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Interest Rate Dynamics, Perceived Financial Risk, and SME Investment Choices in Kenya: Evidence from the MSMEs Register

Tonny Odhiambo
Presbyterian University of East Africa, Nairobi, Kenya
Email: tonny.odhiambo@puea.ac.ke

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Abstract

Small and Medium Enterprises (SMEs) contribute substantially to employment, income generation, innovation and local economic activity, yet productive investment can be constrained when finance is costly, difficult to obtain or uncertain. In Kenya, evidence linking financing conditions, perceived financial risk and enterprise investment remains fragmented, particularly when current firm-level evidence is distinguished from macroeconomic interest-rate conditions. This article addresses that gap using genuine secondary data from the World Bank Enterprise Survey (WBES) 2025 for Kenya. The study is quantitative and explanatory, using a cross-sectional secondary-data design. The official Kenya 2025 file contains 1,024 establishments and 336 variables. Financing conditions are examined through documented indicators including access to finance as a business obstacle, internal and bank financing of working capital, bank financing of fixed assets, and loan or line-of-credit access. Investment is represented by reported fixed-asset purchases and expenditure on equipment and land or buildings. The study finds that the WBES provides a suitable empirical basis for distinguishing financing constraints, financing structure and observable investment activity, while interest-rate stability must be treated as a macro-financial context rather than an invented firm-level scale. The contribution is methodological as well as substantive, establishing a reproducible foundation for future inferential analysis of SME financing and investment in Kenya.

Keywords: interest rates; financial risk; sme investment; kenya; MSMEs

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INTRODUCTION

Small and medium enterprises are central to productive economies because they create employment, distribute income, introduce products and services, and connect local markets with national and international value chains. Their contribution, however, depends on the ability to maintain productive capacity and

undertake investment when opportunities arise. Investment in equipment, premises, technology, inventories and other productive assets requires firms to commit resources before the associated returns are realized. The financing environment consequently becomes an important part of the decision context in which smaller enterprises operate.

At the global level, access to finance remains a persistent concern for smaller firms. Financing constraints may reflect inadequate collateral, limited credit histories, information asymmetry, high transaction costs, lender risk assessment and the structure of financial markets. Earlier cross-country evidence established that financing and legal constraints vary by firm size and institutional environment (Beck et al., 2005, 2006). More recent research continues to show that financing restrictions can affect investment capacity and business adjustment. Khan, (2022), using World Bank enterprise-survey follow-up data, reports that credit-constrained SMEs experienced greater liquidity pressures and had more difficulty adjusting their operations during a major economic shock. Nicolas, (2022) similarly finds that short-term financial constraints can affect SME investment through the working-capital channel.

The investment problem is therefore not limited to whether a firm can obtain a loan. It also concerns the terms under which finance is available, the financing mix selected by the enterprise, and the extent to which financing uncertainty changes the willingness to commit resources. Martinez-Cillero et al., (2023) show that financing constraints can be examined through investment efficiency and that collateral and both internal and external finance are relevant to SME investment. Evidence on firms' indebtedness and financial restrictions likewise indicates that financing conditions can be associated with lower investment among SMEs (De et al., 2022).

These findings make the study of financing conditions particularly important in developing economies. African enterprises operate within financial systems where collateral, credit information, institutional capacity and banking structures may differ materially from high-income settings. Beck & Cull, (2014) document the distinctive challenges of SME finance in Africa, while Simba et al., (2024) show that involuntary financial exclusion remains a significant issue for African SMEs. The Kenyan context is therefore not simply a geographical case; it provides a setting in which a relatively developed financial system coexists with continuing constraints on access to appropriate finance for smaller enterprises (Abdisa & Hawitibo, 2021).

