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By Christine Waita and Hillary S. Mulindi

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Bridging the Gender Credit Gap: How can we track progress?

By Christine Waita and Hillary S. Mulindi

Abstract

This paper answers a fundamental yet often unresolved question: How can Kenya's gender credit gap be tracked in real time with precision? To monitor progress towards a truly inclusive financial sector, the study proposes a multi-institutional credit analytics dashboard that integrates anonymized data from Credit Reference Bureaus across banks, SACCOs, microfinance institutions and digital lenders. The dashboard delivers real-time insights on credit access, loan performance and institutional lending patterns by gender. As of October 2025, latter reveals stark disparities in loan size, product availability and collateral requirements. This evidence-based tool empowers financial institutions and regulators to implement data-driven interventions and gender-smart product designs. Ultimately, the dashboard transforms isolated data into actionable intelligence, offering a replicable model for bridging the gender credit gap.

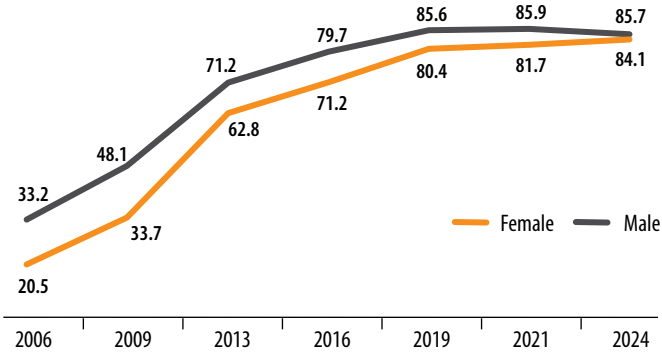
1.0 Introduction

1.1 Background and Context

Gender disparities in access to finance continue to limit women's economic participation globally. Closing gender gaps in entrepreneurship and employment could add up to USD 12 trillion to global GDP by 2025 (McKinsey Global Institute, 2015). Yet, women-owned enterprises receive less than 2% of global venture funding, despite comprising nearly 38% of all businesses worldwide (OECD, 2019; Global Entrepreneurship Monitor, 2020). These global patterns underscore a persistent structural imbalance, where women are active economic agents, but remain systematically underserved by formal financial systems.

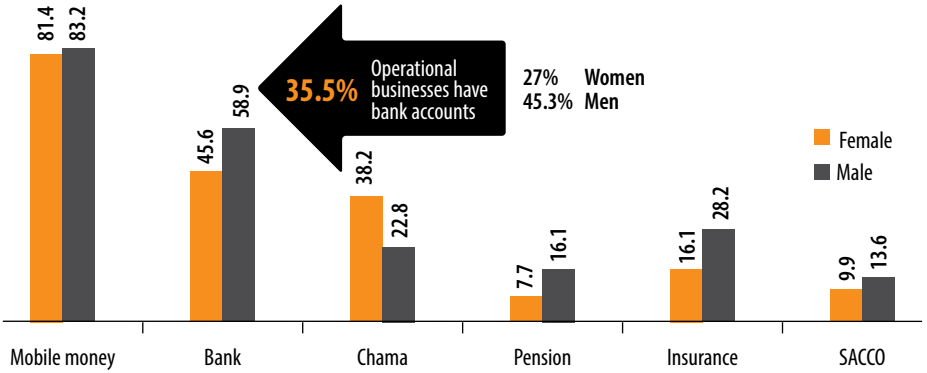
Kenya reflects this global picture as well. Over the past two decades, the country has made remarkable progress in expanding financial inclusion. Access to formal financial services among adults rose from the 30% range in 2006 to over 84% in 2024 (**Figure 1**), largely driven by the rapid adoption of mobile money. During this period, the gender gap in formal access declined sharply from 12.7% in 2006 to just 1.7% in 2024. By 2024, 84.03% of women and 85.68% of men accessed formal financial services (FinAccess, 2024), representing near parity in overall inclusion. Mobile money has been the primary equalizer, with 81% of women and 83.2% of men holding mobile money accounts in 2024.

Figure 1: Financial Inclusion, Male vs Female
Account ownership by gender (% of adults 18+)



Source: FinAccess 2024:

Figure 2: Financial Account ownership by type of account by gender, 2024 (% of adults 18+)



Source: FinAccess 2024:

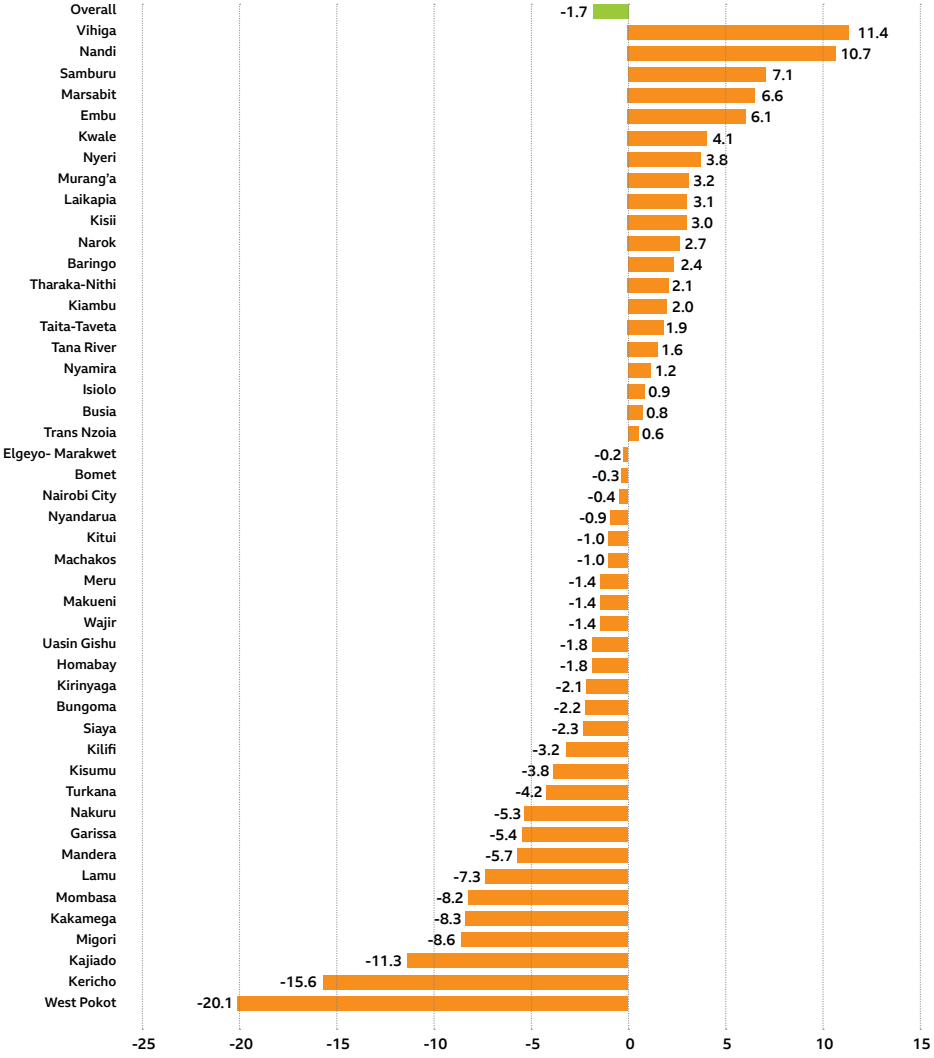
However, this headline progress masks deeper and more persistent disparities. While mobile money access is nearly equal, gaps widen significantly across other formal financial channels (**Figure 2**). Women remain less likely than men to hold traditional bank accounts (46.5% compared to 58.9%) and to participate in SACCOs (9.9% versus 13.6%). In contrast, women demonstrate stronger participation in chamas (38.2% compared to 22.8%), which signals their continued reliance on informal and community-based financial mechanisms. Hence, while women are formally included, their inclusion is often concentrated in low-barrier, transactional platforms rather than in institutions that provide larger, growth-oriented financial products.

