

Closing the Gap or Widening the Divide? Heterogeneous Effects of Mobile Money on Gender Inequalities in Sub-Saharan Africa

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Abstract

This article examines the effects of mobile money on gender inequalities using a panel of 41 Sub-Saharan African (SSA) countries over the period 2004–2020. Results from two-stage least squares and instrumental-variables quantile regression indicate that mobile money reduces gender inequalities in SSA. However, the magnitude of these effects varies depending on the distribution of gender inequalities. The effects are more pronounced in countries with low levels of gender inequalities. In countries with high levels of gender inequalities, mobile money has a limited impact. These results suggest that financial inclusion policies that use mobile money should target women more effectively to reduce gender inequalities in SSA. They also indicate that measures aimed at sustainably reducing gender inequalities should be directed more towards countries where gender inequalities are particularly pronounced.

Keywords: mobile money; FinTech; financial inclusion; gender inequalities; Sub-Saharan Africa.

JEL Classification: G21; J16; O16; O55; C36; C21.

Introduction

Reducing gender inequalities has been one of the key economic objectives of many countries, both developing and developed, in recent years. This policy, which is partly based on a United Nations recommendation and aligns with Goal 5 of the Sustainable Development Goals (SDGs), aims to achieve gender equality by 2030. Its implementation has been driven

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by the economic disadvantages associated with gender inequalities. Indeed, some studies argue that gender inequalities reduce the available stock of human capital, thereby undermining economic performance (Cuberes & Teignier, 2016; Asongu et al., 2021; Santos Silva & Klasen, 2021). Some studies estimate a loss of approximately \$160 trillion in gross domestic product (GDP) due to gender inequalities (Wodon & De La Brière, 2018; Asongu et al., 2021). These adverse effects of gender inequalities highlight the importance of identifying factors that could reduce them globally.

In contemporary economic literature, several studies have identified financial inclusion as a key factor in reducing gender inequalities (Ngono, 2021; Asongu & Le Roux, 2023; Asongu et al., 2024; Dorfleitner & Nguyen, 2024; Faton et al., 2025; Youl et al., 2025). Defined as facilitating access for all to affordable and appropriate financial services, financial inclusion helps to reduce gender inequalities by promoting women's economic empowerment (Dorfleitner & Nguyen, 2024; Faton et al., 2025). It enables vulnerable households, particularly women, to save safely, finance their development projects, and cope with emergencies involving unexpected expenses.

However, despite these positive effects highlighted in the literature, the contribution of financial inclusion to reducing gender inequalities in Sub-Saharan African countries remains limited compared to the expectations of SDG 5. Indeed, although gender inequalities in Sub-Saharan Africa (SSA) have fallen in recent years, from 64.8% to 55.8% in 2023, they remain high compared to other regions, notably the Arab States (53.9%), South Asia (45.8%), Latin America and the Caribbean (38.4%), East Asia and the Pacific (31.9%) and Europe and Central Asia (22.6%) (UNDP, 2025).

Several studies attribute the persistence of gender inequalities in SSA to low levels of financial inclusion among women (GSMA, 2021, 2026; FAS, 2023, 2024). In developing economies, 74% of men have a current account, compared with 68% of women, representing a gender gap of 6%. Globally, this average gap is smaller, at 4% (GSMA, 2021).

There are many reasons for women's limited access to financial services. Some studies have shown that the geographic distance to bank branches, linked to the underdeveloped state of the financial sector, is one of the main barriers to women's financial inclusion in SSA (World Bank, 2024; Loaba & Maiga, 2025; Youl et al., 2025). Furthermore, other studies have shown that in developing countries, particularly in SSA, women are more often excluded from access to financial services, a disparity attributed to inequalities in income, education, and employment (Yeyoumo et al., 2023; World Bank, 2024; Razzaq et al., 2024; Valea, 2024). Additional factors include the cost of financial services and the documentation required to open an account (World Bank, 2024). Given these factors that hinder financial inclusion's impact in reducing gender inequalities, mobile money emerges as a palliative solution. Mobile money, characterized by the provision of financial services via mobile phone, enhances women's financial inclusion in two ways. Firstly, it facilitates access to financial services for those who do not meet the requirements set by banking institutions. Furthermore, it addresses the issue of distance and reduces the costs of financial services, making them accessible to all.