Kenya offers a particularly relevant setting for examining enterprise finance because formal banking, digital finance and other financial innovations coexist with persistent financing constraints. World Bank evidence on Kenya has identified insufficient access to finance as a barrier to MSME productivity and highlighted a substantial financing gap. At the macro-financial level, the Central Bank of Kenya uses the Central Bank Rate as a key signal of monetary policy and monitors credit and other financial conditions as part of its mandate for price and monetary stability.

These conditions matter to enterprises because changes in the cost or predictability of borrowing can alter the feasibility of investment projects (Machokoto & Omotilewa, 2024).

However, macroeconomic interest-rate conditions should not be conflated with firm-level perceptions or outcomes. The Kenya 2025 WBES does not contain a direct five-point composite variable called interest-rate stability. It does contain establishment-level measures of access to finance, financing sources, loan and line-of-credit access, fixed-asset financing and actual investment activity. This distinction is fundamental to the revised manuscript. Rather than assigning a constructed risk or interest-rate score to Kenyan firms, the analysis uses the variables that the World Bank actually collected and documents the macroeconomic interest-rate environment separately.

The urgency of the question is practical. If enterprises cannot obtain finance on workable terms, investment opportunities may be postponed, scaled down or funded through internal resources. A firm that uses internal funds for working capital may consequently have fewer resources available for equipment or premises. Conversely, access to formal credit may allow investment that would otherwise be delayed. These mechanisms imply that policymakers and financial institutions need to distinguish among the availability of credit, its cost, collateral requirements, credit information, and the financing sources actually used by enterprises.

The current evidence base also makes a Kenya-specific secondary-data analysis valuable. The official Kenya 2025 WBES contains 1,024 establishments and 336 variables, with detailed finance and investment information. The dataset therefore provides an opportunity to move beyond broad macroeconomic indicators and examine documented enterprise-level financing behaviour. It also allows the revised manuscript to correct the central integrity problem identified by reviewers: the earlier version presented simulated observations as if they represented Kenyan firms. Those observations are not used in the present analysis.

Three strands of prior evidence are especially relevant. First, the financing-constraint literature establishes that smaller firms face distinctive obstacles because information asymmetry and collateral limitations can restrict external finance (Beck et al., 2006; Beck et al., 2005). Ayyagari et al., (2008) further demonstrate the importance of finance within the broader business environment. These studies establish the financing-constraint problem but do not provide a current Kenya-specific examination using the 2025 WBES.

Second, research connects financing constraints directly to investment behaviour. Nicolas, (2022) finds that short-term credit constraints can cause SMEs to forgo investment opportunities when working-capital requirements compete for scarce funds. Martinez-Cillero et al., (2023) similarly identify financing constraints across SME asset classes and show the importance of collateral and financing structure for investment efficiency. These studies support the expectation that

finance and investment should be examined jointly, while also showing that investment is better represented by actual asset expenditure than by a generic agreement scale.

Third, uncertainty and financing conditions interact. Favara et al., (2021) link uncertainty, debt access and precautionary behaviour, while Benlemlih et al., (2024) examine the international relationship between economic policy uncertainty and access to finance. Such evidence is relevant to discussions of interest-rate stability, but it does not justify inventing a firm-level interest-rate-stability scale where the underlying dataset does not contain one.

Financing constraints refer to situations in which firms cannot obtain external finance in the amount, form or terms required to undertake desired activities. The concept is broader than a simple absence of credit. A firm may have access to a loan but face collateral requirements, high transaction costs, short maturities or conditions that make the financing unsuitable for a particular investment. Conversely, an enterprise may rely heavily on internal funds without being formally credit constrained. The measurement of financing constraints must therefore distinguish access, use and financing terms.

The classic firm-level literature demonstrates that financing constraints vary systematically with firm characteristics and institutional conditions. Beck et al., (2005) show that financial and legal constraints can influence growth and that firm size matters. Beck et al. (2006) demonstrate that financing obstacles differ across firms and countries. Ayyagari et al., (2008) place access to finance within the wider business environment and link financing conditions to enterprise outcomes. These studies provide the conceptual foundation for examining finance as an input into investment decisions.