The divergence becomes even more pronounced when the focus shifts from access to accounts toward access to credit. Women-led MSMEs constitute over half of small enterprises in Kenya, yet they access only 36% of formal credit (CIS Kenya, 2024). The constraint, therefore, is not account ownership per se, but the ability to secure productive financing through formal channels. Among surveyed businesses in 2024, only 35.5% had an operational bank account, with just 27% owned by women entrepreneurs compared to 45.3% owned by men. The national gender gap in traditional bank access stands at 13.3%. This gap translates directly into reduced access to working capital, asset finance and long-term credit necessary for business expansion.

County-level patterns reinforce the structural nature of the challenge (Figure 3 and Figure 4). While the overall formal financial inclusion gap varies modestly across counties, the traditional banking gap is negative in nearly all counties except Nyeri and Meru. In counties such as Kitui and Nairobi City, the disparities are particularly large. These geographic variations indicate that women's exclusion from

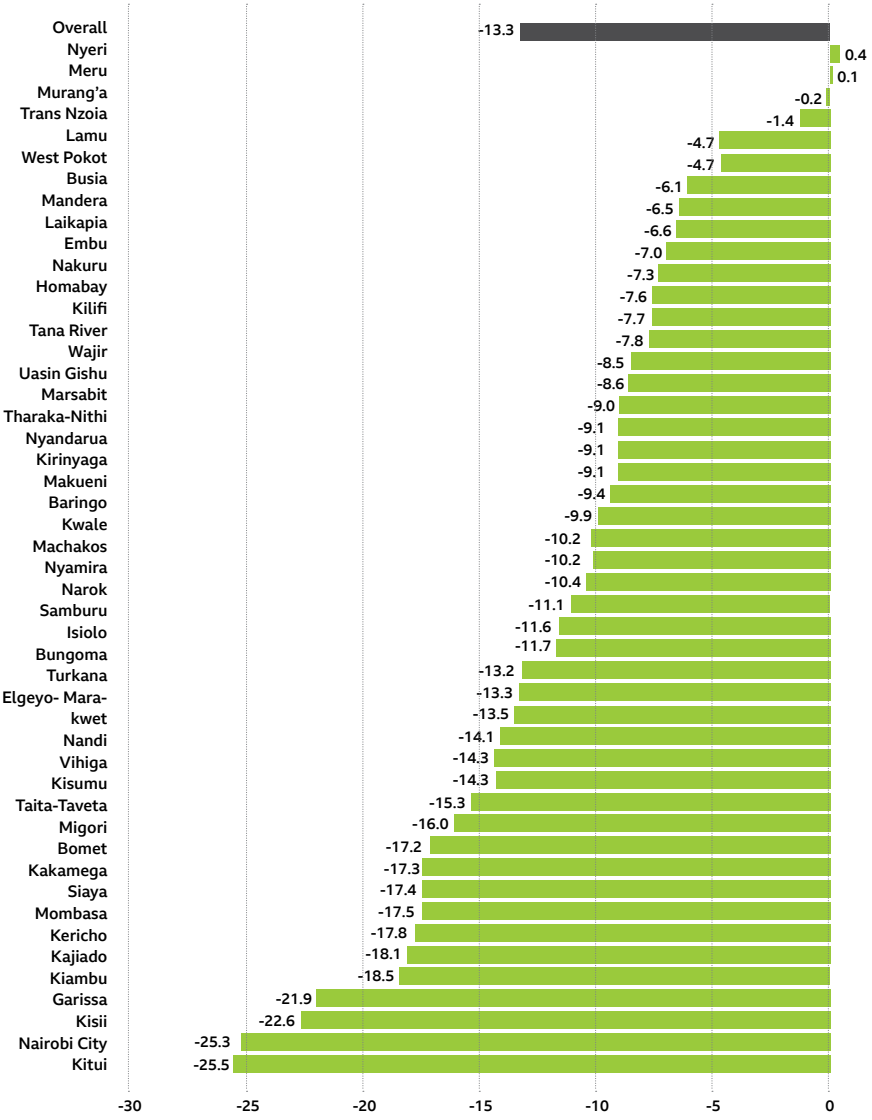
traditional banking is both widespread and context-specific, shaped by local economic structures, asset ownership patterns, and institutional practices. In many areas, limited collateral ownership, income volatility, and entrenched risk perceptions further constrain women's access to formal credit, reinforcing dependence on informal financing channels.

Figure 3: Overall Financial inclusion by County



Source: FinAccess 2024:

Figure 4: Traditional bank



Source: FinAccess 2024:

Kenya's financial ecosystem is relatively sophisticated, encompassing banks, SACCOs, microfinance institutions, digital lenders and credit reference bureaus. Yet despite this institutional diversity, the lack of integrated, gender-disaggregated data has created fragmented insights that obscure systemic disparities. Current reporting frameworks rely heavily on aggregate statistics that conceal gender-specific credit patterns. Data is scattered across institutions, while credit reference bureau datasets remain underutilized for gender analysis. As a result, regulators, lenders and development partners operate without a comprehensive evidence base to diagnose constraints, design targeted interventions, or track progress toward gender parity in credit markets.

This fragmentation generates a critical analytical blind spot. Financial institutions are unable to fully identify women-led enterprises as viable and profitable market segments, resulting in product designs and risk models that inadequately reflect women's business realities. Policymakers lack the granular evidence needed to implement targeted incentives, regulatory reforms or gender-responsive lending frameworks. Development partners face constraints in allocating resources effectively and measuring impact. Consequently, systemic barriers, ranging from collateral requirements and risk assessment biases to institutional norms, persist largely unchallenged.

On this account, this paper proposes a multi-institutional gender-disaggregated credit analytics dashboard as a solution to bridge this gap. By centralizing and standardizing CRB data across banks, SACCOs, MFIs, and digital lenders, the platform enables stakeholders to monitor gender disparities in real-time, identify institutional performance patterns, and implement data-driven interventions. This creates a pathway toward inclusive finance in Kenya while offering a replicable model for other emerging markets facing similar data fragmentation challenges.

2.0 Literature Review

2.1 Gender and Financial Inclusion Theory

The financial inclusion framework rests on four pillars: access, usage, quality, and impact (Alliance for Financial Inclusion, 2020). Kenya's access to formal finance has grown to 84.8% (FinAccess, 2024), yet gender gaps persist in credit access and loan size. Women remain concentrated in informal savings groups and short-term digital loans, with limited access to productive credit.

Fletschner and Kenney (2014) identify structural barriers, such as lack of collateral, time poverty, and institutional bias, that disproportionately constrain women's borrowing. The KNBS MSME Survey (2016) found that although women own nearly half of Kenya's 7.4 million MSMEs, only a small share have accessed formal loans. CIS Kenya (2024) further reports that women-led MSMEs receive just 36% of total credit despite demonstrating lower delinquency rates than men.

2.2 Data Integration Methodologies

2.2.1 Multi-Source Financial Data Integration

Comprehensive financial inclusion analysis requires integrating data from multiple sources to reveal the full picture of gendered credit dynamics. Traditional single-source approaches create blind spots by capturing only fragments of borrowers' financial lives. When women entrepreneurs maintain relationships with multiple lenders across different institution types, analyzing any single data source provides an incomplete and potentially misleading view of their credit access patterns. In Kenya, this fragmentation is particularly pronounced. The financial ecosystem spans commercial banks, SACCOs, MFIs, and digital lenders, each operating with different reporting standards and data systems. Women may hold a savings account at a SACCO, access digital credit for working capital, and maintain a business account at a commercial bank, yet no single institution sees this complete financial profile. This fragmented reporting obscures critical patterns in women's cross-institutional borrowing behavior, making it difficult to assess their true credit utilization, repayment performance, or accumulated debt burden.

