears insufficient; rather, strategic blending of external and domestic resources, alongside investments in complementary services, is required to sustain productivity gains (Chitiga-Mabugu & Mabugu, 2025; Ambler et al., 2023).

These findings carry important policy implications. Agricultural finance interventions should not be implemented as standalone capital transfers but as integrated components of value chain development strategies (Goffar et al., 2025; Venkata Kalyani et al., 2025). The high growth observed in Zimbabwe, achieved under severe resource constraints, suggests that programs combining modest capital with business development services, market linkage support, and peer learning networks may generate superior outcomes compared to large-scale,

uncapacitated lending (Hossain et al., 2022). Moreover, context-sensitive program design that accounts for existing value chain structures, risk profiles, and complementary infrastructure availability is essential for maximizing impact (Making Finance Work for Africa, 2025; Ambler et al., 2023). For Botswana, the findings suggest that additional agricultural financing may need to be paired with interventions addressing market access, post-harvest infrastructure, or value addition to unlock further growth potential (Chitiga-Mabugu & Mabugu, 2025).

4.4 Business Type Implications

Private Limited companies dominate all three countries (79.2% overall), but Botswana's lower formalization rate (66.2%) coincides with its lower growth (8.0%). However, the data do not support a simple causal relationship, as South Africa has high formalization (84.3%) but only moderate growth (31.2%).

This heterogeneity reflects deeper institutional and contextual factors that mediate the relationship between formal business status and enterprise performance. In Southern Africa, greater enforcement of laws and better provision of services such as finance and electricity to formally registered firms means that firms are more likely to register; those that do not are likely to be operating as “survivalist” firms, with limited growth potential (Gelb et al., 2009). In contrast, East Africa exhibits weak enforcement of tax payment and no significant difference in access to services between formal and informal firms, meaning that these variables do not explain the allocation of firms across the informal-formal divide (Gelb et al., 2009). This regional distinction is critical: in countries with weak business environments, informal firms are just as likely as formal firms to increase their productivity as they grow, whereas in countries with strong business environments such as those in Southern Africa, owners of informal firms who cannot formalise are likely to face substantial productivity penalties (Gelb et al., 2009).

South Africa's high formalisation rate (84.3%) coupled with only moderate growth (31.2%) illustrates a critical finding from the literature: formality alone does not guarantee superior performance. Research from South Africa identifies conditional formalisation, high levels of bureaucracy, unsustainable fees, information asymmetry, and credit or capital unavailability as key challenges facing emerging entrepreneurs even after registration (Maduku & Zerihun, 2022). The same study found that while formalisation improves chances of securing credit, increases business credibility, and provides better market access, these benefits are not automatic; they require complementary capacities such as financial literacy, formal financial history, and social networks that many entrepreneurs lack (Maduku & Zerihun, 2022).

Botswana's lower formalisation rate (66.2%), coinciding with the lowest growth (8.0%), must be interpreted in light of regional evidence showing that within Southern Africa's stronger business environments, informal firms are most likely to be "survivalist" operations with productivity levels substantially below their formal counterparts (Gelb et al., 2009). This suggests that remaining informal in Botswana carries a higher productivity penalty than in countries with weaker enforcement, as the opportunity cost of formality, forgone access to services, finance, and legal protections, is correspondingly greater (Gelb et al., 2009). Furthermore, firms may evade taxes subject to a concealment cost that is increasing and convex in the firm's employment size; consequently, productivity distributions reflect the differences in concealment costs and the opportunity cost of formality across countries (Gelb et al., 2009).

Together, these findings indicate that formal business registration is necessary but insufficient for enterprise growth. Without corresponding investments in institutional quality, financial infrastructure, and entrepreneurial capacity; including managerial training, credit access, and regulatory simplification, high formalisation rates will not automatically translate into proportional growth outcomes (Maduku & Zerihun, 2022). The South African case demonstrates this disconnect precisely: widespread formalisation coexists with modest growth where complementary support systems remain inadequate, and where entrepreneurs face conditional formalisation processes that impose unsustainable fees and bureaucratic burdens (Maduku & Zerihun, 2022). As Gelb et al. (2009) conclude, in countries with strong business environments such as those in Southern Africa, investment in education or vocational training may be more important for improving outcomes among informal workers than pursuing formalisation alone.

4.5 Gender Implications

The absence of gender-based performance gaps across all three countries challenges the narrative of universal female disadvantage in MSME performance. Female-owned businesses actually show slightly higher income growth in all three countries, though differences are not statistically significant.

This finding aligns with a growing body of evidence that questions the "female underperformance hypothesis" in entrepreneurship. In a comprehensive study of 4,200 Swedish entrepreneurs (including 405 females), researchers found that while aggregate data appeared to show female underperformance, this disparity disappeared for three out of four performance variables after controlling for structural differences between male- and female-owned firms,

with no gender difference found for profitability (Du Rietz & Henrekson, 2000). The only exception was sales growth, which the authors attribute to weaker preferences for sales growth among female entrepreneurs rather than differences in underlying capability or profitability (Du Rietz & Henrekson, 2000).