More recent research deepens the interpretation. Harrison et al., (2022) distinguish supply-side and demand-side influences on SMEs' difficulty in accessing bank finance and show the importance of credit supply during periods of financial stress. Bank market power and discouraged borrowing have also been examined internationally, with evidence that institutional and information-sharing conditions shape financing constraints. Simba et al., (2024) emphasize the institutional dimensions of involuntary financial exclusion among African SMEs.

For the Kenyan case, the implication is that financing constraints should not be reduced to a single perception score. The WBES variable k30 captures access to finance as a business obstacle, while k3a and k3bc identify the financing structure of working capital. k82a/k82b concern formal loan or line-of-credit access, and k5bc captures the share of fixed assets financed by banks. Taken together, these variables provide a more transparent representation of financing conditions than an author-created Likert construct.

Investment is a forward-looking commitment of resources. Keynes, (1937) emphasized expectations and uncertainty as determinants of investment because

firms compare present costs with uncertain future returns. In modern firm-level research, uncertainty can also influence precautionary behaviour and the willingness to assume debt. Favara et al.,(2021) show how uncertainty and access to debt interact in firms' financing decisions. Benlemlih et al., (2024) similarly connect economic policy uncertainty with access to finance across countries.

The financing-constraint perspective complements the uncertainty perspective. A firm may identify a profitable investment but still be unable to undertake it because internal funds are insufficient and external finance is unavailable or too costly. Nicolas, (2022) demonstrates this working-capital channel, while Martinez-Cillero et al., (2023) show that financing constraints can be studied through investment efficiency and that collateral and liquidity conditions matter.

The literature also cautions against using indebtedness as a universal proxy for financial constraint. A firm with substantial debt may have reliable access to finance, while a low-debt firm may be discouraged from borrowing or unable to obtain credit. This distinction supports the use of multiple WBES indicators rather than a single risk score. The same principle applies to interest rates: the macroeconomic policy rate is not equivalent to an enterprise's perceived stability of borrowing costs.

For this reason, the revised manuscript treats interest-rate stability as contextual rather than as a measured latent construct. The Central Bank of Kenya's monetary-policy information can establish the national interest-rate environment, while the WBES provides establishment-level evidence on financing access and investment. Combining these sources conceptually is useful; creating a firm-level score not present in the WBES would not be.

SME finance in Africa is shaped by financial-sector structure, collateral practices, credit information, informality and enterprise heterogeneity. Beck & Cull, (2014) identify persistent barriers in African SME finance, while more recent work emphasizes financial exclusion and the institutional features that shape credit access. The result is a financing environment in which formal credit can be available in principle while remaining inaccessible or unsuitable for particular enterprises.

Kenya is distinctive because financial innovation has expanded the range of financial services available to businesses, yet access to productive investment finance remains an important concern. The World Bank's Kenya supply-chain-finance assessment identifies insufficient finance as a major constraint on MSME productivity. OECD, (2024) likewise emphasizes the importance of monitoring financing conditions for SMEs because financing structures and credit conditions affect enterprise resilience and investment.

The 2025 WBES provides an important opportunity because it contains current establishment-level information and a broad set of standardized variables. The official data catalogue reports 1,024 establishments and 336 variables. The survey includes information on access to finance, working-capital financing, fixed-asset

financing, formal credit and investment activity. This allows the study to identify the actual mechanisms through which finance may be connected with investment.

The literature therefore supports three propositions that guide the analysis: financing constraints can limit investment; financing structure matters because internal and external funds are not equivalent; and uncertainty surrounding financing conditions can affect willingness to commit resources. The propositions guide interpretation rather than serving as evidence of causality. The empirical contribution of the present manuscript is to document these dimensions using the official Kenya 2025 establishment data.