Kenya's mandatory Credit Reference Bureau framework offers a unique solution to this challenge. By law, all financial institutions regulated by the central bank of Kenya must report loan data to licensed CRBs. This creates a centralized repository that captures borrowers' complete credit history across the entire financial sector. When combined with gender data requirements, as part of KYC, the CRB framework enables longitudinal analytics that reveal how women and men differently navigate the multi-layered financial system, which institutions serve them effectively, and where systemic barriers persist. This multi-institutional view transforms isolated data points into actionable intelligence for improving women's financial inclusion.

2.2.2 Dashboard Design for Policy Impact

Dashboards transform raw data into actionable intelligence by visualizing disparities and allowing drill-down exploration. The Women Entrepreneurs Finance Initiative (WE-FI) lustrates how gender dashboards enhance accountability by tracking inclusion outcomes across 30 countries. Interactive dashboards support decision-makers by linking patterns to causes, promoting evidence-based lending and regulatory reform. In Kenya, a CRB-powered dashboard will offer policymakers and banks real-time visibility into gendered credit access and performance.

2.3 Gender-Smart Product Design

Research increasingly demonstrates that financial products tailored to women's realities are both socially impactful and commercially viable. Women's World Banking (2023) finds that gender-neutral design often overlooks constraints such as limited collateral, irregular income flows, and time poverty. By contrast, gender-intentional design, grounded in women's economic behavior, can expand inclusion and strengthen portfolio performance.

Emerging models show how financial design can improve women's access to credit when traditional approaches fall short. Women often lack immovable property to use as collateral, so expanding the range of accepted assets and credit-assessment methods helps reduce this barrier. For example, allowing movable assets such as equipment, inventory, and receivables to serve as collateral has been shown to open new pathways for credit access for women entrepreneurs, addressing structural disadvantages tied to traditional collateral requirements. Movable collateral registries and other alternatives are highlighted as promising tools for making formal credit more inclusive (Women's World Banking, 2022; World Bank Group, 2024).

Alternative credit assessment methods such as cash-flow-based scoring and group lending can also expand access by focusing on revenue patterns and social collateral rather than fixed property. The World Bank's digital financial inclusion guidance shows that these approaches help bypass rigid collateral norms and improve access to credit for underserved groups, including women (World Bank, 2023).

Digital delivery models, particularly mobile-first platforms and digital financial services, can align with women's mobility and time constraints by reducing the need for in-person bank visits and enabling remote onboarding and loan access. Digital tools have

contributed to narrowing gaps in account ownership and usage, strengthening women's engagement with formal financial services (World Bank Group, 2024).

Finally, integrated solutions that combine finance with non-financial supports such as capacity building, business development services, mentorship, and market linkages are increasingly recognized as ways to strengthen women's repayment capacity and drive sustainable enterprise growth by addressing both financial and capability barriers. While impact evidence continues to evolve, global toolkits recommend bundling credit with training and digital support as part of inclusive financial ecosystems (World Bank Group, 2024).

In Kenya, a range of innovations has expanded women's access to financial services, including SACCO group lending models, agency banking, and mobile-based credit products such as digital overdrafts and micro-loans. These channels have contributed to narrowing gender gaps in basic financial access by reducing distance, documentation, and time barriers, particularly for women entrepreneurs (Finacess, 2024). However, evidence suggests that increased access does not automatically translate into sustainable or productive credit use. Concerns persist regarding loan affordability, short repayment tenures, high effective interest rates, and limited impact on long-term business growth, especially among micro and small enterprises (MSEs) led by women (FSD Kenya, 2022; CBK, 2021). Many interventions remain fragmented, with limited comparative evidence across institutions or regions. Without systematic, gender-disaggregated analytics, successful innovations cannot be consistently evaluated or scaled.

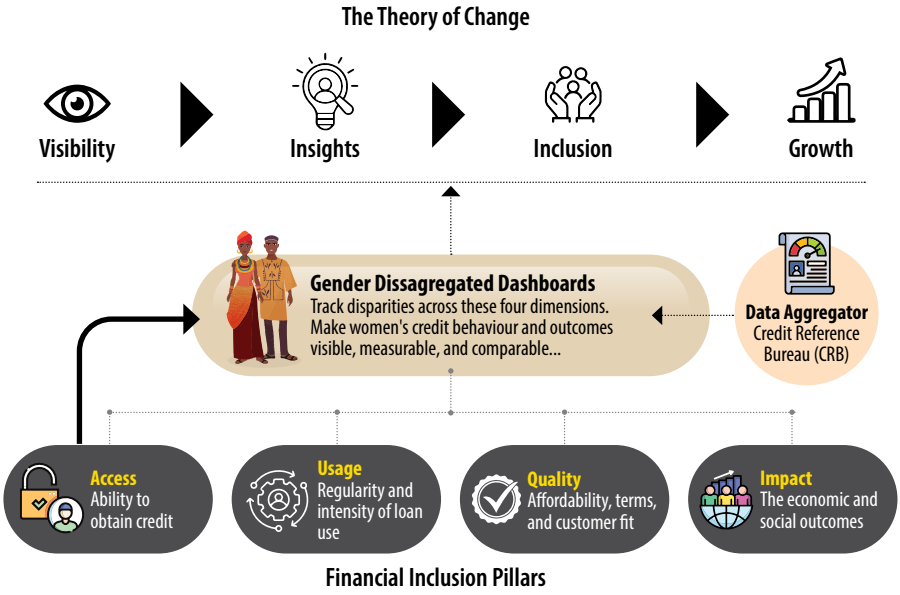
A gender-disaggregated credit analytics dashboard addresses this evidence gap by aggregating institutional data to assess which products and delivery channels best serve women-led MSMEs. By moving beyond access metrics to include usage, portfolio performance, and outcomes, the dashboard enables banks to benchmark performance and refine product design using evidence rather than assumptions. For regulators and development partners, such analytics support policy incentives that promote gender-smart lending and track progress toward inclusive finance objectives over time

3.0 Methodology

3.1 Conceptual Framework

The conceptual framework behind this study links the financial inclusion pillars: Access, Usage, Quality and Impact, to a theory of change that explains how gender-disaggregated analytics can improve women's financial inclusion outcomes. The approach assumes that multi-institutional data, when aggregated through a centralized platform such as a CRB, can serve as a single source of truth for monitoring gender disparities in credit markets. This addresses the fragmentation that characterizes Kenya's financial ecosystem, where banks, SACCOs, MFIs, and digital lenders often report independently with varying standards, making it difficult to identify systemic patterns or measure progress consistently across the sector.

Figure 5: Conceptual Framework: Linking Financial Inclusion Pillars to the Theory of Change



3.2 Data architecture and Integration

This study utilizes anonymized administrative data obtained from Metropol Credit Reference Bureau (CRB), a licensed aggregator of borrower information across Kenya's financial sector. The data conforms to the Credit Information Sharing (CIS) Data Specification Template (DST) and is refreshed monthly, providing a longitudinal, supply-side view of MSME credit activity.

Metropol consolidates borrower and loan-level records from commercial banks, microfinance banks, SACCOs, digital lenders, and microfinance institutions, ensuring system-wide coverage. This integrated dataset captures both formal and semi-formal lending channels, addressing the fragmentation that limits most institution-level analyses.

