Effects of monetary policy mechanisms on investment decisions of MSMEs in Lusaka, Zambia

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https://doi.org/10.51867/scimundi.6.1.21

ABSTRACT

This study examined the effects of monetary policy on the investment decisions of micro, small, and medium-sized enterprises (MSMEs) in Lusaka. The theoretical foundation of this study was based on the interest-rate (Keynesian) channel, Credit Channel Theory, and Financial Accelerator Theory. A mixed-methods approach was employed, combining quantitative analysis with qualitative insights from business owners. The target population was 48,078 SMES operating in Lusaka, and the study utilized a sample of 100 participants. Data for quantitative analysis were collected from 100 MSMEs across various sectors. A total of 25 participants were interviewed for qualitative analysis. The regression results showed that the policy interest rate has a significant negative effect on MSME investment ($\beta = -0.45$, $p = 0.001$), suggesting that higher borrowing costs discourage capital investment. In contrast, access to bank loans ($\beta = 0.41$, $p < 0.001$), liquidity provision ($\beta = 0.32$, $p = 0.024$), and firm financial position ($\beta = 0.29$, $p = 0.001$) positively influence investment decisions. Sectoral analysis further revealed that interest rate increases affect sectors differently. Manufacturing firms appeared more sensitive, with 90% (27 out of 30) reporting negative effects from rising interest rates, followed by the retail sector (80%) and the services sector (64%), reflecting differences in capital intensity and reliance on external financing. Qualitative insights highlight challenges, including limited access to affordable credit, low awareness of monetary policy changes, and institutional barriers to financial support. Based on these findings, the study recommends that policymakers should implement monetary policies that are MSME-sensitive, promote alternative financing mechanisms, improve financial literacy, and enhance coordination between monetary and fiscal policies to improve MSME access to finance and support sustainable investment growth.

Keywords: Credit Channel Theory, Interest Rate, Inflation Rate, Monetary Policy Rate, MSME Investment Decisions

I. INTRODUCTION

Zambia's economy has undergone significant structural transformation since the liberalization of its financial sector in the 1990s. The Bank of Zambia (BoZ), established as an independent central bank in 1996, has adopted inflation targeting as its primary monetary policy framework (BoZ, 2022). Under this framework, the Monetary Policy Rate (MPR) is the main instrument for influencing short-term interest rates and overall liquidity conditions in the economy. In recent years, as indicated in *Figure 1*, the MPR has fluctuated considerably, ranging from 8.5% in 2021 to 14.25% in 2025, reflecting the central bank's response to domestic economic pressures and external shocks such as the COVID-19 pandemic and global commodity price movements. These changes in interest rates directly influence the cost and availability of credit for businesses. MSMEs play a key role in Zambia's economic growth. The Zambia Statistical Agency reports that MSMEs make up about 97% of all businesses and employ nearly 88% of the non-agricultural workforce (Bank of Zambia, 2024). The sector's share of GDP has also grown, increasing from 65% in 2015 to around 70% in 2023 (Ministry of Small and Medium Enterprise Development, 2023). Despite this important role, MSMEs still face major structural challenges, especially in accessing formal finance. The FinScope Zambia Survey in 2021 shows that only about 35% of MSMEs can obtain formal credit, with many depending on personal savings, retained earnings, or informal funding sources. These problems worsen during monetary tightening, when banks often adopt more cautious lending practices.

Rising interest rates and restricted credit availability can greatly affect MSME investment decisions. Higher borrowing costs reduce the affordability of capital investments such as machinery, equipment, and business expansion. At the same time, monetary policy changes may indirectly affect MSMEs through exchange rate changes and wider macroeconomic conditions. For instance, the depreciation of the Zambian kwacha between 2022 and 2023 increased the cost of imported manufacturing inputs, further constraining firms' ability to invest (BoZ, 2023). These factors demonstrate the complex relationship between monetary policy and firm-level investment behavior. Despite the importance of MSMEs to Zambia's economy, empirical research on how monetary policy influences MSME investment decisions at the firm level remains limited. Much of the existing literature focuses on macroeconomic outcomes or on banking-sector responses, with less attention to the experiences of small businesses. This study addresses this gap by

examining the effects of monetary policy variables—including interest rates, liquidity conditions, and credit access—on MSME investment decisions in Lusaka. By combining quantitative regression analysis with qualitative insights from MSME owners, the study provides a more comprehensive understanding of how monetary policy affects investment behavior across sectors. It offers policy-relevant insights to strengthen MSME resilience and growth.

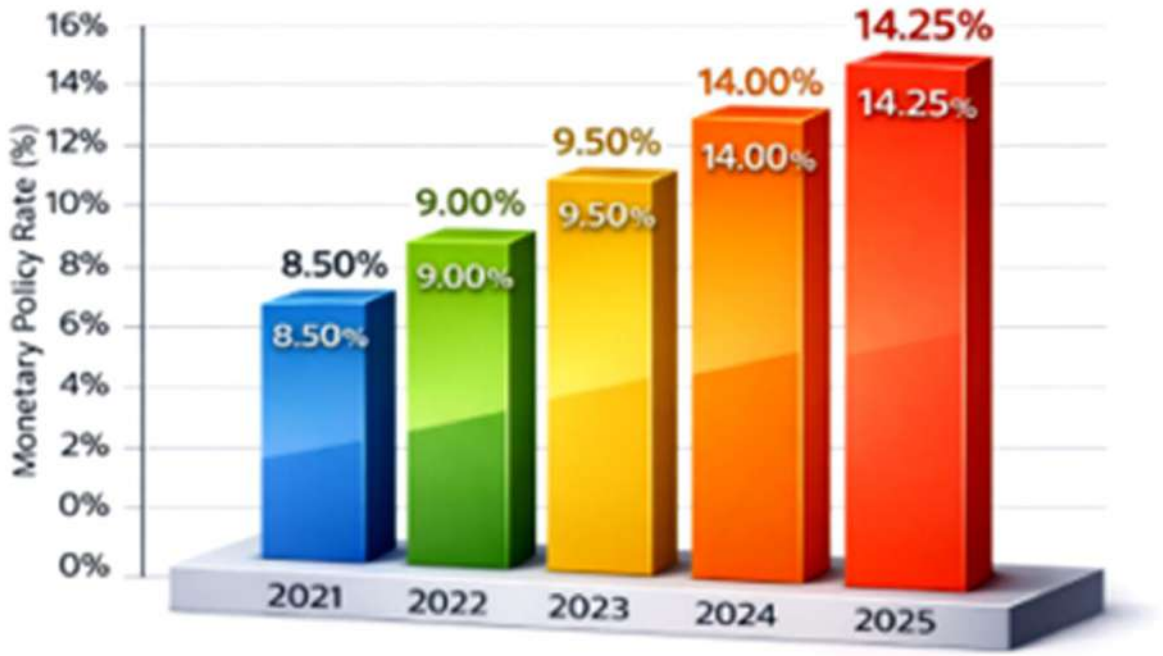

Figure 1
Monetary Policy Rate Trends

1.1 Research Objectives

This study aimed to achieve the following objectives:

i. To examine how changes in key monetary policy instruments (interest rates, reserve requirements, and open market operations) influence MSME financing and investment patterns.
ii. To assess the differential effect of monetary policy across various MSME sectors and firm sizes.
iii. To evaluate the effectiveness of existing policy interventions in mitigating monetary policy challenges for MSMEs.

II. LITERATURE REVIEW

2.1 Theoretical Review

The theoretical foundation of this study was based on the interest-rate (Keynesian) channel, Credit Channel Theory, and Financial Accelerator Theory. These theories explain how monetary policy affects MSME investment decisions. The Financial Accelerator Theory, introduced by Bernanke et al in 1999, emphasizes the role of firm balance sheets in amplifying the effects of monetary policy on investment. It suggests that changes in interest rates or credit conditions affect a firm's net worth, thus affecting its borrowing capacity. MSMEs with strong financial positions, such as low debt and sufficient liquidity, can sustain steady investment levels, even when monetary policy tightens. In contrast, financially constrained MSMEs may reduce or delay investment in response to negative policy changes. This theory shows that monetary policy affects firms differently, meaning not all MSMEs are affected equally by these changes. The Credit Channel Theory, proposed by Bernanke et al in 1995, argues that monetary policy affects firms' investment choices mainly by influencing the availability and cost of external financing. According to this theory, changes in central bank policy rates affect borrowing costs, which in turn impact the credit supply from financial institutions. MSMEs, which often rely on external loans due to limited internal resources, are especially sensitive to these changes. These theories are particularly relevant since MSMEs frequently struggle to access finance and are very responsive to shifts in macroeconomic conditions.

2.2 Empirical Review

Prior studies and evidence on the relationship between monetary policy and investment decisions of micro, small, and medium enterprises (MSMEs) were reviewed. By reviewing empirical findings from both local, regional and

international contexts, the discussion highlights how changes in interest rates, liquidity, and credit access influence firm-level investment behavior and financial decision-making. The review provided a foundation for understanding the mechanisms through which monetary policy affects MSME growth and identifies gaps in the existing literature that this study sought to address.

The main goals of monetary policy are to keep the economy stable. Price stability is important because it supports maintaining the currency's purchasing power and reduces uncertainty for investors and businesses. Monetary policy also aims to promote economic growth by influencing borrowing and financing habits and to support employment by creating favorable conditions for business growth. Another important goal is to maintain a stable exchange rate to enable smooth international trade and investment flows. The BoZ's policy framework is built to achieve these goals while considering the needs of different sectors, including MSMEs. To meet these objectives, central banks use various policy tools. Policy interest rates are a key instrument since changes in these rates directly impact borrowing costs, consumption, and investment. Lower interest rates usually encourage loans and investments, while higher rates can help control inflation. Open market operations (OMOs), which involve buying and selling government securities, are used to control liquidity. Buying securities puts money into the economy, while selling them removes funds from circulation. Reserve requirements, which set the minimum reserves commercial banks must hold, influence the money available for lending. Likewise, the discount rate—the rate at which banks borrow from the central bank— affects loan costs and overall economic activity.

The Federal Reserve Board (2021) states that monetary policy is an important tool that central banks use to shape economic activity by managing the money supply, interest rates, and overall liquidity of the financial system. Its main goals are to control inflation, stabilize the currency, promote economic growth, and support employment. In Zambia, the Bank of Zambia (BoZ) uses both traditional and unconventional monetary policy instruments, adjusting them to fit the country's unique economic circumstances and challenges. These policies especially affect the financing and investment decisions of small and medium-sized enterprises (MSMEs), which are highly sensitive to credit availability and borrowing costs. While these descriptions offer a solid theoretical foundation, most sources, including the Federal Reserve Board (2021), primarily provide conceptual understanding and offer little empirical evidence on how these mechanisms operate across different economic environments. This limits their direct relevance to Zambia's MSME sector, where organizational constraints may influence how policy is transmitted. For example, while interest rate changes are expected to affect MSME investment, the extent of their impact may vary by financial literacy, firm size, and sector. This suggests that a uniform approach may be too simplistic.

Beck et al. (2005) explored how financial, legal, and institutional barriers affected firm growth across firm sizes using survey data from 54 countries. They find that the smallest firms are often the most limited by financial and legal challenges. This suggests that access to finance and the business environment significantly restrict growth for smaller companies compared to larger ones. Their results indicate that improving financial and institutional systems can reduce these barriers, with the greatest impact on small firms. However, the quality of legal systems and corruption also affect firm performance. This evidence highlights the role of firm size in influencing the effects of external constraints on growth. It shows that smaller companies face greater difficulties in getting credit and expanding than larger ones. These findings are commonly cited in discussions of credit limitations and firm behavior, underscoring that firm size plays a crucial role in how economic policies, including monetary policy, affect business success. While Beck et al. (2005) showed that smaller firms face greater financial and legal challenges than larger firms, their analysis relies on survey data from multiple countries and primarily examines general firm growth rather than specific reactions to monetary policy changes. Additionally, the study did not consider sector- or country-specific factors, especially in Sub-Saharan Africa, where MSMEs often face distinct structural, institutional, and financial challenges. As a result, there is limited evidence on how Zambian MSMEs of various sizes respond to changes in interest rates and monetary policy, particularly concerning investment choices, access to credit, and differences across sectors. Filling this gap can provide insights into how firms respond to monetary policy and guide effective policy measures to support small and medium enterprises in Zambia.