The conceptual framework links financing conditions to productive investment while recognizing the distinction between firm-level measures and the macro-financial context. At the firm level, access-to-finance constraints, working-capital financing structure and formal credit access represent observable financing conditions. Investment is represented by fixed-asset purchase and expenditure on equipment and land or buildings. Establishment characteristics such as size, age, sector and region may be included as controls where appropriate.

The first pathway is a financing-constraint pathway. When access to finance is reported as a substantial business obstacle, an establishment may have fewer resources available for productive investment. This expectation is consistent with the financing-constraint literature and does not require the assumption that every constrained firm will reduce investment by the same amount.

The second pathway is a financing-structure pathway. Internal funds may be used to finance working capital, while bank borrowing may finance a different share of working capital or fixed assets. The mix can therefore matter because internal liquidity and external credit impose different constraints and obligations. The WBES permits this distinction through k3a, k3bc and k5bc.

The third pathway is the formal-credit pathway. Access to a loan or line of credit may expand the financing options available to an establishment. However, access does not necessarily imply use, and use does not necessarily imply investment. The empirical analysis therefore treats loan access as an explanatory indicator rather than assuming a mechanical effect.

Interest-rate conditions sit outside the firm-level measurement model. National interest-rate information provides context for the cost and predictability of borrowing, but the WBES does not provide a direct composite measure of firm-level interest-rate stability. This conceptual separation prevents the methodological error identified by reviewers.

The gap is consequently both empirical and methodological. Empirically, the Kenyan literature needs current firm-level evidence that distinguishes financing constraints, financing structure, formal credit access and observable investment. Methodologically, secondary-data research must preserve the meaning of the variables actually collected rather than reconstructing unsupported latent

constructs. The novelty of the revised manuscript is therefore its transparent alignment between research concepts and documented WBES variables. It does not claim to estimate a mediation mechanism that the available data and verified variables do not directly support (Hansen-Addy et al., 2025).

The study adopts a cautious research stance. It supports the established proposition that financing conditions matter for investment, but it avoids claiming that a cross-sectional survey proves causal effects. It also distinguishes macro-financial interest-rate conditions from establishment-level finance variables. This stance directly addresses the reviewers' concern about overstatement and improves the manuscript's reproducibility.

The first objective is to describe the financing conditions observable among formal private-sector establishments in Kenya using the 2025 World Bank Enterprise Survey. This includes the degree to which access to finance is reported as a business obstacle, the sources used to finance working capital, access to loans or lines of credit, and the financing of fixed assets. The objective is descriptive because the dataset provides a rich set of observed financing indicators and because the study must not impose an unsupported composite scale.

The second objective is to examine the association between documented financing constraints and observable investment activity. Investment is represented by whether establishments purchased fixed assets and by expenditure on equipment and land or buildings. This approach retains the economic meaning of the survey variables and avoids treating a constructed investment-choice score as though it were directly observed.

The third objective is to assess whether financing structure and formal credit access are associated with investment outcomes after accounting for relevant establishment characteristics where the data permit. The intended analytical framework is therefore based on associations and predictive relationships rather than causal claims. Binary outcomes should be modelled with appropriate binary-response techniques and monetary outcomes should be examined with methods suited to skewness and conditional reporting.

The theoretical benefit is the application of financing-constraint theory, information-asymmetry reasoning and investment-under-uncertainty perspectives to current Kenyan establishment-level data. The methodological benefit is the use of a verifiable secondary dataset and transparent variable codes. The practical benefit is the distinction among credit access, financing source, and investment behaviour. Policymakers can use these distinctions to avoid assuming that every financing problem is simply a shortage of loans.

The implications are deliberately bounded. The evidence applies to the population represented by the WBES formal private-sector establishments with at least five employees and should not automatically be generalized to informal microenterprises. The study also cannot establish that a change in interest rates

causes a change in investment because the WBES is cross-sectional and does not provide a direct firm-level measure of interest-rate stability. These limitations are not weaknesses to conceal; they define the appropriate scope of inference.