A targeted subset of Data Specification Template (DST) files forms the analytical base for gender-disaggregated modeling:

1. Individual and Non-Individual Consumer Files: Capture demographics, firm ownership and gender tagging for MSME borrowers.
2. Credit Application File: Tracks both approved and rejected loans, enabling gender gap analysis in approval rates and loan sizes.
3. Guarantor and Stakeholder Files: Reveal women's indirect participation in credit markets and enterprise governance.
4. Collateral and Group Guarantee Files: Highlight barriers linked to asset ownership and collective lending mechanisms.

3.3 Gender & MSME Tagging Framework

To generate consistent gender-disaggregated insights, explicit tagging rules illustrated in Table 1, are applied to classify borrowers and enterprises according to ownership structures and borrower type. These rules ensure comparability across individuals, partnerships, and institutions while reducing ambiguity in cases of mixed ownership.

For sole proprietors, gender tagging is straightforward. Any individual borrower accessing a business loan, limited in this framework to working capital, business expansion loans, and trade finance, is treated as a sole proprietor. In such cases, the business is assigned 100 percent gender ownership based on the recorded gender of the borrower. This rule reflects the direct alignment between the individual borrower and the enterprise.

For partnerships and legal entities, gender tagging is based on the distribution of shareholding among natural persons. Ownership percentages are attributed proportionally to male and female stakeholders, according to their recorded shares. An entity is considered Female-owned if women collectively own at least 51 percent of shares.

Table 1: Gender tagging

Borrower Type	Ownership Category	Gender Tagging Rules	Notes
Sole Proprietor (Individual)	Female-Owned	100% female	Applies to individuals in position of a business loan: working capital, expansion, trade finance
	Male-Owned	100% male	
Partnerships	Joint / Mixed-Gender	No single gender ≥51%	Shares allocated proportionally among natural persons
	Female-Owned	≥51% female	Based on shareholding
	Male-Owned	≥51% male	Based on shareholding
Legal Entities	Female-Owned	≥51% female (aggregate natural-person shares)	Registered under BRS
	Male-Owned	≥51% male (aggregate natural-person shares)	
	Jointly Owned	No single gender ≥51%	Aggregate shareholding below majority for both genders
	Unknown	No gender information present	

Source: Author's illustration

Mathematically, for entity j:

$$G_j = \begin{cases} Female, if \sum Share_{Female} \geq 0.51 \\ Male, if \sum Share_{Male} \geq 0.51 \\ Joint \quad Otherwise \end{cases}$$

3.4 Data Transformation and Indicator Construction

The raw CRB datasets, though rich in detail, are not immediately suitable for analysis in their original form. To ensure comparability across institutions and to generate indicators that align with the four pillars of financial inclusion, a series of data transformations and derived features are applied. These transformations standardize temporal references, enrich borrower and loan-level attributes, and create consistent classification rules for MSMEs and gender.

3.4.1 Temporal Transformations

All loan and borrower records are anchored to a standardized reporting date (REPORTING_DATE), which creates a consistent time series across all institutions. This enables the construction of monthly trend analyses and the monitoring of inclusion indicators over time. From the disbursal date (LOAN_DISBURSAL_DATE), a loan vintage variable is derived, capturing the age of each loan in months. This allows the generation of vintage curves, which are critical for understanding repayment and default trajectories by gender. Similarly, the age of a firm is derived from the YEAR_BUSINESS_REGISTERED field, categorized into bands such as new (<2 years), emerging (2–5 years), established (5–10 years), and mature (10+ years). These bands provide insight into whether women-led firms are disproportionately concentrated in early-stage segments of the enterprise life cycle.

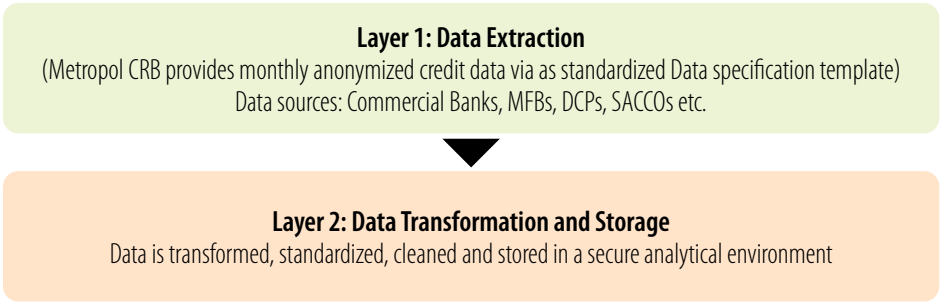
3.4.2 Business Classification

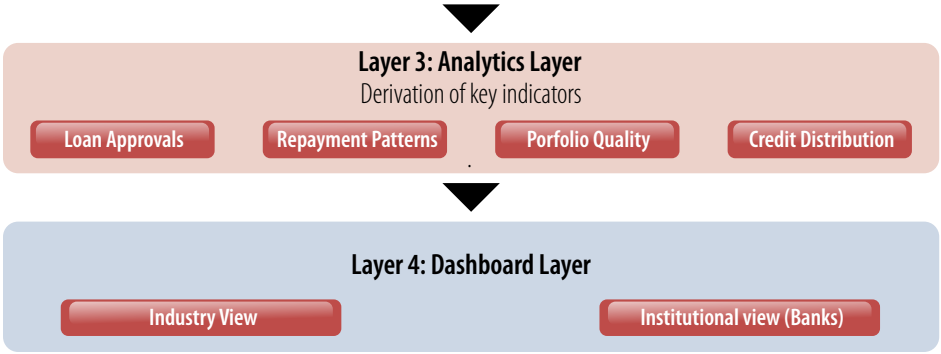
For the purposes of this project, enterprises are classified primarily based on formality. Businesses that are formally registered under the Business Registration Service (BRS) are tagged as legal entities. Conversely, sole proprietors are defined as individual borrowers who have accessed loans explicitly classified as business facilities, such as working capital loans, business expansion loans, or trade finance facilities, but are not registered as separate legal entities under BRS. Both formal businesses and individual entrepreneurs engaged in business activities are systematically captured in the analysis, while also aligning with the structure of the available Credit Reference Bureau (CRB) datasets.

3.4.3 Dashboard Structuring

The gender-disaggregated MSME dashboard is designed as both a technical tool and a strategic policy instrument. The dashboard transforms raw, anonymized data from the CRB into meaningful insights that highlight the position of women-led MSMEs within Kenya's credit markets. Additionally, the dashboard addresses a long-standing information gap: women entrepreneurs have often been invisible in financial datasets, leading to assumptions rather than evidence-driven decisions. This section outlines the technical architecture, design principles, and planned implementation of the dashboard, emphasizing how it integrates data privacy safeguards with actionable outputs for financial institutions, regulators and development partners.

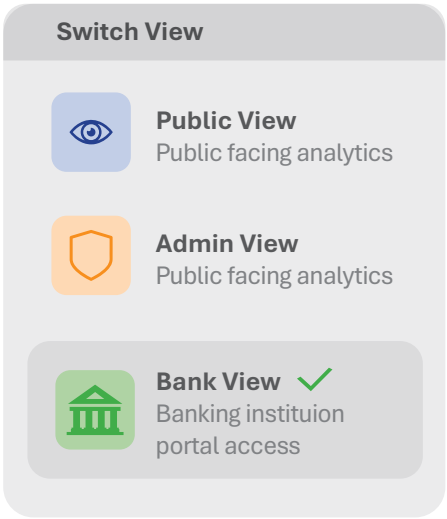
Figure 4: Structure of the gender-disaggregated MSME dashboard





Dashboard views

The system has been designed with two distinct views that cut across all modules, ensuring that stakeholders access the right level of information based on their role.