A study by Kaulu et al. (2023) entitled "*Assessment of factors affecting access to finance by small and medium enterprises: Evidence from Kitwe, Zambia*" observed that, internally, MSMEs' investment decisions are significantly influenced by managerial capabilities, financial literacy, and organizational structures. Effective management practices, such as strategic planning and risk assessment, enable MSMEs to make informed investment decisions. Financial literacy, encompassing the ability to understand and utilize financial information, plays a crucial role in evaluating investment opportunities and managing financial risks. Additionally, the organizational structure, including decision-making processes and resource allocation, affects how investment opportunities are identified and pursued. However, the study relies on cross-sectional survey data, which limits causal inference and fails to capture dynamic responses to policy changes over time. Chilembo (2021) similarly documents how macroeconomic and institutional factors constrain MSME access to finance. However, the study's descriptive, quantitative design does not assess the relative strength or interaction of these factors, leaving potential confounding effects unexamined.

A study conducted by Chilembo (2021), *entitled "A study of the factors affecting small and medium enterprises (SMEs) access to finance," observed that several macroeconomic and institutional factors affect* MSME investment decisions. Access to finance remains a critical determinant; however, MSMEs often face challenges such as high collateral requirements, elevated interest rates, and stringent lending conditions, which hinder their ability to secure necessary capital. Moreover, market conditions, including demand fluctuations and competition, influence investment choices as MSMEs seek to align their investments with market opportunities and threats. The study further noted that despite the potential benefits of investment, MSMEs face numerous challenges that impede investment decisions. Limited access to finance is a predominant barrier, with many MSMEs unable to meet the collateral requirements set by financial institutions. Additionally, the high cost of credit, coupled with stringent lending conditions, limits MSMEs' ability to secure the funding they need for investment. This study, however, employs a descriptive quantitative design that does not test the relative strength or interaction of these factors, leaving potential confounding effects unexamined.

Durante et al. (2022) conducted a study entitled *"Monetary policy, investment and firm heterogeneity. European Economic Review"* in Italy. The research employed a quantitative approach, analyzing panel data from 200 MSMEs over ten years. The study investigated how changes in interest rates affected the borrowing and investment patterns of MSMEs. It was found that increases in interest rates significantly reduced borrowing capacity among MSMEs, resulting in lower investment in capital projects and expansion initiatives. The study concluded that MSMEs are particularly sensitive to monetary policy shocks due to limited access to alternative financing sources and smaller internal reserves, highlighting the importance of targeted policy measures to support MSME investment during periods of monetary tightening. Even though the longitudinal design used in this study strengthens causal inference, the Italian context—characterized by highly developed financial markets—limits the generalizability to Zambia, where financial inclusion is low. Another study by Caglio et al. (2021) examined the impact of monetary expansion on MSME investment in the United States. This study combined firm-level financial data with qualitative interviews of MSME managers, providing a mixed-methods perspective. It was observed that monetary expansion increased the value of MSMEs' earnings-based collateral and improved access to credit from financial institutions. Consequently, MSMEs were able to undertake higher levels of investment, particularly in machinery, technology, and workforce expansion. employed a mixed-methods approach in the United States, combining firm-level data with interviews. While this improves understanding of firm behavior, the study's reliance on larger, more formal MSMEs may underestimate the vulnerabilities of smaller, informal enterprises prevalent in Zambia.

Akarsu et al. (2025) also conducted a study titled "Borrowing costs and firm performance: The role of credit supply shocks" in Turkey, using a cross-sectional survey of 150 MSMEs across the manufacturing and service sectors. The study aimed to understand firm-specific responses to monetary tightening. It was found that highly leveraged firms experienced significant reductions in investment following interest rate hikes. In contrast, MSMEs engaged in export activities demonstrated resilience, partly due to access to foreign currency-denominated borrowing and diversified revenue streams. The study concluded that monetary policy effects on MSMEs are heterogeneous, influenced by firm characteristics such as leverage, sector, and international exposure, underscoring the need for policies tailored to firm-specific contexts. However, this study underscores a recurring gap: the study assumes uniform effects of monetary policy, failing to account for firm-level differences that are highly relevant in Sub-Saharan Africa.

In the Zambian context, Lamya (2021) conducted a study entitled *"The Effectiveness of Monetary Policy on the Growth of Micro, Small and Medium-Sized Enterprises in Zambia: A Case Study of Lusaka District."*, The study employed quantitative research design using panel data from 150 MSMEs across the manufacturing, retail, and service sectors over a period of eight years. It was found that higher inflation rates negatively affected MSMEs' investment decisions by reducing consumer purchasing power and increasing input costs. Consequently, MSMEs often delay expansion or capital investment projects during periods of high inflation. The study concluded that maintaining macroeconomic stability through prudent monetary policy is essential for fostering MSME investment and growth in Zambia. However, the study's panel of 150 MSMEs, while useful, is limited in scope and may not fully capture informal-sector dynamics, which constitute a large portion of Zambian MSMEs. Simpasa et al. (2015) carried out research entitled *"Bank Lending Channels of Monetary Policy Transmission in Zambia"*, focusing on how policy rate changes affect MSME financing. The study combined bank-level lending data with interviews with 120 MSME owners. It was found that while large commercial banks quickly adjusted their lending rates in response to changes in the Bank of Zambia's policy rate, smaller banks were slower to adjust, limiting MSMEs' access to affordable credit. The study concluded that disparities in bank responsiveness weaken the overall impact of monetary policy on MSME investment, underscoring the need for mechanisms to ensure equitable access to credit across MSMEs. The study is constrained by a relatively small sample and potential reporting bias in interviews with MSME owners.