RESEARCH METHOD

Research Method

Research type and design. The study is quantitative and explanatory, using a cross-sectional secondary-data design. It is a secondary empirical analysis rather than a primary survey and does not use simulated observations. The design is suitable for describing financing conditions and examining statistical associations among documented enterprise characteristics, financing indicators and investment outcomes. It does not, by itself, establish causal effects. Any future regression estimates should therefore be interpreted as conditional associations rather than causal parameters.

Study location and population. The geographical setting is Kenya. The official Kenya 2025 WBES covers formal private-sector establishments with at least five employees. The full Kenya-2025-full-data file contains 1,024 establishments and 336 variables. These establishments constitute the empirical population represented by the secondary dataset. Data source. Data are obtained from the official World Bank Enterprise Surveys platform, catalogue reference KEN_2025_WBES_v01_M. The World Bank reports that the full Kenya dataset contains 1,024 cases and 336 variables. The present researcher did not administer a questionnaire to the establishments and does not claim direct primary data collection.

Data collection procedure. The original survey was conducted under the World Bank Enterprise Surveys programme using standardized instruments and sampling procedures. For the present research, no questionnaire was administered and no respondents were recruited. The researcher obtained the documented Kenya 2025 secondary dataset, identified relevant variables from the codebook, screened valid and special response codes, respected questionnaire skip patterns, and prepared the file for analysis.

This procedure is explicitly different from the earlier manuscript's construction of 420 simulated observations; no simulated data are retained in the revised empirical analysis. Research ethics. The analysis uses publicly documented secondary survey data and does not reproduce personal identifiers. The World Bank source is acknowledged for all derived tables and figures. The study is limited to legitimate secondary use and transparent reporting of the dataset.

Measurement Of Variables

Financing conditions are measured through observed WBES indicators, not an author-created Likert instrument. Variable k30 captures the extent to which access to finance is reported as a business obstacle. Variables k3a and k3bc record the shares of working capital financed from internal funds and bank borrowing,

respectively. Variables k82a/k82b identify access to a loan or line of credit, while k5bc records the share of fixed assets financed through bank borrowing. Each indicator retains its original World Bank coding and scale.

The analysis should not combine these variables into a latent 'perceived financial risk' score unless a separately validated measurement model is estimated from the microdata. Investment is operationalized using observed investment activity rather than an author-created agreement scale. Variable k4 records whether an establishment purchased fixed assets. Variables n5a and n5b record expenditure on equipment and land or buildings. These measures have direct economic meaning and avoid the former problem in which a three-construct Likert dataset was presented as though it had been collected from Kenyan entrepreneurs.

Interest-rate context is treated separately. The Central Bank of Kenya's monetary-policy information provides macroeconomic context on the monetary policy stance and the Central Bank Rate. The firm-level WBES variables provide evidence about financing access and financing sources. The two levels should not be merged into an invented individual-level construct. Controls. Where inferential modelling is undertaken from the microdata, establishment size, age, sector and region should be considered where the relevant variables are available and appropriately coded. This approach reduces the risk that observed financing-investment associations are interpreted without considering basic establishment heterogeneity.

Reliability and validity. Cronbach's alpha for the previous author-created three-construct scale is not appropriate because the revised study does not use that instrument. The earlier erroneous entry 'Investment Choice = α α α 0.902' is removed. Measurement validity is addressed through direct alignment between the research concepts and the World Bank questionnaire variables, use of the official codebook, transparent reporting of variable definitions, and explicit treatment of conditional valid counts. The revised manuscript therefore does not claim psychometric reliability for constructs that were never measured as a multi-item scale in the secondary dataset.

Data Preparation and Analysis

Data preparation begins with the World Bank codebook. Valid responses are distinguished from missing, not applicable, don't know and other special codes. Skip patterns are respected, particularly for variables that are only applicable to establishments meeting earlier questionnaire conditions. This is important because the number of valid observations can differ across variables.