Source: KBA's MSME Gender-Disaggregated Dashboard

a) Public View

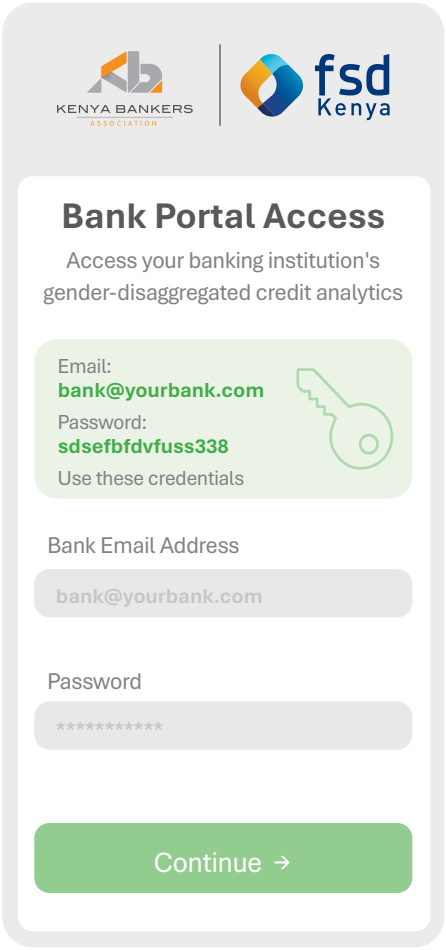
A simplified, high-level perspective accessible to the public, media, and development partners. It provides transparency while protecting sensitive institutional data and serves as an accountability tool to track national progress in inclusive finance.

b) Bank View

A secure and role-based interface designed for participating banks.

Each bank can view:

- Its own portfolio metrics (credit approvals, loan values, repayment performance).
- Comparisons against anonymized industry averages to benchmark performance.
- Deep-dive analytics by gender, MSME type, product category, and region.



c) Admin View

The administrator (developer) interface provides full system access for maintenance, configuration, and data management. It supports:

- Oversight of data ingestion and validation processes.
- User management and access control.
- System diagnostics, updates, and security monitoring.
- This view ensures data integrity, smooth operation, and compliance with privacy and governance protocols.

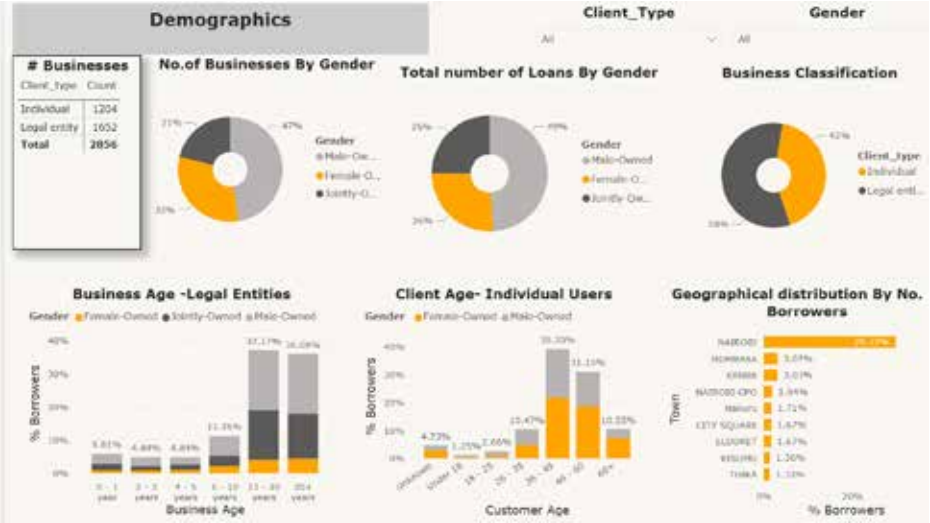
4.0 Empirical Application

This section presents key insights derived from the analysis of business borrowers, with a focus on gender dynamics in Kenya's formal credit markets. Using sample data, the findings highlight patterns in borrower demographics, business types, ownership structures, and credit access. The analysis aims to uncover disparities, identify opportunities for more inclusive financial services, and provide a foundation for evidence-based decision-making. Each dashboard page is designed to allow users to explore the data by gender, borrower type, and business registration status, supporting deeper understanding of participation, usage, and performance across financial products.

4.1 Demographics

This dashboard page provides a foundational view of the gender composition of business borrowers and their key demographic characteristics. It establishes a baseline for understanding who participates in Kenya's formal credit markets, highlighting disparities in representation, age, business maturity, and geography. By allowing users to drill down by gender, client type, and business registration status, this view sets the stage for deeper analysis on access, usage, and performance across financial institutions.

Figure 7: Demographics



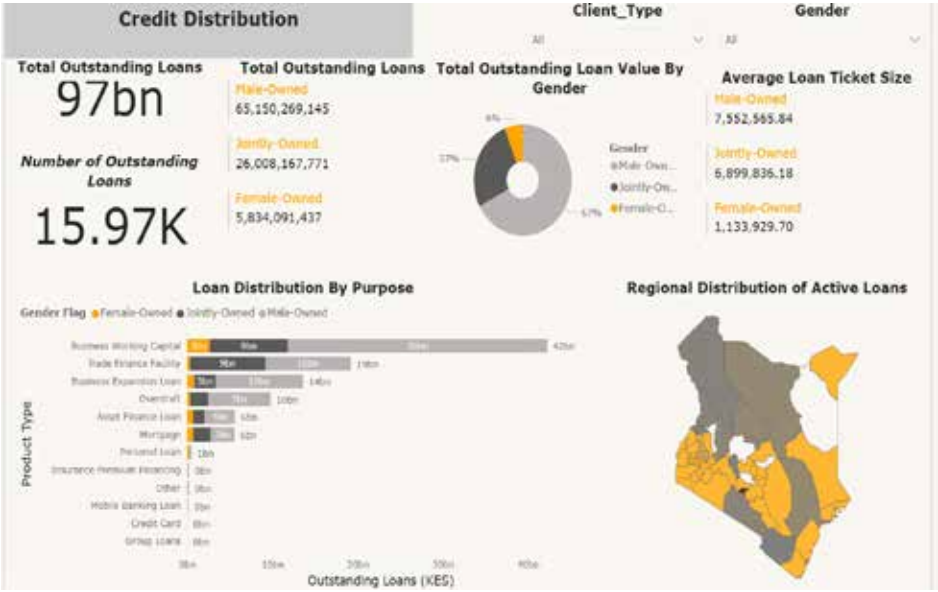
The demo sample comprised 2,856 businesses drawn from both legally registered enterprises and individuals holding business loans. The preliminary findings highlight several important trends. Women accounted for 32% of the sample, compared to 47% male-owned and 21% jointly owned businesses, underscoring the persistent gender gap in formal credit access. In terms of business type, 58% were legally registered entities, while 42% represented individuals borrowing for business purposes, indicating that a significant portion of business credit remains held in personal rather than institutional form.

Age distribution patterns show that both businesses and borrowers tend to be older, with most enterprises operating for over ten years and borrowers predominantly aged between 35 and 60 years, suggesting that mature businesses dominate formal credit channels. Most borrowers are concentrated in Nairobi, although analysis is somewhat constrained by incomplete location data, as the "Town" variable is non-mandatory in the dataset.

4.2 Credit allocation patterns

The Credit Distribution module provides a system-wide overview of how credit is allocated across gender, MSME type, and loan product categories. It highlights both the scale of lending and the depth of gender disparities in access to financial capital. This dashboard enables users to explore not just the number of borrowers, but also the distribution of outstanding loan values and average ticket sizes, offering critical insights into equity and representation within Kenya's credit markets.