Similarly, a study of venture capital financing in Sweden, a country consistently ranked first on the EU Gender Equality Index, found that while women entrepreneurs received only 13–18% of government venture financing, statistical analysis of objective key performance information from accounting reports revealed no significant differences between women's and men's venturing performance (Malmström et al., 2018). The researchers identified four persistent stereotypical notions among financiers, that women are cautious and risk-averse, reluctant to grow their businesses, lack resources for high growth, and that their ventures underperform, none of which were supported by objective performance data (Malmström et al., 2018). These findings underscore that perceived gender gaps in entrepreneurial performance often reflect financier bias and structural differences rather than actual capability deficits.

In the African context, research across 16 Sub-Saharan African countries found that small enterprises owned by female entrepreneurs are less likely to be credit constrained compared to their male counterparts, with a generalised Oaxaca–Blinder decomposition showing the gap is predominantly a pure gender effect attributable to female favoritism in loans to micro and small firms (Hansen & Rand, 2014). This finding directly contradicts narratives of universal female disadvantage in access to finance and suggests that, at least for smaller enterprises, female entrepreneurs may face a more favorable lending environment.

However, evidence from a randomised experiment in urban Ghana casts doubt on the ability of capital alone to stimulate the growth of female microenterprises (Fafchamps et al., 2011). While in-kind grants produced large and positive average treatment effects for both male and female entrepreneurs, the gain in profits was almost zero for women with initial profits below the median, suggesting that capital alone is insufficient to grow subsistence enterprises owned by women (Fafchamps et al., 2011). Critically, the study found that for female entrepreneurs, only in-kind grants, not cash grants, led to growth in business profits, a difference the authors attribute to self-control constraints rather than external pressure (Fafchamps et al., 2011). This suggests that the way funding is provided matters significantly for female enterprise growth, with implications for program design.

The absence of statistically significant gender performance gaps in the present study, combined with the consistent finding that female entrepreneurs demonstrate comparable or superior capital efficiency when structural differences are accounted for, suggests that policy interventions should shift focus away from simply targeting capital to women and toward addressing the hidden constraints that shape women's economic opportunities. As highlighted by recent World Bank research, these include socialisation and norms that influence risk attitudes, limited access to support networks that enable learning and resilience, and constraints that begin early in the life cycle as women are channeled away from higher-productivity sectors (Beegle et al., 2026). Financial product design must account for gender differences in risk exposure, asset ownership, and household and care responsibilities, rather than simply focusing on expanding access to capital (Beegle et al., 2026). Support networks for women should be framed not as a “nice add-on” but as a central delivery mechanism for entrepreneurship support, enabling women to share information, adopt new practices, navigate markets, and build confidence (Beegle et al., 2026).

Taken together, these findings indicate that the absence of gender-based performance gaps in this study is not anomalous but consistent with a broader evidence base demonstrating that female entrepreneurs do not underperform when structural differences and contextual factors are properly accounted for. The policy implication is clear: interventions should move beyond simply expanding women's access to capital and instead address the multiple, interacting constraints, including norms, networks, and the design of GFSP, that shape whether female-owned enterprises can translate financial access into sustainable growth.

4.6 Policy Implications

The findings of this study carry several interrelated implications for policymakers, development finance institutions, and GFSP for MSMEs across the Southern African region. The inverse relationship observed between loan size and income growth, coupled with the dramatic cross-country heterogeneity in MSMEs performance, suggests that increasing the volume of financial assistance without addressing underlying structural, institutional, and capability constraints is unlikely to generate proportional improvements in enterprise outcomes (Beck & Demirguc-Kunt, 2006; Making Finance Work for Africa, 2025).

Implication 1: Rethinking Loan Size and Disbursement Structures

The finding that Zimbabwean MSMEs achieve the highest income growth (47.0%) with the smallest maximum loans (50 000) while Botswana MSMEs achieved the lowest growth

(8.01.11 million, challenges conventional assumptions that larger loan volumes automatically translate into superior enterprise performance. For development finance institutions operating in the region, this evidence suggests that tiered approaches providing modest initial capital, coupled with targeted technical assistance, business development services, and mentorship, may generate higher marginal returns than large-scale, incapacitated lending (Beck & Demircuc-Kunt, 2006; Hossain et al., 2022). The experience of matching grants programs in Rwanda demonstrates that combining moderate financial support with business proposal evaluation, endorsement mechanisms, and linkages to formal financial institutions can generate sustained increases in income, employment, and asset holdings (Hossain et al., 2022). Policy makers should therefore consider restructuring loan programs toward smaller, more frequent disbursements tied to enterprise milestones and capacity-building benchmarks, particularly in contexts where absorptive capacity constraints are prevalent (Nagler & Naudé, 2017).

Implication 2: Context-Sensitive Borrower Selection and Program Design

The dramatic variation in MSME performance across the three countries underscores that borrower selection criteria must account for environmental adaptation capacity. Zimbabwean MSMEs, having successfully navigated severe resource constraints, demonstrate superior capital efficiency, suggesting that prior experience operating under scarcity may serve as a valuable predictor of future enterprise growth (Mutsamba-Magwaza et al., 2025; Osei et al., 2025). Policy makers should therefore consider incorporating measures of entrepreneurial resilience, adaptive capacity, and prior experience with resource constraints into borrower assessment protocols, rather than relying solely on conventional metrics such as collateral availability or credit history (Beck & Demircuc-Kunt, 2006; Gelb et al., 2009).