The existing literature offers a wide range of empirical analyses on the interrelationships between mobile money, women's economic empowerment, women's financial inclusion, and gender inequalities. Some studies have examined the effects of mobile money on women's economic empowerment (Asongu & Le Roux, 2023; Asongu et al., 2024; Dorfleitner & Nguyen, 2024; Faton & Monwanou, 2025) or on women's financial inclusion (Yeyoumo et al., 2023; Valea, 2024; Sultana, 2025; Khan et al., 2026). Others have analysed the effects of financial

inclusion on gender inequalities (Ohiomu & Ogbeide-Osaretin, 2019; Faton et al., 2025). In SSA countries, few studies have directly examined the link between mobile money and gender inequalities. The closest research is that of Faton et al. (2025), which analysed the impact of digital financial inclusion on gender inequalities in Africa. Their analysis covered 36 countries from 2015 to 2021, using the Systematic Generalized Method of Moments (S-GMM).

This research, therefore, contributes to the existing literature by analysing the effects of mobile money on gender inequalities in SSA. It differs from existing studies in two key respects: analytical and methodological. From an analytical perspective, it examines the effects of mobile money on gender inequalities across several domains (economic, social, and political). Methodologically, the studies most closely related to ours have employed analytical methods that assume the effects of mobile money are homogeneous. However, several studies have shown that the effects of financial inclusion vary by income level, education level, and degree of inequality. Mobile money, as a financial inclusion strategy in SSA, may have differentiated effects on gender inequalities. To account for this aspect, the present analysis uses quantile regression to highlight this heterogeneity.

The remainder of this research is divided into four sections. Section 2 presents a synthetic review of the link between mobile money and gender inequalities. Section 3 presents the methodology adopted. Section 4 presents and discusses the results obtained. The final section concludes the article and provides economic policy recommendations.

1. Literature Review

Gender inequalities, defined by the imbalances between men and women in terms of individual achievement, have been the subject of extensive research in contemporary economic literature. A significant portion of this literature is devoted to analysing the effects of financial inclusion, and mobile money in particular, on gender inequalities. This clear interest is evident at both the theoretical and empirical levels.

From a theoretical perspective, several mechanisms have been identified to explain how mobile money helps reduce gender inequalities (Sen, 1995, 1999; Kabeer, 1999; Duflo, 2012). For example, Kabeer (1999) shows that women's empowerment, which he defines as their ability to make strategic choices, rests on three interdependent dimensions: resources, agency, and outcomes. To this end, he argues that gender inequalities result from men and women having asymmetrical access to resources, decision-making, and opportunities. Based on this theory, unequal access to financial resources is likely to lead to gender inequalities to the detriment of women. Conversely, women's access to financial services enhances their empowerment. Thus, mobile money, which facilitates access to financial services, acts as a lever to strengthen women's empowerment and reduce gender inequalities. Indeed, access to financial services, facilitated by mobile money, improves women's economic empowerment, which in turn has positive spillover effects on other areas, notably health, education, and politics. Furthermore, women's empowerment, resulting from access to financial services via mobile money, can help reduce gender inequalities, particularly those between men and women. Indeed, numerous studies have highlighted a positive link between mothers' educational attainment and income and children's well-being, particularly their health and education (Sen, 1990; Thomas, 1990; Kabeer, 1999; Duflo, 2003, 2012; Chen & Li, 2009). These studies attribute this to women's primary responsibility for caring for young children. To this end, greater empowerment of mothers could encourage them to invest more in their children's health and education.

The theoretical link between mobile money and gender inequalities has been tested in several empirical studies. A large proportion of these studies have shown that mobile money helps to reduce gender inequalities by promoting women's economic empowerment. For example, Dorfleitner & Nguyen (2024) analysed the effects of mobile money on women's economic empowerment using cross-sectional data from a sample of women in Sub-Saharan African and South Asian countries. Their results, obtained using ordinary least squares, reveal that mobile money has a positive effect on women's economic empowerment in the study areas.