Figure 8: Credit Distribution



From the demonstration sample, the businesses collectively hold an outstanding loan value of KES 97 billion, spanning business loans, overdrafts, asset financing, and other personal credit facilities. Gender-disaggregated analysis reveals a striking imbalance:

- Women-owned businesses account for only 6% of the total outstanding value.
- Male-owned businesses dominate with 67%, while jointly owned businesses hold 27%.
- The average loan size for women-owned businesses is approximately KES 1.1 million, compared to KES 7.5 million for male-owned enterprises.

These disparities suggest that women entrepreneurs continue to access significantly smaller loan amounts despite owning a substantial share of MSMEs. The credit distribution dashboard thus serves as a diagnostic tool for financial institutions and policymakers to identify where structural barriers persist and where gender-smart lending strategies could unlock growth potential.

4.3 Credit Performance

The Loan Performance page provides visibility into the quality of lending portfolios, repayment behaviors, and credit outcomes disaggregated by gender, MSME type, and institution category. It helps users assess whether credit risk and repayment patterns differ by gender, offering actionable insights for both risk management and gender-smart credit design.

Figure 9: Credit Performance

This page provides a cross-institutional overview of how different categories of financial institutions banks, SACCOs, microfinance institutions, DFIs, and digital lenders perform in extending and managing credit across genders. It helps stakeholders understand where the largest loan exposures lie, how performance differs by gender, and which segments present the highest potential or risk. In the beta release, participating banks will have a personalized view that allows them to compare their own performance against anonymized peer benchmarks, supporting fair, data-driven competition and sector-wide accountability.

The institutional performance page is central for institutional benchmarking. It helps lenders and policymakers identify structural disparities, evaluate performance efficiency, and assess portfolio risk. The inclusion of gender-disaggregated indicators within institutional comparisons makes it visible where gaps persist, ensuring that inclusion efforts are backed by measurable, actionable evidence.

Figure 10: Institutional Performance.

The sample data highlights the concentration and distribution of credit across Kenya's formal lending institutions, as well as persistent gender disparities in access and loan performance. Banks dominate lending, accounting for over 98% of total loan value (KES 96 billion of KES 97 billion), reinforcing their central role in formal credit provision. By loan count, 88.9% of all loans are held by banks, followed by 7.4% by microfinance institutions (MFIs), reflecting high institutional concentration among a few large lenders.

Gender gaps are evident across all institutions. Female-owned businesses hold only KES 5.8 billion, representing 6% of total loans, compared to KES 65 billion (67%) for male-owned businesses and KES 26 billion (27%) for jointly owned enterprises. Average loan sizes for female borrowers are consistently smaller across all institutions, with the largest disparities observed in banks and deposit-taking SACCOs.

In terms of portfolio quality, the overall non-performing loan (NPL) ratio stands at 12.33%. Female-owned businesses exhibit a slightly lower NPL ratio at 12.77% compared to 13.55% for male-owned businesses, while jointly owned enterprises show the strongest performance with 9.17%. Deposit-taking SACCOs have the highest NPL ratio at 18.07%, followed by microfinance banks (MFBs) at 40.7%, whereas development finance institutions (DFIs) report the lowest at 2.98%, which may reflect sample effects or portfolio characteristics.

4.5 Product Analysis

The Product Analysis dashboard explores how credit products differ across gender, business type, and loan characteristics. It provides a breakdown of loan tenors, ticket sizes, and product distribution to reveal how women, men, and jointly owned enterprises access and use different types of credit. This view is crucial for identifying structural differences in loan design and usage that can inform gender-smart product innovation.

Figure 11: Product Analysis

Analysis of loan characteristics reveals differences in access and usage across gender. The overall average loan tenor is 39 months; however, female-owned businesses receive shorter-term credit, averaging 29 months, compared to 41 months for male-owned and 47 months for jointly owned enterprises. This suggests that women may face higher perceived risk or limited access to longer-term financing.

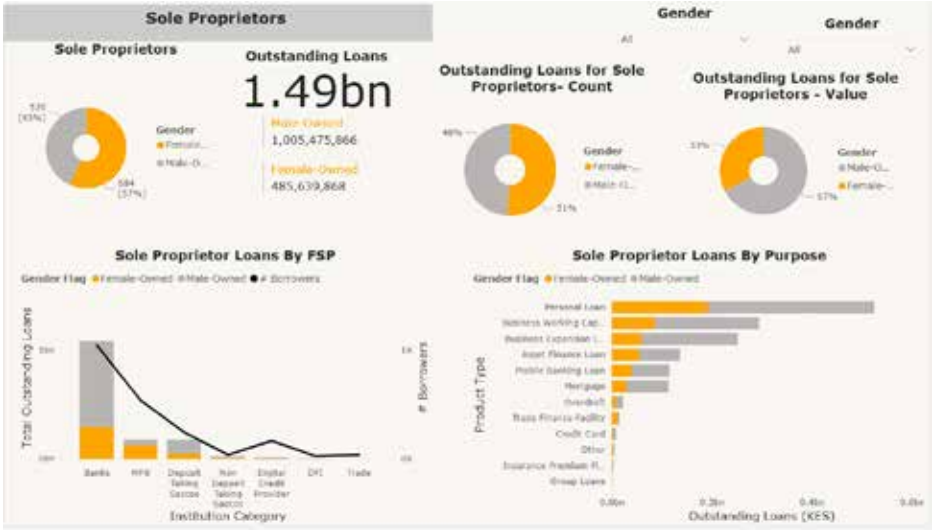
On average, each business holds eight loans, but female-owned businesses hold fewer (6.75) than male-owned (8.57) and jointly owned businesses (9.93), indicating lower credit diversification among women entrepreneurs. Product mix further underscores gender disparities: mortgages and trade finance facilities represent the largest average loan sizes and are dominated by male and jointly owned businesses. Female-owned enterprises are concentrated in smaller-value products, such as working capital and asset finance loans.

Patterns of tenor and product use show that credit cards and overdrafts are the most frequent and have the shortest tenors across all genders, while mortgages and business expansion loans are longer-term products with limited female participation. Loan age analysis indicates that most loans are recent, with over 49% less than three years old, reflecting an expanding credit market. However, female participation declines with loan age, suggesting later entry into formal credit or shorter credit cycles for women-owned businesses.

4.6 Sole Proprietors

This dashboard focuses on sole proprietors, individuals who operate businesses under their personal names rather than as registered entities. It provides visibility

Figure 12: Sole Proprietors



into how male and female business owners access and use credit, highlighting gender disparities in loan value, purpose, and distribution across financial institutions. This view is essential for understanding gender-specific credit behaviors in the informal and microenterprise segments of Kenya's economy.

This page underscores the structural imbalance where female sole proprietors participate actively in formal credit markets but access lower-value facilities, often short-term and unsecured. The insights help financial institutions and policymakers tailor inclusive credit products that better align with the financing needs of women entrepreneurs operating at the micro and small enterprise level.

Sole proprietors account for KES 1.49 billion in total outstanding loans, representing only 1.6% of the overall loan book. Within this segment, female-owned enterprises make up 57% of the borrowers but hold just 33% of the total loan value (KES 486 million), whereas male-owned proprietors control 67% (KES 1 billion). This disparity highlights lower average loan sizes for female borrowers despite their greater representation in numbers.

Banks are the dominant lenders to sole proprietors, followed by microfinance institutions (MFIs) and SACCOs. Notably, the share of women borrowers declines sharply beyond banks, suggesting limited engagement with smaller or alternative financial service providers.

The leading loan purposes among sole proprietors are personal loans and business working capital loans, which together account for most borrowing. Female proprietors are concentrated in smaller-value personal and working capital loans, while male proprietors dominate higher-value products such as business expansion, mortgages, and asset finance.