Implication 3: Strengthening the Agricultural Value Chain Focus

Agriculture demonstrates the highest owner income growth (52.3%) across the pooled sample, with Zimbabwean agricultural enterprises achieving exceptional returns (68.4%). This finding suggests that channeling financial assistance through agricultural value chains, where buyers, suppliers, and financial institutions jointly structure credit around production, processing, and marketing stages, may be particularly effective in bridging financing gaps for MSMEs (Goffar et al., 2025). Policy makers should prioritise the development of value chain financing mechanisms that integrate modest capital with input supply, market linkage support, technical assistance, and peer learning networks (Venkata Kalyani et al., 2025). The high growth observed in Zimbabwe's agricultural sector under severe resource constraints indicates

that programs combining modest capital with business development services may generate superior outcomes compared to large-scale, uncapacitated lending (Hossain et al., 2022; Mutsamba-Magwaza et al., 2025).

Implication 4: Addressing Formalisation Without Assuming Automatic Returns

Private Limited companies dominate all three countries (79.2% overall), but South Africa's high formalisation rate (84.3%) coincides with only moderate growth (31.2%), while Botswana's lower formalisation rate (66.2%) coincides with the lowest growth (8.0%). These findings indicate that formal business registration, while necessary for accessing structured financial assistance, is insufficient to guarantee enterprise growth (Gelb et al., 2009). Research from South Africa identifies conditional formalisation, high levels of bureaucracy, unsustainable fees, information asymmetry, and credit unavailability as key challenges facing entrepreneurs even after registration (Maduku & Zerihun, 2022). Policy makers must therefore accompany formalisation promotion with corresponding investments in institutional quality, financial infrastructure, regulatory simplification, and entrepreneurial capacity building, including managerial training, financial literacy programs, and expanded credit opportunities (Maduku & Zerihun, 2022; World Bank, 2026). As Gelb et al. (2009) conclude, in countries with strong business environments such as those in Southern Africa, investment in education or vocational training may be more important for improving outcomes among informal workers than pursuing formalization alone.

Implication 5: Designing Gender-Sensitive Financial Products and Support Systems

The absence of statistically significant gender-based performance gaps in this study, combined with evidence that female entrepreneurs demonstrate comparable or superior capital efficiency when structural differences are accounted for (Du Rietz & Henrekson, 2000; Malmström et al., 2018), suggests that policy interventions should shift focus away from simply targeting capital to women and toward addressing the hidden constraints that shape women's economic opportunities. As highlighted by recent World Bank research, these include socialisation and norms that influence risk attitudes, limited access to support networks that enable learning and resilience, and constraints that begin early in the life cycle as women are channeled away from higher-productivity sectors (Beegle et al., 2026). Financial product design must account for gender differences in risk exposure, asset ownership, and household and care responsibilities, rather than simply focusing on expanding access to capital (Beegle et al., 2026; Fafchamps et al., 2011). Critically, support networks for women should be framed not as a “nice

add-on” but as a central delivery mechanism for entrepreneurship support, enabling women to share information, adopt new practices, navigate markets, and build confidence (Beegle et al., 2026). The finding from Ghana that only in-kind grants, not cash grants, led to profit growth for female microenterprises suggests that the manner in which funding is provided matters significantly for female enterprise growth, with implications for program design (Fafchamps et al., 2011).

Implication 6: Investing in Complementary Infrastructure and Support Systems

The striking dispersion in agricultural enterprise growth across the three countries reflects fundamental differences in how agricultural value chains are structured and financed (Goffar et al., 2025). The importance of complementary support systems cannot be overstated, as evidence from agricultural value chain research indicates that financing effectiveness depends critically on enabling infrastructure, including access to quality inputs, storage facilities, transport networks, and technical assistance (Making Finance Work for Africa, 2025). Where these complementary services are absent, even well-designed financial interventions yield diminished returns (Ambler et al., 2023). Policy makers should therefore ensure that GFSP are integrated with investments in physical infrastructure (roads, storage, electrification), institutional infrastructure (contract enforcement, credit information systems), and human capital (management training, financial literacy, technical skills) to maximise the productivity impact of MSME financing (Beck & Demirguc-Kunt, 2006; World Bank, 2026).

Implication 7: Country-Specific Policy Recommendations

Based on the findings, the following country-specific recommendations emerge:

Table 4 Country-Specific Recommendations

Country	Key Finding	Policy Recommendation
Zimbabwe	Highest growth (47.0%) with smallest loans (\$50,000 max)	Expand access to even modest capital; prioritise agricultural lending (68.4% growth); promote partnership business structures (54.9% growth)
South Africa	Moderate growth (31.2%) despite large loan capacity (\$846,047 max)	Redesign programs for diverse service businesses (27% of sample shows only 16.8% growth); expand agricultural lending beyond 10.4% of portfolio
Botswana	Lowest growth (8.0%) despite largest loans (\$1.11 million max)	Investigate systemic constraints limiting returns; restructure loan programs

toward smaller, more frequent disbursements; pair financing with technical assistance and market linkage support

Source: Authors' computation based on survey data

5 CONCLUSION

This study set out to examine MSME owner income dynamics, employee salary structures, employment patterns, and access to GFSP across three Southern African countries with distinct economic contexts: Zimbabwe, South Africa, and Botswana. Using survey data from 1,161 businesses with all monetary values reported in USD, the analysis has produced several findings that challenge conventional assumptions about MSME financing and performance.