Descriptive analysis is used to summarize the distribution and coverage of the selected financing and investment indicators. For continuous monetary variables, measures such as the mean, median, standard deviation and appropriate percentiles can be reported. Binary investment variables should be summarized through counts

and proportions. These statistics should be presented with valid denominators so that conditional variables are not mistakenly interpreted as applying to all 1,024 establishments.

Association analysis should match the measurement scale and distribution. Binary outcomes such as fixed-asset purchase can be analysed with logistic or other appropriate binary-response models. Monetary expenditure variables may require logarithmic transformation or other distribution-sensitive approaches because financial expenditure is typically skewed. Multivariable models can include establishment controls where available.

The earlier manuscript reported Pearson correlations, regression coefficients and a mediation model using a constructed dataset. Those numerical estimates are deliberately not reproduced in the revised results because they were not generated from the official WBES observations. Reintroducing them would incorrectly attribute artificial values to the World Bank dataset. A scientifically defensible revised manuscript must report only statistics that can be reproduced from the verified data.

Reproducibility is strengthened by identifying the exact dataset reference, variable codes, documented coverage and source. The World Bank catalogue confirms the Kenya 2025 file and its 1,024 cases and 336 variables. Future replication should use the same release, apply the same missing-data rules and report the same denominators.

RESULT AND DISCUSSION

Data Coverage

The official Kenya 2025 WBES contains 1,024 establishments and 336 variables. The data catalogue identifies the Kenya-2025-full-data file as the full establishment-level dataset. This documented coverage replaces the former 420-observation constructed dataset and provides the empirical foundation for the revised manuscript.

Table 1. Documented coverage of selected World Bank Enterprise Survey variables

Indicator	Documented coverage	Interpretation
Kenya 2025 full dataset	1,024 establishments; 336 variables	Full establishment-level file
Establishment start year (b5)	1,024 valid observations	Establishment-age information
Annual sales (d2)	1,024 valid observations	Firm sales measure
Working capital from internal funds (k3a)	1,024 valid observations	Internal financing measure
Fixed assets financed by bank borrowing (k5bc)	359 valid observations	Conditional fixed-asset finance measure

The different valid counts are substantively important. A variable with 359 valid observations should not be interpreted as though it were observed for all 1,024 establishments. Conditional variables arise because the questionnaire routes establishments according to previous responses. Respecting those routes is essential to avoiding denominator errors and misleading percentages.

The data also contain establishment-level measures that can support controls and contextual interpretation. The official catalogue documents establishment start year and annual sales for the full file. These variables can be used to distinguish younger from older establishments and to consider enterprise scale when modelling financing and investment outcomes.

Financing Conditions

Table 2. Principal financing-condition indicators

Indicator	WBES code	Operational meaning
Access to finance obstacle	k30	Degree to which access to finance is reported as a business obstacle
Internal financing of working capital	k3a	Percentage of working capital financed from internal funds
Bank financing of working capital	k3bc	Percentage of working capital financed through bank borrowing
Loan/line-of-credit access	k82a/k82b	Access to formal credit from a financial institution
Bank financing of fixed assets	k5bc	Share of fixed assets financed through bank borrowing

The selected indicators demonstrate why financing conditions should not be represented by one composite score. An establishment may report access to finance as an obstacle while still financing part of its working capital internally. Another establishment may have access to a loan or line of credit but choose not to use bank borrowing for a particular investment. These are economically different states and should remain analytically distinct.

Internal financing is particularly relevant because retained earnings and other internal resources can substitute for external credit when investment requirements are modest, but internal resources may become insufficient for larger fixed-asset purchases. Bank financing of working capital and fixed assets therefore provides a complementary view of how external finance enters enterprise operations.

The conditional coverage of k5bc also illustrates the need for careful reporting. The documented 359 valid observations do not indicate that only 359

establishments are in the survey; they indicate that the variable is observed for a conditional subset. This distinction should be maintained in every table and inferential model.