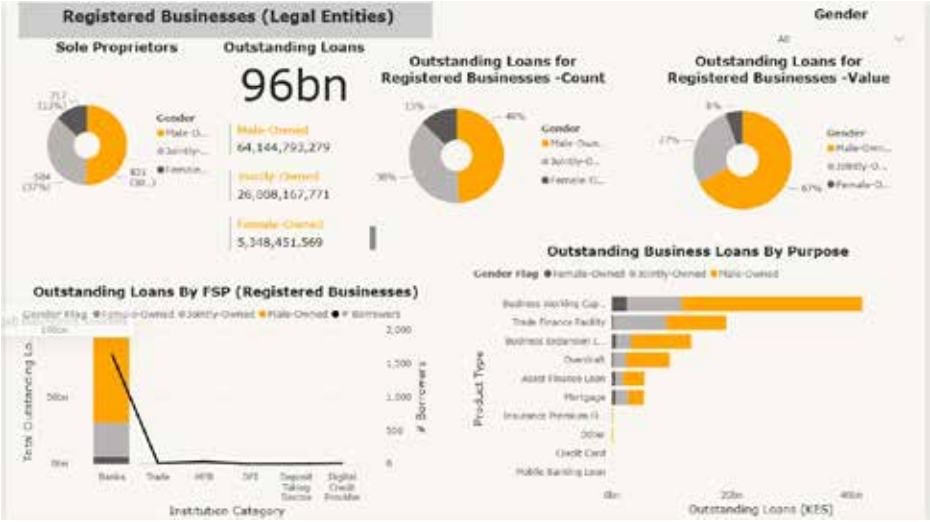
4.7 Registered Businesses

The section provides an overview of credit distribution among legally registered businesses, offering a gender-disaggregated perspective of loan values, borrower counts, financial institution types, and loan purposes. It is designed to help stakeholders understand how women- owned formal enterprises engage with credit markets. By visualizing these dynamics, the dashboard highlights where financing gaps exist, and which sectors or products offer opportunities to strengthen women's access to formal credit.

The analysis reveals a total outstanding loan value of KES 96 billion, with male-owned businesses holding 67% of the total, jointly owned at 27%, and female-owned enterprises representing only 6%. While male-owned businesses account for nearly half of all borrowers, female-owned and jointly owned entities make up 13% and 38%, respectively, evidence of persistent gender imbalances in business lending.

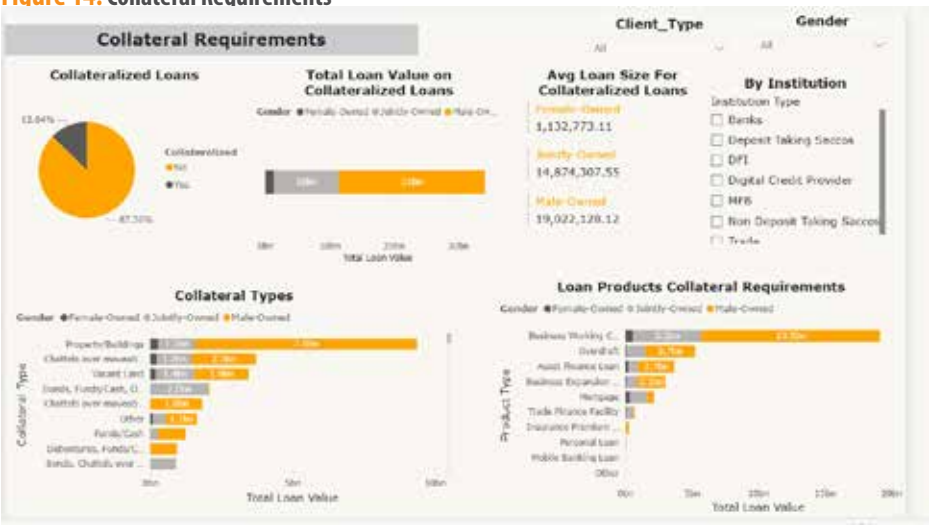
In terms of loan purposes, most credit is directed toward working capital, followed by trade finance and business expansion loans. Female-owned businesses are more concentrated in working capital products, suggesting limited access to higher-value or long-term financing instruments.

Figure 13: Registered Businesses (Legal Entities)



4.8 Collateral Requirements

Figure 14: Collateral Requirements



This dashboard explores how collateral obligations shape access to credit across genders. It enables users to compare the proportion of secured versus unsecured loans, examine collateral types pledged, and identify which financial products and institutions most rely on collateral. This view is crucial for understanding structural barriers for women entrepreneurs who often lack ownership of high-value assets like land and property and helps build evidence for designing collateral-light or alternative financing models.

Observations

Only 12.64% of total loans in the sample are collateralized, with the remainder (87.36%) unsecured, suggesting a growing use of unsecured digital and short-term lending channels. However, within the collateralized segment, valued at approximately KES 33 billion, male-owned businesses hold the largest share (KES 23 billion), followed by jointly owned (KES 10 billion) and female-owned (KES 1.1 billion).

Average loan sizes reinforce this disparity: male-owned businesses average KES 19 million per collateralized loan, compared to KES 1.1 million for female-owned businesses, underscoring the gender gap in access to asset-backed credit.

In terms of collateral type, property and buildings dominate (over KES 7.8 billion pledged by male-owned enterprises), followed by moveable assets such as chattels and machinery. Women, on the other hand, appear more reliant on smaller-value moveable assets and cash or fund-based guarantees, reflecting limited ownership of immovable property.

By loan product, collateral is most heavily associated with business working capital loans (KES 13.5B) and overdrafts (KES 3.7B), products critical for enterprise growth. This pattern highlights how collateral requirements continue to influence both the scale and type of financing women can access, reinforcing the need for inclusive, flexible credit models.

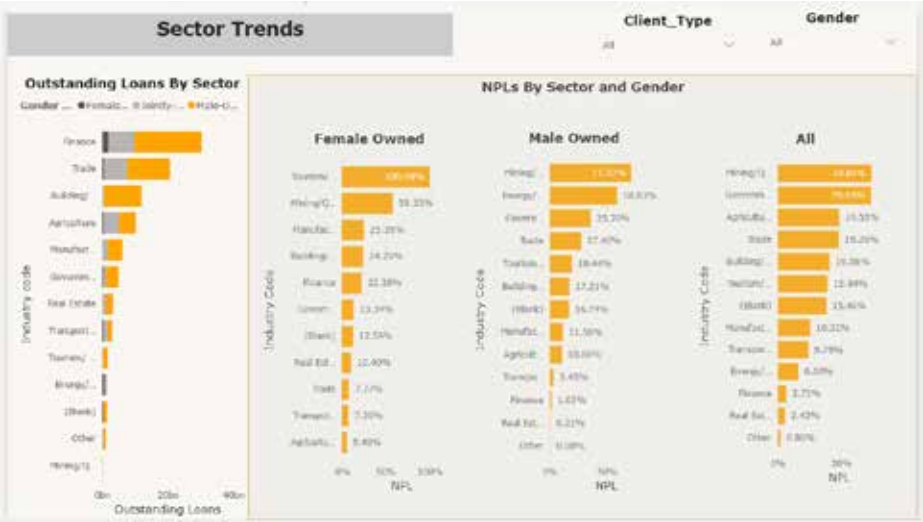
4.9 Sectoral Distribution

The Sector Trends dashboard examines how credit distribution and performance vary across industries, segmented by gender. It enables stakeholders to identify which sectors dominate in loan value, where women-led businesses are concentrated, and which industries carry the highest credit risk. This analysis is vital for shaping gender-responsive sector financing strategies, highlighting areas where targeted interventions could unlock growth or mitigate risk for women-led MSMEs.