Summary of Principal Findings

First, this study finds striking cross-country heterogeneity in MSME performance that cannot be explained by loan size alone. Zimbabwean MSME owners achieve the highest income growth (47.0 percent) despite having the lowest owner income ranges (120 – 2,900 before; 200 -3,200 after) and the smallest loan capacity (\$50,000 maximum). This finding supports the proposition that challenging economic environments may foster entrepreneurial resilience, adaptive capacity, and efficient capital utilisation. The evidence aligns with the concept of bricolage as a strategic response to resource-constrained environments (Baker & Nelson, 2005) and with research demonstrating that marginal returns to capital are highest at low levels of capital stock when firms are financially constrained (Dodlova et al., 2015).

Second, South African owners achieve intermediate growth (31.2 percent) with the widest income ranges (169 - 22,561 before; 226 - 28,202 after), reflecting the region's most developed but unequal economy. The moderate growth rate despite high absolute incomes suggests potential ceiling effects or diminishing returns to capital among established formal enterprises, consistent with evidence from other middle-income African contexts (Fatoki, 2014).

Third, and most paradoxically, Botswanan owners exhibit the most modest growth (8.0 percent) despite having the largest loan capacity (\$1.11 million maximum). This inverse relationship between loan capacity and income growth constitutes a central contribution of this study: entrepreneurial capability and effective capital utilisation may be more important determinants of MSME success than loan size alone. Correlation analysis confirms weak relationships between loan amounts and owner income growth (pooled $r = -0.002$, $p = 0.944$), and regression analysis demonstrates that observable characteristics explain virtually none of

the variation in owner income growth (adjusted $R^2 = 0.008$). Several mechanisms may explain Botswana's low returns to capital: absorptive capacity constraints, selection effects in reverse (where stable environments allow less capable entrepreneurs to survive and access credit), and potential misalignment of long-term lending structures with MSME needs for flexible, timely working capital (Nagler & Naudé, 2017; Jefferis, 2018; Beck & Demirguc-Kunt, 2006).

Fourth, employee salary growth is remarkably consistent across all three countries (29.5-32.5 percent), suggesting that GFSP consistently enable wage increases for workers regardless of owner income growth outcomes. This decoupling of owner income growth from employee wage growth has important implications for understanding benefit distribution from GFSP.

Fifth, the owner-employee income gap ranges from 5:1 in Botswana to 6.1:1 in South Africa, indicating substantial within-enterprise inequality that has been underexplored in the MSME literature. The gap widest in South Africa (6.1:1) is consistent with the country's status as one of the world's most unequal societies (Kirsten & Biyase, 2025).

Sixth, agriculture demonstrates the highest owner income growth (52.3 percent), followed by transport (48.1 percent) and manufacturing (45.6 percent), with sectoral differences statistically significant ($p = 0.001$). The dramatic cross-country variation in agricultural performance, Zimbabwe 68.4 percent versus Botswana 12.5 percent, underscores the importance of context, market conditions, and complementary support systems (Goffar et al., 2025). Evidence from Zimbabwe demonstrates that smallholder farmers achieve significant productivity increases not primarily through formal credit, but via localised, innovative strategies, including the formation of informal institutions based on trust, reciprocity, and collective action (Mutsamba-Magwaza et al., 2025; Chiweshe, 2014). These findings support the proposition that systemic resource pressures, operating in the absence of fully functioning formal banking, can paradoxically foster a higher “adaptive intensity,” compelling firms to innovate in ways that stable environments may not demand (Osei et al., 2025).

Seventh, this study finds no statistically significant gender differences in MSME performance across any of the three countries. Female-owned MSME show slightly higher income growth in all three countries (Zimbabwe: 48.5 percent vs. 45.9 percent; South Africa: 31.7 percent vs. 30.8 percent; Botswana: 8.4 percent vs. 7.7 percent), though differences are not statistically significant. This finding aligns with a growing body of evidence that questions the “female underperformance hypothesis” in entrepreneurship when structural differences are

properly accounted for (Du Rietz & Henrekson, 2000; Malmström et al., 2018; Fafchamps & Woodruff, 2017).

Theoretical Contributions

This study makes several theoretical contributions to MSME literature. First, it provides empirical support for the “positive selection under scarcity” hypothesis: resource-constrained environments may select for the most capable and resilient entrepreneurs, while stable environments may allow less capable entrepreneurs to survive, thereby diluting average performance metrics (Feng & Ren, 2023). Second, it demonstrates that absorptive capacity constraints and diminishing returns to capital are significant but often overlooked factors in MSME financing (Nagler & Naudé, 2017). Third, it contributes to understanding of the “loan amount paradox”, the inverse relationship between loan capacity and income growth, suggesting that entrepreneurial capability may be a more binding constraint on growth than capital availability (Beck & Demirguc-Kunt, 2006). Fourth, the decoupling of owner income growth from employee wage growth raises important questions about benefit distribution from GFSP that merit further investigation.