Observable Investment Activity

Table 3. Observable investment measures

Investment indicator	WBES code	Interpretation
Fixed-asset purchase	k4	Whether the establishment purchased fixed assets
Equipment expenditure	n5a	Expenditure on equipment
Land/building expenditure	n5b	Expenditure on land and buildings

The investment indicators provide a stronger empirical basis than the former 'Investment Choice' scale. A fixed-asset purchase is an observed business action, while expenditure variables quantify the resources committed to particular asset categories. Together they allow investment to be studied as an economic activity rather than as agreement with statements on a Likert scale.

The use of actual investment measures also improves the conceptual fit between the research question and the data. Investment in equipment, land or buildings represents a commitment of resources with expected future returns. It is therefore more closely connected to the investment-under-uncertainty perspective than an unsupported perception score.

The results do not, however, justify a claim that Kenyan SMEs 'strongly prefer' a particular investment option unless the microdata are explicitly analysed to establish that pattern. The revised manuscript therefore reports what the dataset contains and avoids converting the variable documentation into unsupported behavioural conclusions.

This reporting approach directly addresses the reviewers' integrity concern. Figures and tables that previously displayed means for Interest Rate Stability, Perceived Financial Risk and Investment Choice are removed because those values belonged to the constructed dataset. Only tables tied to documented WBES variables are retained.

DISCUSSION

Financing Constraints, Uncertainty And Interest-Rate Context

The documented evidence is consistent with a substantial literature linking financing conditions with enterprise investment, but the present dataset must be interpreted within its design. Financing-constraint theory predicts that enterprises with inadequate external finance may be unable to undertake productive investments that cannot be funded entirely from retained earnings. Ayyagari et al.,

(2008); Beck et al., (2006) provide the broader empirical foundation for this proposition.

The relevance of this mechanism to SMEs is reinforced by recent evidence. Nicolas, (2022) shows that short-term financial constraints can divert resources away from investment toward working-capital needs. Martinez-Cillero et al., (2023) similarly identify financing constraints across different SME asset classes. The Kenyan WBES permits this mechanism to be investigated using observed financing sources and actual fixed-asset investment measures.

The discussion should nevertheless avoid transforming theoretical expectations into findings. The revised manuscript does not report a verified coefficient showing that k30 causes a reduction in k4, n5a or n5b. Such estimates require direct computation from the microdata and appropriate model specification. The current evidence establishes that the variables exist, are observed at documented coverage levels, and can be combined in a reproducible analytical framework.

The distinction between access and use is also important. A business may report finance as an obstacle and still use internal funds, while another may have formal credit access but finance investment from retained earnings. This means that policy interventions aimed simply at increasing the number of loans may not address all financing constraints. Credit design, collateral, information, maturity and pricing can matter simultaneously (Namara et al., 2025).

Financing Uncertainty And Interest-Rate Context

Investment decisions are made under uncertainty because firms cannot know future sales, costs, financing conditions or macroeconomic conditions with certainty. Keynesian reasoning emphasizes expectations and uncertainty, while contemporary evidence shows that uncertainty can influence debt access and precautionary behaviour (Favara et al., 2021). This provides a theoretical reason to examine interest-rate conditions when discussing SME investment.

The methodological boundary is equally important. The WBES does not provide a direct firm-level composite measure of interest-rate stability. Consequently, the revised manuscript does not report the former correlation of .641 or the former regression coefficient of .538 as WBES evidence. Those figures were produced from the earlier constructed dataset and cannot legitimately be attributed to the World Bank.

The Central Bank of Kenya provides the appropriate macro-financial source for interest-rate context. Its monetary-policy statements describe the Central Bank Rate and the broader monetary policy stance. This information can be used to contextualize the financing environment, but a macroeconomic rate series should not be treated as though each establishment reported an identical perception of rate stability.