Similarly, Asongu & Le Roux (2023) examined the effects of mobile payment innovation on women's economic empowerment using data from 44 Sub-Saharan African countries for the period 2004–2018. Using interactive quantile regressions, the authors found positive effects, indicating that mobile payment innovation promotes women's empowerment by transforming unemployed women into female entrepreneurs. Suri & Jack (2016) and Faton & Monwanou (2025), for their part, analysed the effects of mobile money on women's empowerment using time-series data and found similar results. For example, Faton & Monwanou (2025) conducted their analysis of 3,687 women in Benin. The results from a two-stage Heckman model indicate that mobile payment services promote women's empowerment. They show that using mobile payment services increases the likelihood that women engage in entrepreneurial activity.

Despite the growing body of empirical research on mobile money, several limitations remain. Firstly, few of these studies have directly analysed the effects of mobile money on gender inequalities in SSA. Most of these studies rely on a deductive approach, demonstrating that mobile money reduces gender inequalities by promoting women's empowerment. However, whilst it is sometimes true that women's economic empowerment automatically reduces gender inequalities in the economic sphere, this is not necessarily the case in other spheres. Indeed, gender inequalities are not solely economic in nature, but encompass several dimensions, notably economic, political, and social (Kabeer, 1999). Secondly, a large proportion of this research employs analytical methods that assume the effects of mobile money are homogeneous. However, several studies have shown that the effects of financial inclusion vary with income level, education level, and, by extension, the degree of inequality (Dorfleitner & Nguyen, 2024; Loaba & Maiga, 2025). Mobile money, as a financial inclusion strategy in SSA, may have differentiated effects on gender inequalities.

2. Methodology

2.1. Model Specification

This research into the effects of mobile money on reducing gender inequalities in SSA draws on two main theories (Kabeer, 1999; Duflo, 2012). According to Kabeer's (1999) theory of empowerment, gender inequalities result from unequal access to financial resources. Thus, mobile money, which facilitates access to financial services, acts as a lever to strengthen women's economic empowerment and reduce gender inequalities. Similarly, Duflo's (2012) analysis shows that economic development (income, access to financial services, and technologies) strengthens women's economic empowerment by providing them with the necessary resources, thereby contributing to the reduction of gender inequalities.

To examine this link in SSA, we start from these theoretical foundations, which hold that access to financial services helps reduce gender inequalities. We therefore seek to assess the capacity of mobile money to reduce gender inequalities. In this context, gender inequalities

constitute the endogenous variable, whilst mobile money constitutes the explanatory variable. Drawing on the work of Suri & Jack (2016), the basic model for capturing the effects of mobile money on gender inequalities is defined as follows:

$$GII_{it} = \beta_0 + \beta_1 MM_{it} + \beta_2 X_{it} + \varepsilon_{it} \quad (1)$$

where: *GII* is an index of gender inequalities². This index builds on previous gender indices and focuses on three aspects of gender inequalities within a country, namely: economic (labour market participation), social (health and education), and political (participation in decision-making). *MM* is a measure of mobile money (number of active mobile money accounts), and ε is the country-specific error term.

The matrix of control variables, *X*, comprises macroeconomic variables commonly used in the literature to examine the relationship between access to financial services and inequality. These include per capita GDP growth, trade openness, inflation, public expenditure, and population growth.

As we have shown previously, most studies have highlighted a uniform effect of mobile money on gender inequalities. Given that SSA countries exhibit varying levels of gender inequalities, the effects of mobile money may differ depending on how these inequalities are distributed. To account for this heterogeneity, we use instrumental-variables quantile regression to highlight the conditional effects of mobile money. According to D'Haultfoeuille & Givord (2014), quantile regression offers a useful framework, as it allows us to study the entire conditional distribution of the variable of interest, rather than just the mean, and is well-suited to describing the determinants of changes in inequality. Thus, the quantile regression model is specified by solving an optimisation problem at the quantile- ω^{th} ($0 < \omega < 1$).

$$\min_{\delta \in R^k} \left[\sum_{i \in \{i: y_i \geq x_i' \delta\}} \Psi |y_i - x_i' \delta| + \sum_{i \in \{i: y_i < x_i' \delta\}} (1 - \Psi) |y_i - x_i' \delta| \right] \quad (2)$$

where: y_i - dependent variable (gender inequalities), x_i - vector of explanatory variables.