Policy Implications

The findings carry several interrelated implications for policymakers, development finance institutions, and GFSP across the Southern African region. First, increasing loan sizes without accompanying investments in entrepreneurial capability and complementary support systems may yield diminishing returns. Tiered approaches that provide modest initial capital combined with targeted technical assistance, business development services, and mentorship may generate higher marginal returns than large-scale, incapacitated lending (Hossain et al., 2022). Second, borrower selection criteria should account for environmental adaptation capacity, as entrepreneurs who have successfully navigated resource-scarce conditions may demonstrate superior capital efficiency. Third, agricultural finance interventions should be integrated with value chain development strategies rather than delivered as isolated capital transfers, with particular attention to enabling infrastructure, storage facilities, transport networks, and technical assistance, that critically mediates financing effectiveness (Making Finance Work for Africa, 2025; Ambler et al., 2023). Fourth, formal business registration, while necessary for accessing structured financial assistance, is insufficient to guarantee enterprise growth without corresponding investments in institutional quality, regulatory simplification, and entrepreneurial capacity building (Gelb et al., 2009; Maduku & Zerihun, 2022). Fifth, policy

interventions should shift focus away from simply targeting capital to women and toward addressing the hidden constraints that shape women's economic opportunities, including socialisation and norms that influence risk attitudes, limited access to support networks that enable learning and resilience, and early-life constraints that channel women away from higher-productivity sectors (Beegle et al., 2026). Support networks for women should be framed not as a “nice add-on” but as a central delivery mechanism for entrepreneurship support (Beegle et al., 2026).

Limitations and Future Research

Several limitations of this study should be acknowledged. First, the cross-sectional design limits causal inference; future research should employ longitudinal or experimental designs to establish causality. Second, the sample, while substantial (n=1,161), may not be fully representative of all MSMEs in each country, particularly informal enterprises that may be underrepresented. Third, all monetary values are self-reported and subject to recall bias, although consistency checks were employed to enhance data quality. Fourth, the “Other” sector in South Africa (27.0 percent of the sample) could not be disaggregated into meaningful sub-categories, limiting sectoral analysis for this country.

Future research should investigate several unanswered questions. First, longitudinal studies tracking MSMEs over time could establish whether the high growth rates observed in Zimbabwe are sustained and whether Botswanan enterprises can achieve higher returns with modified program designs. Second, qualitative research could elucidate the specific adaptive strategies employed by Zimbabwean entrepreneurs, providing actionable insights for policy and program design. Third, experimental studies randomly assigning different loan sizes, disbursement structures, and complementary support services could identify optimal program configurations for different country contexts. Fourth, comparative research across a broader range of African countries could test the external validity of the “positive selection under scarcity” hypothesis and identify contextual factors that moderate MSME performance. Fifth, future research should disaggregate the “Other” sector in South Africa to understand the performance dynamics of service-sector MSMEs, which constitute a substantial portion of the sample but show the lowest growth outcomes.

Concluding Remarks

The study set out to examine how GFSP influence MSME performance across Zimbabwe, South Africa, and Botswana, three countries representing markedly different institutional

environments, levels of development, and entrepreneurial ecosystems. Across all analyses, a consistent pattern emerges; context matters profoundly, shaping how enterprises absorb capital, convert financial assistance into growth, and distribute benefits between owners and employees.

Three core insights stand out. First, the loan amount paradox demonstrates that larger loans do not automatically produce superior outcomes. Zimbabwean MSMEs achieved the highest income growth despite receiving the smallest loans, suggesting that entrepreneurial adaptation under scarcity and strong absorptive capacity may be more decisive than the volume of capital itself. In contrast, Botswana's low growth despite large loan capacity highlights the constraints of diminishing returns, managerial capacity limits, and misalignment between loan structures and MSME needs. These findings reinforce the importance of designing GFSP instruments that match the operational realities of MSMEs rather than assuming that "more capital equals more growth."

Second, the study reveals substantial sectoral heterogeneity, with agriculture consistently outperforming other sectors but with dramatic variation across countries. Zimbabwe's exceptional agricultural growth reflects the strength of value-chain financing, informal institutional cooperation, and adaptive strategies developed under resource pressure. Botswana's modest agricultural performance underscores the need for complementary infrastructure, market linkages, and technical support. These results highlight that financial assistance is most effective when embedded within broader value-chain ecosystems, not delivered as isolated capital injections.

Third, the findings challenge common assumptions about gender-based performance gaps. Across all three countries, female-owned enterprises perform on par with male-owned firms, consistent with evidence showing that gender differences in MSME outcomes often disappear once structural and contextual factors are accounted for. This suggests that policy interventions should move beyond simply expanding women's access to capital and instead address the interacting constraints, including norms, networks, sectoral segregation, and financial product design, that shape women's ability to translate capital into sustainable growth. These insights align with broader research on gendered access to finance and entrepreneurial capability development.

Taken together, the findings demonstrate that GFSP effectiveness depends on the interplay between institutional context, sectoral dynamics, entrepreneurial capability, and program design. The comparative approach used in this study leverages the heterogeneity of Zimbabwe,

South Africa, and Botswana to show that identical financial instruments can produce divergent outcomes depending on the surrounding environment. This insight is particularly important given that Orbis and similar commercial databases do not capture informal MSMEs, which constitute the majority of enterprises in Sub-Saharan Africa. Understanding how GFSPs operate across different institutional settings is therefore essential for designing interventions that are both context-sensitive and capable of supporting inclusive enterprise growth.

Ultimately, the study underscores that capital alone is insufficient. Effective MSME support requires integrated approaches that combine financial assistance with managerial training, market access, value-chain coordination, and gender-responsive program design. As governments and development partners continue to expand MSME financing initiatives, the evidence presented here offers a clear message: the impact of financial support depends not on how much capital is provided, but on how well it aligns with the realities of the enterprises it aims to support.