This distinction improves the manuscript's scientific precision. A future panel design could merge establishment-level investment and financing observations with time-varying interest-rate data, allowing researchers to examine whether changes in borrowing conditions are associated with changes in investment. A repeated-survey or administrative-data design would also strengthen temporal ordering and causal interpretation.

African/Kenyan Implications And Scientific Integrity

Implications For Kenyan Enterprise Finance

The African SME-finance literature indicates that financing constraints are shaped by institutional and enterprise characteristics. Beck & Cull, (2014) identify structural barriers in African financial markets, while Simba et al., (2024) emphasize the problem of involuntary exclusion. Recent evidence also indicates that credit constraints can arise from supply-side conditions rather than simply weak borrower demand (Harrison et al., 2022).

For Kenya, the implication is that financing policy should distinguish among credit availability, credit suitability and investment capacity. An enterprise that lacks collateral requires a different intervention from one that has collateral but faces inadequate cash flow. Likewise, an enterprise with access to a line of credit may need longer-term investment finance rather than additional short-term working-capital credit (Ogunmokun et al., 2026).

Financial institutions can use this distinction when designing products for smaller establishments. The WBES variables suggest several dimensions that can be monitored: the reported obstacle posed by access to finance, the proportion of working capital financed internally, bank borrowing for working capital, formal credit access and bank financing of fixed assets. These dimensions can inform segmentation without assuming that all SMEs have identical financing needs (Kadzima et al., 2025)

Policymakers should also recognize the limits of cross-sectional evidence. The revised manuscript cannot claim that a particular policy will increase investment by a specific amount. It can, however, identify the financing mechanisms that warrant closer investigation and show how a standardized national dataset can support more rigorous follow-up analysis.

Limitations And Future Research

The first limitation is the cross-sectional design. The WBES provides establishment-level information at a point in time and therefore supports association rather than definitive causal inference. Temporal ordering between financing constraints and investment cannot be established from the survey alone. The second limitation concerns coverage. The Kenya 2025 WBES covers formal private-sector establishments with at least five employees. The results should

therefore not be generalized automatically to informal microenterprises, household businesses or the entire universe of Kenyan SMEs. This limitation is particularly important because informal firms can face different financing mechanisms and constraints.

The third limitation concerns interest-rate stability. Because the WBES does not contain a direct firm-level composite measure of interest-rate stability, the manuscript cannot legitimately estimate the former interest-rate-stability construct from the secondary file. Macro-financial interest-rate conditions must be analysed separately using official Central Bank of Kenya time-series information. The fourth limitation concerns conditional variables and missing data. Some indicators are observed only for subsets of establishments, as illustrated by the 359 valid observations for k5bc. Future analyses must use variable-specific denominators and transparent missing-data procedures.

Future research should combine WBES observations with longitudinal or administrative information. A panel dataset could examine changes in investment following changes in financing conditions. A merged firm-macro dataset could also examine whether monetary-policy changes are associated with enterprise investment while preserving the distinction between national interest rates and firm-level financing access. Qualitative research could further explore how entrepreneurs interpret borrowing costs, collateral and uncertainty.

CONCLUSION

This manuscript examines financing conditions and SME investment in Kenya using genuine secondary data from the World Bank Enterprise Survey 2025. Objective one is addressed by documenting the finance variables including access-to-finance obstacles, internal and bank financing of working capital, formal credit access and bank financing of fixed assets. Objective two is addressed by linking the financing-constraint framework to observable investment measures, fixed-asset purchases and expenditure on equipment and land or buildings.

The principal methodological contribution is the replacement of the former constructed 420-observation dataset with the official Kenya 2025 WBES file containing 1,024 establishments and 336 variables. The theoretical contribution lies in connecting financing-constraint, information-asymmetry and investment-under-uncertainty perspectives to a Kenyan establishment-level dataset. The manuscript does not claim that interest-rate stability causes SME investment or that the reported dataset proves a mediation mechanism.

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