Chilembo (2021) carried out a study entitled *"A study of the factors affecting small and medium enterprises (SMEs) access to finance"*, using survey data from 200 MSMEs in Lusaka and Ndola. The study employed a descriptive quantitative design to assess how changes in interest rates influenced borrowing and investment decisions. It was found that MSMEs with limited access to formal financial institutions were highly sensitive to policy rate adjustments, often

foregoing profitable investment opportunities due to high borrowing costs. The study concluded that improving MSME access to finance through supportive policies and alternative credit mechanisms is critical for enhancing the effectiveness of monetary policy in stimulating investment. The review of the empirical literature offers several key insights into monetary policy and MSME investment decisions in Zambia. First, interest rates and access to credit are key channels through which monetary policy affects MSME investment. Studies from around the world (Durante et al., 2022; Caglio et al., 2021) show that lower loan costs and stable financial conditions motivate MSMEs to make capital investments, whereas higher interest rates and inflation volatility discourage them. These outcomes underscore the need for monetary policies that account for MSMEs' financial challenges.

Second, regional and local studies indicate that structural barriers, such as high collateral requirements, inconsistent bank responses, and low financial literacy, often limit MSMEs' ability to adjust to policy reforms (Lamya, 2021). This underscores that the effectiveness of monetary policy is closely tied to the broader business and financial environment in which MSMEs operate. Supportive measures, such as credit guarantee programs and financial inclusion initiatives, are important for improving MSMEs' ability to capitalize on policy changes. Third, characteristics of individual firms, such as their debt levels, industry, and export focus, strongly influence how monetary policy affects investment. Research by Akarsu et al (2025) and Mankishi et al. (2025) revealed that MSMEs with sound financial practices, diversified income sources, and access to international markets are more resilient to policy transitions. The key takeaway is that recognizing the diversity among MSMEs is key to developing inclusive and successful policies. Finally, a considerable gap in the current literature is the lack of qualitative evidence within quantitative studies. Many studies rely on small samples, descriptive data, or cross-sectional methods, which limit their applicability and their ability to demonstrate cause-and-effect relationships. Additionally, most research overlooks MSMEs' perspectives, adaptive strategies, and real-world challenges, underscoring the need for mixed-method approaches. This suggests that future research should employ mixed methods to gain a more comprehensive understanding of how monetary policy influences MSME investment decisions in real-world settings.

III. METHODOLOGY

3.1 Research Design

To achieve the three main goals of the research, this study used an explanatory sequential mixed-methods design. This approach combines quantitative and qualitative methods in two separate, yet connected phases. The reason for choosing this design is to explore how monetary policy affects MSME investment decisions by merging statistical analysis with real-life insights and experiences.

3.2 Study Area

The study took place in the Lusaka Central Business District (LCBD), which is at the center of Lusaka Province, Zambia's capital city. The LCBD is the city's main commercial and administrative area. It has a high number of businesses, banks, government offices, retail stores, and service industries. This location was chosen for the study because it has a dense population of Micro, Small, and Medium Enterprises (MSMEs) operating in sectors such as retail, hospitality, financial services, information technology, and informal trade. MSMEs in the LCBD are crucial to the local economy. They offer jobs, goods, and services to a wide range of consumers. The variety and number of businesses in this area provide a robust sample for assessing investment decisions and reactions to monetary policy.

3.3 Target Population

According to the Revised National Micro Small and Medium Enterprise Development Policy, 2023 of Zambia, there were 110,508 tax-paying micro, small, and medium enterprises (MSMEs) in the country. The policy notes that the population is concentrated in Zambia’s major urban and peri-urban areas, especially Lusaka (43.5%), Copperbelt Province (27%), and parts of Southern Province (15%). These areas have better access to commercial banks, microfinance institutions, and fintech platforms. They also represent key economic zones where MSMEs work with formal financial institutions and experience the impact of monetary policy changes. Therefore, the number of MSMEs in Lusaka Province is approximately 48,078, calculated as $110{,}508 \times 0.435$.

3.4 Sampling Procedure and Sample Size

To determine the appropriate sample size for this study, Yamane’s (1967) formula is applied. This formula provided a simplified method for calculating sample size for a finite population, using a specified margin of error and assuming a 95% confidence level. This study focuses on MSMEs that have been in business for at least three years. These firms are more likely to have felt the effects of recent monetary policy changes, including the rise in the policy rate from 9% to 14.5% between 2022 and 2024. Using Yamane’s formula, the Sample size for this study comprised 100 Micro, Small, and Medium Enterprises (MSMEs) in Lusaka, with a focus on those operating in the manufacturing, retail, and service sectors. According to the *Revised National Micro, Small and Medium Enterprise Development Policy* (Bank

of Zambia, 2025), in 2019, Zambia had 110 ,508 formal MSMEs, of which nearly half (47 %) were engaged in wholesale and retail trade and repair of motor vehicles and motorcycles. Other sectors, such as construction, agriculture, and manufacturing, represented smaller percentages of the total enterprise population, indicating that trading and related activities are dominant. This study uses stratified sampling to ensure the sample accurately reflects the composition of MSMEs across key economic sectors in Zambia. Stratified sampling divides the population into distinct subgroups, or strata, based on shared characteristics like sector or size. Then, it selects samples proportionally from each subgroup. For the qualitative phase, purposive sampling is used to select key informants, including MSME owners, commercial bank lending officers, and policymakers involved in monetary policy and MSME financing.

3.5 Data Collection Instruments and Procedure

In this study, both primary and secondary data collection methods were used to gather detailed information on how monetary policy affects MSME investment decisions. As indicated in *Table 1*, primary data were collected using structured questionnaires and semi-structured interviews with MSME owners and financial managers. This helped capture insights on investment behavior, access to credit, and reactions to changes in interest rates and liquidity conditions. The questionnaires included closed-ended and Likert-scale questions to measure perceptions and decisions. The interviews offered an opportunity to explore the challenges and contextual factors affecting investment in more depth. The interview questions focused on understanding the challenges MSMEs face in accessing financing during periods of monetary policy change, the adaptation they employ, and their perceptions of the effectiveness of policy measures.

For the qualitative phase, purposive sampling was used to select key informants, including MSME owners, commercial bank lending officers, and policymakers involved in monetary policy and MSME financing. A total of 25 participants were interviewed. This group included 15 MSME owners chosen from the 100 SMEs in the quantitative survey to ensure diversity in size, sector, and geographic location. Five bank lending officers were selected based on their experience in lending to MSMEs and their understanding of policy transmission channels. Five policymakers from the Bank of Zambia participated; they were involved in implementing monetary policy. This approach ensured that the qualitative data collected provided context and explanations for the trends observed in the quantitative analysis, thereby strengthening the overall credibility of the study's findings.