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APPENDICES

Appendix A: Supplementary Tables

Appendix Table A1 Sector Codes and Names

Code	Sector Name
1	Wholesale and Retail
2	Manufacturing
3	Agriculture
4	Transport
5	Energy and Construction
6	Art, Entertainment and Culture
7	Mining and Quarry
8	Accommodation & Food Services
9	Other

Source: Authors' computation based on survey data

Appendix Table A2 Business Type Codes and Names

Code	Business Type
1	Partnership
2	Family Business
3	Sole Proprietorship
4	Private Limited

Source: Authors' computation based on survey data

Appendix Table A3 Gender Codes

Code	Gender
1	Male
2	Female

Source: Authors' computation based on survey data

Appendix B: Supplementary Tables

Appendix Table B1: Sample Distribution by Country

Country	Code	Frequency	Percentage
Zimbabwe	1	449	38.7%
South Africa	2	345	29.7%
Botswana	3	367	31.6%
Total		1,161	100%

Source: Authors' computation based on survey data

Appendix Table B2: Full Sample Descriptive Statistics (N=1,161)

Characteristic	Mean	Median	SD	Min	Max
Owner Income					
Owner Income Before (USD)	1,357	700	2,843	0	22,561
Owner Income After (USD)	1,874	950	3,487	148	28,202
Owner Income Growth (%)	38.1	38.9	89.6	-89.3	1,200
Employee Salary					
Employee Salary Before (USD)	233	222	139	0	846
Employee Salary After (USD)	307	282	173	70	1,110
Employee Salary Growth (%)	31.8	25.0	45.2	-50.0	300

Owner Characteristics

Owner Age (years)	38.2	39.0	9.1	21	69
Business Age (years)	11.1	10.0	7.8	1	31
Dependents	1.4	1.0	1.1	0	4

Source: Authors' computation based on survey data

Appendix Table B3 Owner Income Statistics – Zimbabwe

Characteristic	Mean	Median	SD	Min	Max
Owner Income Before (USD)	1,185	580	890	120	2,900
Owner Income After (USD)	1,742	850	1,050	200	3,200
Owner Income Growth (%)	47.0	42.5	94.2	-85.0	1,150

Source: Authors' computation based on survey data

Appendix Table B4 Owner Income Statistics – South Africa

Characteristic	Mean	Median	SD	Min	Max
Owner Income Before (USD)	1,482	780	2,945	169.21	22,561
Owner Income After (USD)	1,945	980	3,412	225.61	28,202
Owner Income Growth (%)	31.2	28.6	80.1	-89.3	1,100

Source: Authors' computation based on survey data

Appendix Table B5 Owner Income Statistics – Botswana

Characteristic	Mean	Median	SD	Min	Max
Owner Income Before (USD)	1,412	710	2,890	0	14,799.91
Owner Income After (USD)	1,525	820	3,185	148	22,199.86
Owner Income Growth (%)	8.0	5.0	46.2	-75.0	400

Source: Authors' computation based on survey data

Appendix Table B6 Cross-Country Comparison of Owner Income

Indicator	Zimbabwe	South Africa	Botswana	F-statistic	p-value
Owner Income Before Mean (USD)	1,185	1,482	1,412	1.56	0.210
Owner Income Before Min (USD)	120	169.21	0	N/A	N/A
Owner Income Before Max (USD)	2,900	22,561	14,799.91	N/A	N/A
Owner Income After Mean (USD)	1,742	1,945	1,525	1.72	0.179
Owner Income After Min (USD)	200	225.61	148	N/A	N/A
Owner Income After Max (USD)	3,200	28,202	22,199.86	N/A	N/A
Owner Income Growth (%)	47.0	31.2	8.0	4.28	0.014**

**Note. *p < .10; **p < .05; *p < .01.

Source: Authors' computation based on survey data

Appendix Table B7 Employee Salary Statistics – Zimbabwe

Characteristic	Mean	Median	SD	Min	Max
Employee Salary Before (USD)	225	210	138	60	450
Employee Salary After (USD)	298	270	170	70	850
Employee Salary Growth (%)	32.4	28.6	48.2	-40.0	250

Source: Authors' computation based on survey data

Appendix Table B8 Employee Salary Statistics – South Africa

Characteristic	Mean	Median	SD	Min	Max
Employee Salary Before (USD)	240	230	140	84.60	846
Employee Salary After (USD)	318	295	175	129.73	958.85
Employee Salary Growth (%)	32.5	28.2	46.5	-50.0	300

Source: Authors' computation based on survey data

Appendix Table B9 Employee Salary Statistics – Botswana

Characteristic	Mean	Median	SD	Min	Max
Employee Salary Before (USD)	234	222	137	0	740
Employee Salary After (USD)	303	278	168	125.80	1,110
Employee Salary Growth (%)	29.5	25.2	44.8	-35.0	280

Source: Authors' computation based on survey data

Appendix Table B10 Employee Salary Comparison Across Countries

Indicator	Zimbabwe	South Africa	Botswana	F-statistic	p-value
Employee Salary Before Mean (USD)	225	240	234	1.18	0.308
Employee Salary Before Min (USD)	60	84.60	0	N/A	N/A
Employee Salary Before Max (USD)	450	846	740	N/A	N/A
Employee Salary After Mean (USD)	298	318	303	1.35	0.260
Employee Salary After Min (USD)	70	129.73	125.80	N/A	N/A
Employee Salary After Max (USD)	850	958.85	1,110	N/A	N/A
Employee Salary Growth (%)	32.4	32.5	29.5	0.45	0.638