The Finance and Trade sectors hold the largest share of outstanding loans, followed by Building/Construction and Agriculture. However, women-owned businesses remain underrepresented in high-value sectors like Finance and Manufacturing, with stronger participation in Trade and Agriculture, sectors traditionally characterized by smaller loan sizes and lower asset bases.

When analyzing loan performance, significant differences emerge across sectors and genders. Among female-owned enterprises, the Tourism sector records the highest non-performing loan (NPL) rate at 100%, followed by Mining/Quarrying (58%) and Manufacturing (25%), suggesting heightened vulnerability in service-oriented industries. For male-

Figure 15: Sector Trends



owned businesses, Mining/Quarrying (71%) and Energy (59%) lead in NPLs, reflecting the volatility and capital intensity of these sectors.

Overall, system-wide NPLs are highest in Mining/Quarrying (29.8%), Government-related lending (29.5%), and Agriculture (19.6%), pointing to persistent repayment stress in sectors sensitive to external shocks.

5.0 Conclusion & Implications for policy and practice

This paper introduces a practical framework for building gender-disaggregated credit analytics dashboards that change how women entrepreneurs are measured and supported within Kenya's formal financial system. By integrating multi-institutional data through a regulated Credit Reference Bureau (CRB), the framework addresses long-standing information gaps that have limited evidence-based action on women's financial inclusion.

Kenya has made remarkable progress in financial inclusion, rising from below 25% in 2006 to over 80% by 2024. Yet women-led MSMEs remain consistently underserved. Despite accounting for more than half of all enterprises, women access only about one-third of formal credit. These gaps are driven by structural constraints such as limited collateral ownership, concentration in lower-value sectors, and institutional biases that are often obscured in aggregate reporting.

The dashboard represents a shift from static, high-level indicators to continuous, granular, and decision-oriented analytics. Using monthly CRB data from multiple financial institutions, it tracks credit access, usage, quality, and outcomes across gender, region, and sector. This enables timely detection of disparities and supports targeted interventions grounded in real transaction data rather than assumptions.

Two features are central to the approach. First, continuous monitoring through monthly updates allows early identification of emerging gaps and market shifts. Second, multidimensional disaggregation by gender, geography, sector, and institution type makes structural inequalities visible and measurable.

The implications extend across the financial ecosystem. Financial institutions can identify profitable yet underserved women-led segments, refine credit models, and design gender-responsive products. Regulators gain a dynamic tool to monitor inclusion benchmarks, assess policy impact, and supervise emerging risks. Development partners can allocate resources more efficiently and track

results with greater precision, while industry bodies can coordinate collective action and monitor progress toward shared inclusion goals.

From a methodological perspective, the framework offers a replicable model for other emerging markets, demonstrating how regulated data aggregators can generate system-wide insights while maintaining data privacy and regulatory compliance. While grounded in Kenya's context, the approach is adaptable across different regulatory and institutional environments.

Ultimately, the question is no longer whether gender-disaggregated analytics can improve financial inclusion, but how quickly such systems can be implemented and scaled. The evidence suggests that the tools to unlock women's economic potential already exist; what remains is sustained commitment to implementation, coordination, and data-driven decision-making.

Implications For Policy and Practice

The gender-disaggregated MSME credit analytics dashboard provides actionable, system-wide insights that can transform Kenya's financial inclusion landscape.

For Financial Institutions

The dashboard enables our member banks to identify untapped opportunities among women-led MSMEs and refine product design, collateral policies, and credit scoring models. It allows institutions to benchmark gender performance, assess portfolio concentration, and monitor repayment trends. By visualizing patterns across gender, region, and sector, lenders can design targeted financial products and recalibrate risk models. Integrating dashboard outputs into regular credit committee and product reviews institutionalizes gender data in decision-making. However, capacity-building is essential to ensure institutions can translate analytics into action, and safeguards are needed to prevent selective targeting of low-risk women borrowers.

For Regulators

The dashboard offers the Central Bank of Kenya (CBK), SASRA, and other regulators a unified supply-side dataset refreshed monthly, complementing periodic surveys like FinAccess. It enables regulators to monitor gendered credit access, non-performing loans, and portfolio quality across the financial ecosystem. County and sector-level analytics help detect exclusion patterns and guide policy reforms such as collateral law implementation and guarantee programs. Importantly, the dashboard supports inter-agency coordination by providing a shared evidence base across supervisory authorities. To fully leverage its potential, regulators will require analytical capacity and frameworks for integrating gender insights into prudential oversight.

For Policymakers and Development Partners

The dashboard bridges the gap between survey-based insights and real-time market behavior. Policymakers can use it to design and monitor gender-responsive programs such as guarantee schemes or concessional lending, and to identify regions where women entrepreneurs remain underserved. Development partners gain a data-driven basis for targeting

interventions and measuring outcomes, reducing reliance on anecdotal reporting. The tool enhances accountability by tracking progress against national inclusion goals and international gender equity commitments.

For Industry Associations

Bodies such as KBA, AMFI, and SACCO federations can use the dashboard to monitor collective industry performance, promote peer learning, and support advocacy with credible, cross-institutional data. It strengthens accountability for voluntary inclusion commitments and enables identification of best practices for scaling.

Cross-Cutting Impact

The dashboard mainstreams gender as a performance metric across the financial system. By shifting from static to dynamic data and fostering collaborative accountability, it transforms inclusion monitoring into a continuous, evidence-based process. This innovation positions Kenya as a leader in gender-responsive financial sector governance and offers a replicable model for emerging markets.

6.0 Methodological Limitations and Future Research Directions

6.1 Methodological Limitations

While the gender-disaggregated dashboard marks a major advance in visualizing credit patterns, several limitations remain:

1. **Scope Restriction.** The dashboard focuses solely on credit data from Metropol CRB, excluding savings, insurance, pensions, and mobile money, key components of women's financial behavior in Kenya.
2. **Informal Sector Exclusion.** It cannot capture informal financing channels such as chamas and table banking, which dominate women's microenterprise financing and thus understate true access levels.
3. **Data Field Gaps.** The CRB Data Specification Template (DST) omits key variables such as loan pricing and access to business support services, limiting analysis of gendered financial constraints. Several critical fields are non-mandatory, leading to inconsistent reporting across institutions. Even mandatory fields like annual turnover accept any numeric value, allowing unrealistic entries that distort analysis. Variations in how institutions record fields such as gender or business type further affect data consistency and reliability.
4. **Historical and Institutional Variability.** Data completeness and historical coverage differ across institutions. Newer digital lenders often lack sufficient backdated records for trend analysis.
5. **Causality Limitations.** The dashboard is descriptive, not analytical, it highlights disparities but cannot determine underlying causes without complementary econometric or qualitative methods.

6.2 Future Research Directions

Building on the methodological foundation of the gender-disaggregated dashboard, several areas for enhancement can strengthen its role in advancing inclusive finance.

1. Broaden scope beyond credit. Future versions should incorporate additional financial products; savings, insurance, pensions, and mobile money, to capture women's full financial behavior. Given women's heavy reliance on savings groups and mobile wallets, such integration would provide a holistic picture of financial resilience and inclusion.
2. Integrate alternative data sources. Incorporating mobile money transactions, utility payments, e-commerce sales, and tax reports would strengthen analysis for thin-file clients and informal-sector women entrepreneurs. These sources could enable more inclusive risk models and reduce dependence on collateral-heavy lending.
3. Apply advanced analytics. Machine learning and causal inference methods can move analysis beyond description to prediction and explanation. These tools could identify hidden gender biases in credit scoring, simulate policy impacts, or predict loan performance patterns by gender and sector.
4. Link supply and demand-side data. Combining CRB data with FinAccess or MSME survey data would allow a 360-degree view of women's financial journeys, connecting attitudes and behaviors with actual borrowing and repayment outcomes.

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