Secondary data was sourced from official reports, policy documents, and financial statistics published by the Bank of Zambia, the Zambia Development Agency, and other relevant institutions. This provided solid evidence on monetary policy trends, interest rate movements, and the performance of the MSME sector. Data collection followed a clear process. Target respondents were selected and identified using purposive and stratified sampling techniques. Questionnaires were distributed, scheduled interviews were conducted, and verified secondary sources were used to ensure reliability and validity. This method yielded a robust dataset that captured both the quantitative and qualitative aspects of monetary policy's effects on MSME investment decisions.

Table 1

Structure of the Survey Questionnaire Used in the Study

Section	Content / Focus	Number of Items	Scale / Measurement
Demographic & Firm Characteristics	Firm size, sector, age, ownership, number of employees	6–8	Categorical / Nominal (e.g., small, medium; manufacturing, retail, services)
Access to Finance & Credit Conditions	Sources of finance, ease of obtaining credit, interest rates, collateral, and approval processes	8–10	Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)
Investment Decisions & Activities	Capital investment, expansion plans, equipment purchases, workforce development, timing of investments	10–12	Likert scale (1 = Very Low Influence to 5 = Very High Influence)
Monetary Policy Awareness & Impact	Awareness of BoZ policies, perception of interest rates and liquidity, influence on borrowing & investment decisions	6–8	Likert scale (1 = Not at all aware/affected to 5 = Highly aware/affected)
Total	–	**30–38**	–

3.6 Data Analysis

Quantitative data from structured questionnaires were first coded and entered into statistical software (STATA) for analysis. Descriptive statistics, including means and percentages, summarize respondent demographics and key variables. Inferential statistics, like correlation and regression analysis, examined relationships between monetary policy indicators, such as interest rates and liquidity measures, and MSME investment behavior. Qualitative data from

interviews were analyzed with thematic content analysis. This process involved identifying recurring themes, patterns, and narratives related to investment decision-making, credit access, and reactions to monetary policy changes. Triangulation of quantitative and qualitative findings was done to improve the reliability and validity of the results. This ensured the analysis captured both the measurable effects of monetary policy and the contextual factors influencing MSME investment decisions.

3.7 Ethical Consideration

Ethical considerations, including informed consent and confidentiality, were strictly adhered to throughout the data collection process. Participation was voluntary, and respondents could withdraw at any time without penalty. Data were stored securely, accessible only to the research team, and the findings were reported accurately, without fabrication, falsification, or misrepresentation. Lastly, the researcher obtained approval from an appropriate research ethics committee or institutional review board before data collection.

IV. FINDINGS & DISCUSSION

4.1 Findings

Table 2 (*Firm Size*) shows the makeup of the 100 MSMEs surveyed, categorized by firm size and sector distribution. Out of 100 businesses, 40% were micro-enterprises, 35% were small enterprises, and 25% were medium-sized firms. This highlights the dominance of smaller firms in Lusaka's MSME scene. Regarding sector distribution, 30% of the firms worked in manufacturing, 45% in services, and 25% in retail and wholesale.

Table 2

Firm Size

Characteristic	Category	Frequency (%)
Firm Size	Micro	40%
	Small	35%
	Medium	25%
Sector	Manufacturing	30%
	Services	25%
	Retail & Wholesale	45%

Table 3 (*Sectoral Differences in Response to Monetary Policy*) indicates that interest rate increases affect firms differently across sectors, with the manufacturing sector exhibiting the highest sensitivity. Of the 30 manufacturing firms surveyed, 27 (90%) reported being negatively affected by rising interest rates. This high proportion suggests that manufacturing businesses are particularly dependent on external financing to support capital-intensive activities such as purchasing machinery, equipment, and raw materials. As borrowing costs increase, these firms face higher financing expenses, which can reduce their capacity to invest and expand production.

Table 3

Sectoral Differences in Response to Monetary Policy

Sector	Firms Affected by Interest Rate Increase	Percentage
Manufacturing	27 out of 30	90%
Retail	36 out of 45	80%
Services	16 out of 25	64%

These findings in Table 3 are consistent with the literature on monetary policy transmission, which suggests that interest rate increases raise the cost of borrowing and, in turn, reduce investment by firms, particularly in capital-intensive industries. For example, Mishkin (2016) and Durante et al (2022) explain that the interest rate channel of monetary policy affects firms' investment decisions by increasing the cost of capital, thereby discouraging expansion and capital expenditure. Similarly, Akarsu et al (2025) found that increases in borrowing costs significantly reduce firm investment, particularly for firms that rely heavily on external financing.

The retail sector also demonstrates substantial sensitivity, with 36 out of 45 firms (80%) reporting negative effects from rising interest rates. Retail businesses often rely on short-term credit to finance inventory purchases and maintain working capital. When interest rates rise, the cost of maintaining inventory and financing operations increases, reducing profitability and limiting business expansion. These findings align with the work of Bernanke and Gertler (1995), who emphasize the role of the credit channel in monetary policy transmission. Their study highlights that tighter monetary conditions restrict access to credit and increase financing costs, thereby limiting firms' operational and investment activities.

In comparison, the services sector appears relatively less affected, although the impact remains significant. 16 out of 25 firms (64%) reported being affected by higher interest rates. This comparatively lower percentage may reflect that many service-oriented businesses require less capital investment and rely more on human capital than on borrowed funds. As a result, they may be somewhat more resilient to changes in borrowing costs than manufacturing or retail firms. Overall, these findings suggest that interest rate increases disproportionately affect capital-intensive sectors, particularly manufacturing, while sectors that require less physical capital, such as services, demonstrate relatively lower sensitivity. This highlights the importance of considering sector-specific dynamics when designing monetary policy, as interest rate changes may have uneven effects across segments of the economy.

Overall, these findings suggest that rising interest rates have a bigger impact on capital-intensive sectors, especially manufacturing. In contrast, sectors that rely less on physical capital, such as services, exhibit lower sensitivity. This pattern is consistent with existing research on how monetary policy works. It emphasizes that the effects of interest rate changes vary across sectors, depending on their financing structure and capital needs. Therefore, the results underscore the need to consider sector-specific factors when setting monetary policy, as interest rate changes can affect different parts of the economy unevenly.