Source: Authors' computation based on survey data

Appendix Table B11 Sector Distribution Across Countries (number of enterprises)

Sector	Zimbabwe	South Africa	Botswana	Total
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Wholesale and Retail	151	84	149	384
Manufacturing	49	50	48	147
Agriculture	165	36	46	247
Transport	13	23	16	52
Energy and Construction	10	20	34	64
Art, Entertainment & Culture	10	6	11	27
Mining and Quarry	26	20	21	67
Accommodation & Food Services	6	13	25	44
Other	19	93	17	129
Total	449	345	367	1,161

Source: Authors' computation based on survey data

Appendix Table B12 Sector Percentage by Country

Sector	Zimbabwe (%)	South Africa (%)	Botswana (%)
Wholesale and Retail	33.6%	24.3%	40.6%
Manufacturing	10.9%	14.5%	13.1%
Agriculture	36.7%	10.4%	12.5%
Transport	2.9%	6.7%	4.4%
Energy and Construction	2.2%	5.8%	9.3%
Art, Entertainment & Culture	2.2%	1.7%	3.0%
Mining and Quarry	5.8%	5.8%	5.7%
Accommodation & Food Services	1.3%	3.8%	6.8%
Other	4.2%	27.0%	4.6%
Total	100%	100%	100%

Source: Authors' computation based on survey data

Appendix Table B13 Owner Income Growth by Sector – Zimbabwe (n=449)

Sector	Sample Size	% of Zimbabwe	Owner Growth (%)	Income
Agriculture	165	36.7%	68.4	
Transport	13	2.9%	62.1	
Manufacturing	49	10.9%	58.9	
Mining and Quarry	26	5.8%	45.2	
Wholesale and Retail	151	33.6%	42.3	
Art, Entertainment & Culture	10	2.2%	41.5	
Energy and Construction	10	2.2%	38.9	

Accommodation & Food Services	6	1.3%	38.9
Other	19	4.2%	25.6

Source: Authors' computation based on survey data

Appendix Table B14 Owner Income Growth by Sector – South Africa (n=345)

Sector	Sample Size	% of South Africa	Owner Income Growth (%)
Agriculture	36	10.4%	48.2
Transport	23	6.7%	45.6
Manufacturing	50	14.5%	42.3
Mining and Quarry	20	5.8%	36.8
Art, Entertainment & Culture	6	1.7%	32.5
Wholesale and Retail	84	24.3%	28.9
Accommodation & Food Services	13	3.8%	27.8
Energy and Construction	20	5.8%	26.7
Other	93	27.0%	16.8

Source: Authors' computation based on survey data

Appendix Table B15 Owner Income Growth by Sector – Botswana (n=367)

Sector	Sample Size	% of Botswana	Owner Income Growth (%)
Agriculture	46	12.5%	12.5
Manufacturing	48	13.1%	10.2
Transport	16	4.4%	9.8
Mining and Quarry	21	5.7%	8.9
Art, Entertainment & Culture	11	3.0%	8.5
Wholesale and Retail	149	40.6%	7.8
Accommodation & Food Services	25	6.8%	7.2
Energy and Construction	34	9.3%	6.5
Other	17	4.6%	4.2

Source: Authors' computation based on survey data

Appendix Table B16 Business Type Distribution Across Countries

Business Type	Zimbabwe	South Africa	Botswana	Total
Partnership	15	28	53	96
Family Business	4	6	4	14
Sole Proprietorship	45	20	67	132

Private Limited	385	291	243	919
Total	449	345	367	1,161

Source: Authors' computation based on survey data

Appendix Table B17 Business Type Percentage by Country

Business Type	Zimbabwe (%)	South Africa (%)	Botswana (%)
Partnership	3.3%	8.1%	14.4%
Family Business	0.9%	1.7%	1.1%
Sole Proprietorship	10.0%	5.8%	18.3%
Private Limited	85.7%	84.3%	66.2%
Total	100%	100%	100%

Source: Authors' computation based on survey data

Appendix Table B18 Owner Income Growth by Business Type – Full Sample

Business Type	Sample Size	Percentage	Owner Income Growth (%)	Employee Salary Growth (%)
Partnership	96	8.3%	35.2	30.5
Family Business	14	1.2%	29.8	28.2
Sole Proprietorship	132	11.4%	37.8	32.4
Private Limited	919	79.2%	38.5	32.1

Source: Authors' computation based on survey data

Appendix Table B19 Owner Income Growth by Business Type – Zimbabwe (n=449)

Business Type	Sample Size	% of Zimbabwe	Owner Income Growth (%)
Partnership	15	3.3%	54.9
Sole Proprietorship	45	10.0%	50.0
Private Limited	385	85.7%	46.7
Family Business	4	0.9%	37.8

Source: Authors' computation based on survey data

Appendix Table B20 Owner Income Growth by Business Type – South Africa (n=345)

Business Type	Sample Size	% of South Africa	Owner Income Growth (%)
Partnership	28	8.1%	36.2
Sole Proprietorship	20	5.8%	33.1
Private Limited	291	84.3%	30.3
Family Business	6	1.7%	29.6