Quantile regression minimizes the weighted sum of absolute deviations and allows various quantiles (10th, 25th, or 90th) to be obtained by appropriately weighting the residuals. Thus, the conditional quantile of y_i given x_i is given by equation 3 below:

$$Q_y(\Psi | x_i) = x_i' \delta_0 \quad (3)$$

2.2. Data and Descriptive Analysis of Variables

In this study, we use secondary data to estimate the effects of mobile money on gender inequalities in 41 SSA countries over the period 2004–2020. The countries covered by the study are presented in Table A1 in the Appendix. The chosen period is justified by the availability of mobile money data. These data come from several sources. Data on per capita GDP growth, trade openness, inflation, total government expenditure, and population growth rates are sourced from the World Bank³. Data on mobile money are sourced from the International Monetary Fund (Financial Access Survey). Data on the gender inequalities index are sourced from the UNDP.

² This composite index reflects the loss of opportunity experienced by women due to gender-based discrimination and ranges from 0 to 1. A score of 0 indicates the absence of gender inequalities, whilst a score of 1 reflects the full extent of gender inequalities.

³ <https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS>

We now present the descriptive statistics for the variables for the period 2004 to 2020 across these 41 SSA countries. These statistics present the means by variable over the study period in question. These statistical results, presented in Table 1, show that gender inequalities persist in SSA. Indeed, the gender inequalities index ranges from 0.344 to 0.750, with an average of 0.587. In general, SSA is characterized by high levels of gender inequalities, and the UNDP’s 2017 report drew attention to these inequalities. As regards mobile money, its use is relatively significant in the Sahel-Saharan region. The analysis indicates that, on average, 165 adults per 1,000 held an active mobile money account between 2004 and 2020, representing a mobile money usage rate of 16.57%.

The GSMA (2021) report on mobile money services worldwide indicates that mobile money served as a reliable and secure lifeline for people’s financial needs in 2020. According to this report, the Sahel-Sahara region is where mobile money is most widely used, with over 159 million active mobile money accounts on a monthly basis. In 2020, the number of registered mobile money accounts increased by 12.7% globally, adding 136 million accounts. The increase in the number of additional accounts was most significant in Sub-Saharan Africa (SSA), with a 43% rise in mobile money accounts in 2020 (GSMA, 2021). On average, 27.4 billion transactions were carried out in 2020 in SSA using mobile money, amounting to \$490 billion (GSMA, 2021) .

Table 1: Descriptive Analysis of the Variables

Variables	Obs	Mean	Standard deviation	Min	Max	Obs
Gender inequalities index	678	0.587	0.077	0.344	0.750	678
Mobile money	310	165.783	253.096	0	1137.843	310
GDP per capita growth rate	687	4.215	4.839	-46.082	33.629	687
Total government expenditure	697	12.397	7.808	0.951	43.483	697
Trade openness	697	30.596	16.839	0	82.529	697
Inflation	681	191.196	104.706	32.148	2042.289	681
Population growth rate	697	2.500	0.870	-0.616	5.027	697

Source: Authors

3. Results and Discussion

3.1. Effects of Mobile Money on Gender Inequalities in Sub-Saharan Africa

Analysing the effects of mobile money on gender inequalities faces an endogeneity problem linked to reverse causality. Indeed, the development of financial services may reduce gender inequalities, and a reduction in such inequality may, in turn, improve the uptake of financial services (Duflo, 2012). To control for this endogeneity bias, we use instrumental variables and estimate the model using two-stage least squares (2SLS). For the instruments, we use lagged values of mobile money. According to Kpodar (2007), lagged values of endogenous variables can constitute valid instruments. Similarly, Wooldridge (2010) demonstrated that lagged values of an endogenous explanatory variable can serve as instruments, as they are correlated with the endogenous variable and uncorrelated with the error term. The estimation results using two-stage least squares are presented in Table 2.