Table 4

Monetary Policy Changes by Firm Size

Firm Size	Firms Reporting Reduced Investment	Percentage
Micro	20 out of 40	50%
Small	26 out of 35	74%
Medium	19 out of 25	76%

The findings in Table 4 (*Monetary Policy Changes by Firm Size*) show that small (74%) and medium (76%) enterprises are more affected by increases in the monetary policy rate than micro enterprises. This pattern aligns with existing studies suggesting that firm size affects sensitivity to monetary policy. Smaller and medium-sized firms depend more on formal credit markets, while micro-enterprises often rely on informal financing (Beck et al, 2005, & Lamya, 2021). The lower responsiveness of micro firms does not necessarily mean they are more financially resilient. It actually reflects their limited involvement in formal financial markets and obstacles to accessing credit. These results highlight the need to consider firm size when examining how monetary policy affects investment behavior. Exposure and vulnerability differ across enterprise categories.

Table 5

Increase in Interest Rate Vs Investment Decisions

Response	Number of Firms	Percentage
Strongly Reduced Investment	35	35%
Moderately Reduced	40	40%
Slightly Reduced	15	15%
No Impact	10	10%
Total	**100**	**100%**

Table 4 (*Increase in Interest Rate vs Investment Decisions) shows that 35% of firms significantly reduced investment,* and 40% moderately reduced investment due to higher interest rates. This means that 75% of MSMEs reported some reduction in investment. The effect was especially strong in manufacturing and medium-sized firms. These results support the interest rate channel of monetary policy, which claims that higher policy rates increase borrowing costs and discourage investment (Mishkin, 2016). Many firms surveyed mentioned that rising interest rates led to less borrowing from financial institutions and delayed planned investments. This provides evidence that capital-intensive, externally financed firms respond most strongly to changes in interest rates (Akarsu et al., 2025; Beck et al., 2005). Overall, the findings show that monetary policy changes can directly affect MSME financing and investment decisions, depending on sector and firm size.

Table 6

Impact of Reserve Requirement Changes on Bank Credit Access

Firm Size	Reduced Credit Access	No Change	Percentage
Micro	20	30	50
Small	20	10	30
Medium	15	5	20
Total	**50**	**50**	**100**

Reserve requirements set the amount of deposits that commercial banks must hold as reserves rather than lend. When these requirements rise, banks can lend less money, which may reduce the credit available to businesses, including MSMEs. Table 5*(Impact of Reserve Requirement Changes on Bank Credit Access*) shows that 20 out of 50 (40%) small firms reported reduced credit access, while 30 out of 50 (60%) reported no effect or change. This shows that microenterprises are somewhat shielded from changes in formal bank credit because they rely on informal funding. 20 out of 30 (66%) Small firms and 15 out of 20 (75%) medium-sized firms reported reduced credit access because of changes in reserve requirements. This indicates that Small and medium-sized firms feel the impact of changes in reserve requirements more directly. The findings show that higher reserve requirements usually tighten credit conditions. Banks become more careful in how they distribute their limited funds. In these cases, banks tend to favor lending to larger, established firms seen as lower risk, putting MSMEs at a disadvantage. This trend shows that changes in reserve requirements can hurt smaller firms more, especially since they are already struggling to access formal credit markets. However, many MSMEs do not see these adjustments in reserve requirements as directly affecting their investment choices. This could be because the impact of reserve requirements is mostly indirect, affecting the banking sector rather than causing immediate changes in borrowing costs. As a result, MSMEs might only feel these effects after banks change their lending policies or tighten credit conditions.

Table 7

Perceived Effectiveness of Policy Interventions Supporting SMEs

Response	Number of Firms	Percentage
Highly Effective	18	18%
Moderately	37	37%
Slightly	28	28%
Not effective	17	17%
Total	100	100%

The results on how well policy interventions address monetary policy challenges reveal mixed views among MSMEs. Table 7 (*Perceived Effectiveness of Policy Interventions Supporting SMEs*) shows that only 18% of respondents found current interventions very effective, 37% moderately effective, 28% slightly effective, and 17% not effective at all. These findings suggest that while initiatives aimed at improving access to finance and reducing vulnerability to interest rate changes exist, their impact remains limited. This supports the literature indicating that MSMEs often encounter structural barriers. These barriers include cautious financial institutions and strict documentation requirements, which limit the effectiveness of policy interventions (Lamya, 2021). Therefore, to make these policies more effective, it is important to tackle broader institutional challenges and improve systems that ensure financial support actually reaches MSMEs.

Table 8

Access to Loans and Interest Rate Conditions

Financing condition	Number of Firms	Percentage
MSMEs that obtained bank loans	60	60%
MSMEs without bank loans	40	40%
Loans offered at favorable interest rates	21	21%
Loans offered at unfavorable/high interest rates	39	39%
Total	**100**	**100%**

*35% of the 60 MSMEs that accessed bank loans received loans at favorable interest rates (0.35 × 60 = 21 firms).

The findings indicate that 60% of surveyed MSMEs obtained bank loans to support their operations or investments, suggesting that a significant proportion of firms in the sample had some access to formal financial institutions. This reflects a moderate degree of financial inclusion within the MSME sector. However, access to credit alone does not necessarily translate into improved investment capacity if borrowing conditions remain unfavorable. A critical observation from the results is that only 35% of the firms that accessed bank loans received financing at favorable interest rates, representing just 21% of the total sample of 100 SMEs. This implies that most MSMEs that obtained loans were still subject to relatively high borrowing costs. High lending rates may limit MSMEs' ability to expand production, invest in new technologies, or increase employment. Instead, many firms may be compelled to use borrowed funds primarily for short-term operational needs rather than long-term capital investment. Furthermore, the findings showed that 40% of MSMEs did not obtain bank loans, suggesting that a substantial portion of the sector remains excluded from formal financial markets. These firms are likely to rely on informal sources of finance such as personal savings, family support, or informal lending networks. While such sources may provide short-term liquidity, they are typically insufficient for large-scale business expansion or investment in productive assets.