Source: Authors' computation based on survey data

Appendix Table B21 Owner Income Growth by Business Type – Botswana (n=367)

Business Type	Sample Size	% of Botswana	Owner Income Growth (%)
Sole Proprietorship	67	18.3%	8.6
Partnership	53	14.4%	8.7
Private Limited	243	66.2%	7.7
Family Business	4	1.1%	7.6

Source: Authors' computation based on survey data

Appendix Table B22 Gender Distribution Across Countries

Country	Male	Female	Male (%)	Female (%)
Zimbabwe	252	197	56.1%	43.9%
South Africa	196	149	56.8%	43.2%
Botswana	200	167	54.5%	45.5%
Total	648	513	55.8%	44.2%

Source: Authors' computation based on survey data

Appendix Table B23 Owner Income Growth by Gender

Country	Male-Owned (Mean Growth %)	Female-Owned (Mean Growth %)	Gender Gap (pp)	p-value
Zimbabwe	45.9%	48.5%	-2.6 (female advantage)	0.772
South Africa	30.8%	31.7%	-0.9 (female advantage)	0.920
Botswana	7.7%	8.4%	-0.7 (female advantage)	0.889
Pooled	37.5%	40.6%	-3.1 (female advantage)	0.553

Note: No gender differences are statistically significant at conventional levels ($p > 0.05$).

Source: Authors' computation based on survey data

Appendix Table B24 Loan Characteristics by Country

Variable	Zimbabwe	South Africa	Botswana
Amount Received Mean (USD)	7,456	42,123	48,876
Amount Received Min (USD)	200	282	370
Amount Received Max (USD)	50,000	846,047	1,109,993
Loan Utilization (%)	90.8	89.5	90.1
Interest Rate (%)	8.52	7.85	7.92

Source: Authors' computation based on survey data

Appendix Table B25 Correlation Between Loan Amount and Owner Income Growth

Country	Correlation (r)	p-value
Zimbabwe	-0.012	0.801
South Africa	0.008	0.884
Botswana	-0.015	0.772
Pooled	-0.002	0.944

Source: Authors' computation based on survey data

No significant correlation between loan amount and owner income growth in any country.

Appendix Table B26 Owner Income Growth Distribution by Country

Growth Category	Zimbabwe (%)	South Africa (%)	Botswana (%)
Negative Growth	20.5	24.6	26.2
0-25%	18.2	22.4	34.5
25-50%	22.4	20.8	18.6
50-100%	19.7	18.4	14.2
>100%	19.2	13.8	6.5
Total	100%	100%	100%

Source: Authors' computation based on survey data

Appendix Table B27 Complete Summary Statistics by Country

Variable	Zimbabwe	Zimbabwe	Botswana
Sample Size	449	345	367
Gender			
Distribution			
Male (n, %)	252 (56.1%)	196 (56.8%)	200 (54.5%)
Female (n, %)	197 (43.9%)	149 (43.2%)	167 (45.5%)
Business Type			
Distribution			
Partnership (n, %)	15 (3.3%)	28 (8.1%)	53 (14.4%)
Family Business (n, %)	4 (0.9%)	6 (1.7%)	4 (1.1%)
Sole Proprietorship (n, %)	45 (10.0%)	20 (5.8%)	67 (18.3%)
Private Limited (n, %)	385 (85.7%)	291 (84.3%)	243 (66.2%)
Owner Characteristics			
Owner Age (years)	38.2 (8.9)	38.9 (9.3)	37.5 (8.9)
Business Age (years)	11.3 (7.6)	11.6 (8.1)	10.5 (7.4)
Dependents	1.4 (1.1)	1.5 (1.1)	1.3 (1.0)
Owner Income (USD)			
Income Before – Mean	1,185	1,482	1,412
Income Before – Min	120	169.21	0
Income Before – Max	2,900	22,561	14,799.91
Income After – Mean	1,742	1,945	1,525
Income After - Min	200	225.61	148
Income After - Max	3,200	28,202	22,199.86
Income Growth (%)	47.0 (94.2)	31.2 (80.1)	8.0 (46.2)
Employee Salary (USD)			
Salary Before – Mean	225	240	234
Salary Before - Min	60	84.60	0
Salary Before - Max	450	846	740
Salary After - Mean	298	318	303
Salary After - Min	70	129.73	125.80

Salary After - Max	850	958.85	1,110
Salary Growth (%)	32.4 (48.2)	32.5 (46.5)	29.5 (44.8)
Employment			
Employment Before	5.4 (8.2)	6.2 (9.5)	5.8 (9.1)
Employment After	9.6 (13.8)	10.1 (15.2)	9.3 (14.6)
Employment Growth (%)	77.8 (125.4)	62.9 (118.7)	60.3 (116.8)
Loans			
Amount Received Mean (USD)	7,456	42,123	48,876
Amount Received Min (USD)	200	282	370
Amount Received Max (USD)	50,000	846,047	1,109,993
Loan Utilization (%)	90.8 (18.5)	89.5 (22.8)	90.1 (21.5)
Interest Rate (%)	8.52 (7.18)	7.85 (6.52)	7.92 (6.62)

Source: Authors' computation based on survey data

Note: Values are mean (standard deviation) unless specified otherwise.