Table 9

MSME Financial Profiles

Characteristic	Mean / Range
Annual Turnover (ZMW)	250,000 – 2,500,000
Liquidity Ratio	0.9 – 2.3
Leverage Ratio	0.2 – 1.8

Table 9 (*MSME Financial Profiles*) presents the financial profiles of the 100 MSMEs surveyed, highlighting significant variation across firm size and sector. Annual turnover ranged from ZMW 250,000 among micro-enterprises to over ZMW 2.5 million for medium-sized firms, reflecting the substantial scale differences within the sample. Liquidity ratios ranged from 0.9 to 2.3, suggesting varying capacities of MSMEs to meet short-term obligations. In contrast, leverage ratios (debt-to-equity) ranged from 0.2 to 1.8, indicating that some firms were highly reliant on external financing, whereas others relied primarily on internally generated capital. These financial characteristics are directly relevant to the study's objectives. Firms with stronger liquidity and lower leverage are more likely to absorb monetary policy shocks and maintain investment activities. At the same time, highly leveraged or less liquid MSMEs may curtail investment when interest rates rise. Similarly, access to affordable finance is a key determinant of MSME responsiveness to monetary policy interventions. By capturing these differences, the descriptive analysis provides a foundation for understanding how monetary policy impacts investment behavior across varying financial profiles.

4.2 Correlation Findings

The results in Table 10 indicate that the policy interest rate is negatively correlated with MSME investment ($r = -0.33$, $p < 0.01$), suggesting that increases in borrowing costs reduce investment activity among MSMEs. This finding supports the theoretical expectation that tighter monetary policy discourages borrowing and capital expansion among small firms. Liquidity provision shows a moderate positive correlation with MSME investment ($r = 0.29$, $p < 0.01$), indicating that increased liquidity in the financial system may improve access to financing and encourage business investment. This suggests that expansionary monetary policy may support MSME growth. Inflation exhibits a weak, statistically insignificant negative relationship with MSME investment ($r = -0.19$). This implies that while rising prices may create uncertainty for small businesses, inflation may not directly influence investment decisions as strongly as other monetary variables. Access to bank loans exhibits a moderate positive relationship with MSME investment ($r = 0.36$, $p < 0.01$), highlighting the importance of financial access for business expansion. MSMEs that can obtain formal financing are more likely to invest in productive activities. Additionally, the matrix reveals that policy interest rates are strongly negatively correlated with liquidity provision ($r = -0.61$, $p < 0.01$), which is consistent with monetary policy theory. When central banks raise policy rates, liquidity conditions in the financial system often tighten, reducing credit availability (Mishkin, 2016; Akarsu et al, 2025).

Table 10

Correlation Matrix of Key Variables (N=100)

Variable	1	2	3	4	5
Policy Interest Rate	1.00				
Liquidity Provision	-0.61**	1.00			
Inflation	-0.25*	0.18	1.00		
Access to Bank Loans	-0.45**	0.41**	-0.21*	1.00	
Firm Financial Position	-0.33**	0.29**	-0.19	0.36**	1.00

**Significant at $p < 0.05$, **Significant at $p < 0.01$*

4.3 Regression Analytical Findings

As indicated in Table 11, multiple regression analysis was conducted to examine the effect of Zambia's monetary policy mechanisms on MSME investment decisions while controlling for firm-specific characteristics. The results provide statistically significant evidence supporting the study's hypotheses. In contrast, Liquidity Provision exhibited a positive and statistically significant coefficient ($\beta = 0.32$, $p = 0.024$). This suggests that expansionary monetary policy measures positively influence investment by MSMEs. Increased liquidity in the financial system likely eases credit conditions and enhances working capital availability, thereby encouraging firms to undertake investment projects. The coefficient for Inflation is negative ($\beta = -0.21$) and marginally significant ($p = 0.059$). While the effect is weaker than that of interest rates, the result suggests that rising inflation moderately discourages investment by MSMEs. Inflation may reduce purchasing power, increase input costs, and generate economic uncertainty, leading firms to delay or scale down capital expenditure decisions (Mishkin, 2016).

Notably, Access to Bank Loans shows a strong positive, highly significant relationship with MSME investment ($\beta = 0.41$, $p = 0.000$). This variable emerges as one of the most influential predictors in the model. The finding confirms

the mediating role of financial access in the transmission of monetary policy, indicating that the effectiveness of policy interventions depends largely on whether MSMEs can secure affordable credit. Similarly, Firm Financial Position showed a positive and statistically significant coefficient (β = 0.29, p = 0.001). Financially stronger MSMEs—characterized by better liquidity and manageable leverage—are more capable of sustaining investment even under tighter monetary conditions consistent with the Financial Accelerator theory (Bernanke & Gertler, 1995). This supports the hypothesized moderating effect of financial health, consistent with the Financial Accelerator theory, which posits that firms with stronger balance sheets are less vulnerable to credit market shocks. Overall, the regression results demonstrated that monetary policy affects MSME investment both directly (through interest rates and liquidity conditions) and indirectly (through credit access and firm financial resilience). The findings reinforced the importance of firm-specific characteristics in shaping the transmission of monetary policy to the real sector.

Table 11

Regression Results (N=100)

Variable	Coefficient (β)	Std. Error	t-value	p-value
Constant	2.34	0.52	4.50	0.000
Policy Interest Rate	-0.45	0.12	-3.75	0.001
Liquidity Provision	0.32	0.14	2.29	0.024
Inflation	-0.21	0.11	-1.91	0.059
Access to Bank Loans	0.41	0.10	4.10	0.000
Firm Financial Position	0.29	0.08	3.63	0.001

*****$R^2 = 0.68$, Adjusted $R^2 = 0.65$, $F(5, 94) = 22.45$, $p < 0.001$*

The qualitative component of this study explored the experiences and perceptions of MSME owners regarding monetary policy, credit access, and firm performance. Interviews with 15 MSME owners, 5 Bank lending Officers were selected based on their involvement in lending to MSMEs and knowledge of policy transmission channels, 5 policymakers/regulators from the Bank of Zambia were analyzed using thematic analysis, yielding four key themes: Access to Credit, Policy effectiveness and awareness, and Institutional Challenges. Participants frequently highlighted the difficulty of obtaining loans from financial institutions. At the same time, others highlighted the significant risks associated with lending to small businesses and the difficulties of loan repayment. Many noted that while policies exist to facilitate credit, practical access often depends on relationships with bank officers. One participant interviewed explained:

> *"Even though the bank says loans are available for small businesses, you really need to know someone inside to get your application considered." (**Interviewee 09**, 22 October 2025, Lusaka).*

This qualitative insight complements the quantitative finding that Access to Bank Loans significantly influences firm performance, illustrating the interpersonal and procedural barriers behind the numerical relationship. MSME owners expressed varying levels of understanding regarding monetary policies, especially interest rate changes and liquidity provisions. Some noted that the lack of awareness limited their ability to respond strategically to policy changes:

> *"I hear about changes in interest rates in the news due to the BOZ changing the MPR, but I have no idea how some of these changes will affect my business." (**Interviewee 03**, 28 October 2025, Lusaka).*

This helps explain why the Policy Interest Rate has a negative effect in the quantitative analysis: firms that are unaware of or unprepared for policy shifts may experience adverse impacts. Several participants reported delays and inconsistencies in liquidity provision programs, which sometimes limited their effectiveness:

> *"The government programs, such as CDF, are good in theory, but it takes a long time for you to get that money. Actually, by the time we get the money, the business opportunity has already gone." (**Interviewee 12**, 30 October 2025, Lusaka).*

Both bank officers and policymakers highlighted that policy rate changes do not always fully translate into lower lending rates for MSMEs due to perceived credit risks and high transaction costs. One bank officer mentioned this:

> *"Even when the central bank reduces the MPR, we often cannot lower our lending rates for small businesses because they lack collateral and carry higher default risk. This has actually been a big problem in Lusaka." (**Interviewee 02**, 28 October 2025, Lusaka).*

Another loan officer stated that:

> *"Most MSMEs come to us with good business ideas, but they fail to meet collateral requirements, which makes lending risky." (**Interviewee 05**, 14 November 2025, Lusaka).*

On the other hand, one policymaker had this to say:

> *"Our policies aim to make credit cheaper, but structural factors in the banking sector limit how effectively these changes reach small firms."* ***(Interviewee 4****, 05 December 2025, Lusaka).*

The findings show that, despite the formal availability of loans and government policies, MSMEs in Lusaka encounter major structural and informational obstacles that limit their access to monetary policy benefits. Interviewees highlighted procedural challenges and the need for personal connections to secure credit. This reflects the interpersonal and institutional limitations behind the strong link between access to bank loans and MSME investment found in the quantitative analysis (Beck et al., 2005). Limited knowledge about monetary policy, including shifts in the policy interest rate and liquidity provisions, further restricted MSMEs' ability to respond effectively. This helps clarify the negative impact of higher interest rates on investment (Mishkin, 2016).

Participants also noted delays and inconsistencies in government liquidity programs, suggesting that even expansionary monetary policy may not improve financing conditions for MSMEs. Practices in the banking sector, such as strict collateral requirements and cautious lending, often hinder reductions in lending rates, despite changes in the central bank's monetary policy rates. These observations relate to the Financial Accelerator theory (Bernanke & Gertler, 1995), which suggests that firms with weaker financial positions or limited access to formal credit are more susceptible to shocks, regardless of policy efforts. Overall, the qualitative data emphasize that the success of monetary policy and government interventions for MSMEs depends not just on formal policies but also on institutional ability, access to information, and structural issues within the financial system.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study examined how Zambia's monetary policy affects MSME investment decisions. The findings showed that monetary policy, through interest rates, inflation control, reserve requirements, and credit availability, directly impacts MSMEs' ability to plan, finance, and carry out investments. A survey of 100 MSMEs indicated that high lending rates are the biggest barrier to investment. Many MSMEs find it hard to access affordable credit, which limits their ability to expand operations, buy modern equipment, or enter new markets. Another key conclusion is that credit accessibility is strongly influenced by monetary policy. Tighter policies, which raise interest rates and limit liquidity in the banking system, hit MSMEs harder because they often have less collateral and weaker financial records compared to larger companies. This finding supports global and regional research highlighting the vulnerability of MSMEs to strict monetary policies.

The study also pointed out that the effects of monetary policy vary across different sectors and firm sizes. Manufacturing and service-oriented MSMEs respond differently to policy changes, with smaller businesses often facing more financial challenges than larger firms. This highlights the need for sector-specific approaches when designing and implementing monetary policy. While current policy measures have offered some help to MSMEs facing restrictive monetary conditions, the study notes gaps in the accessibility, awareness, and effectiveness of these initiatives. Targeted actions, such as favorable lending schemes, credit guarantees, and tailored liquidity support, could improve the resilience and investment capacity of MSMEs. In summary, the study found that Zambia's monetary policy has a dual impact. It is crucial for keeping economic stability, but it can also limit MSME investment when it is too restrictive. For sustainable growth, a more balanced strategy is necessary. This should combine macroeconomic stability with targeted support for MSMEs, enabling this sector to thrive and contribute significantly to the national economy.

5.2 Recommendations

Firstly, policymakers should implement monetary policies that are MSME-sensitive. Policymakers should strengthen the transmission of monetary policy to SMEs by supporting targeted financing facilities through banks and enhancing credit guarantee schemes. Lower-cost funds and partial guarantees can enable SMEs to invest in productive assets, overcoming collateral constraints and perceived credit risks. Secondly, the Bank of Zambia and other financial institutions should Strengthen Financial Literacy and Advisory Support by providing training and advisory services to help SMEs understand monetary policy, investment planning, budgeting, and financial products. Well-informed entrepreneurs are more likely to make responsible borrowing decisions, improve repayment rates, and leverage financing for growth.

Thirdly, financial institutions and other stakeholders should develop alternative financing mechanisms such as equipment leasing, venture capital, and SME investment funds to complement traditional bank loans. Leasing allows SMEs to acquire assets without large upfront capital, while investment funds provide equity for high-growth or innovative firms. Regulators and financial institutions should promote partnerships, supportive frameworks, and financial innovation to facilitate these options. Lastly, there should be alignment of monetary, fiscal, and institutional

policies to reduce structural barriers. Combine interest rate reductions with tax incentives, investment allowances, and regulatory simplification to encourage investment. Collaboration between financial authorities, regulatory agencies, and business development organizations can create a supportive environment for MSMEs.

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