These results show that the null hypothesis of instrument validity cannot be rejected. Indeed, the Hansen-Sargan test yields a p-value greater than 10%, indicating that the chosen instruments are valid. The results indicate that mobile money reduces gender inequalities in ASS. These results can be explained by the fact that mobile money facilitates access to financial resources. Indeed, the advent of mobile money has reduced the barriers to accessing financial services, which previously weighed more heavily on women. It enables households to receive and transfer money at relatively lower costs compared to the banking system. According to Suri & Jack (2016), mobile money improves individuals' resilience to shocks. Thus, mobile money contributes to poverty reduction and stimulates productive investment, particularly among women, thereby helping reduce gender inequalities. These authors noted that the advent of M-Pesa in Kenya has fostered economic activity and enhanced women's economic empowerment. Our results highlight the central role of mobile money in reducing disparities in SSA countries.

Table 2: Estimation Results (2SLS) of the Effects of Mobile Money on Gender Inequalities

Variables	Estimates using two-stage least squares (fixed effects)				
	Dependent variable: gender inequalities				
	(1)	(2)	(3)	(4)	(5)
Mobile money (number of active mobile money accounts)	-0.037*** (0.009)	-0.041*** (0.009)	-0.036*** (0.009)	-0.037*** (0.009)	0.045*** (0.008)
GDP per capita growth rate	0.036 (0.027)	0.037 (0.027)	0.015 (0.025)	-0.021 (0.025)	0.037 (0.023)
Trade openness		-0.034 (0.021)	-0.012 (0.019)	-0.025 (0.022)	-0.053*** (0.020)
Total government expenditure			-0.280*** (0.051)	-0.271*** (0.052)	-0.266*** (0.046)
Inflation				0.0001 (0.000)	0.00006 (0.00008)
Population growth rate					3.264*** (0.496)
Observations	214	214	214	214	214
Anderson cannon. LM stat.	150.642	149.190	148.876	148.696	148.184
Cragg-Donald Wald F-stat	418.992	394.928	388.288	383.615	374.551
Hansen-Sargan test (P-value)	0.8113	0.6661	0.6652	0.6180	0.1062

Note: Standard errors are shown in parentheses. *** $p < 0.01$,

Source: Authors

In the first section of the results, we presented the homogeneous effects of mobile money on gender inequalities. We now examine whether the effects of mobile money may vary with the distribution of gender inequalities across SSA. To do this, we use instrumental-variables quantile regression (IVQR) to address the endogeneity noted earlier. The estimation results, presented in Table 3, indicate that the effects of mobile money on gender inequalities depend on the distribution of gender inequalities. Indeed, mobile money has a more pronounced reducing effect in countries with lower levels of gender inequalities. In countries with high gender inequalities, mobile money has a limited impact.

Table 3: Conditional Effects of Mobile Money on Gender Inequalities in SSA.

Variables	Instrumental Variable Quantile Regression (IVQR)				
	Dependent variable: gender inequalities				
	Q = 0.10	Q = 0.25	Q = 0.50	Q = 0.75	Q = 0.90
Mobile money (number of active mobile money accounts)	-0.179*** (0.034)	-0.091*** (0.007)	-0.072*** (0.013)	-0.053** (0.017)	-0.043 (0.035)
GDP per capita growth rate	-0.356*** (0.131)	-0.273*** (0.104)	0.136 (0.087)	-0.099 (0.064)	-0.028** (0.012)
Trade openness	0.162*** (0.045)	0.159*** (0.036)	0.090*** (0.030)	0.027 (0.022)	-0.047 (0.047)
Total government expenditure	-0.564*** (0.092)	-0.451 (0.592)	-0.423*** (0.061)	-0.210*** (0.045)	-0.335*** (0.058)
Inflation	-0.014 (0.011)	-0.021** (0.008)	-0.020*** (0.007)	-0.018*** (0.005)	-0.018 (0.011)
Population growth rate	4.187*** (0.858)	3.479*** (0.679)	1.727*** (0.572)	1.109*** (0.420)	2.155*** (0.458)
Constant	0.589*** (0.045)	0.660*** (0.035)	0.730*** (0.030)	0.799*** (0.022)	0.840*** (0.046)
Observations	326	326	326	326	326

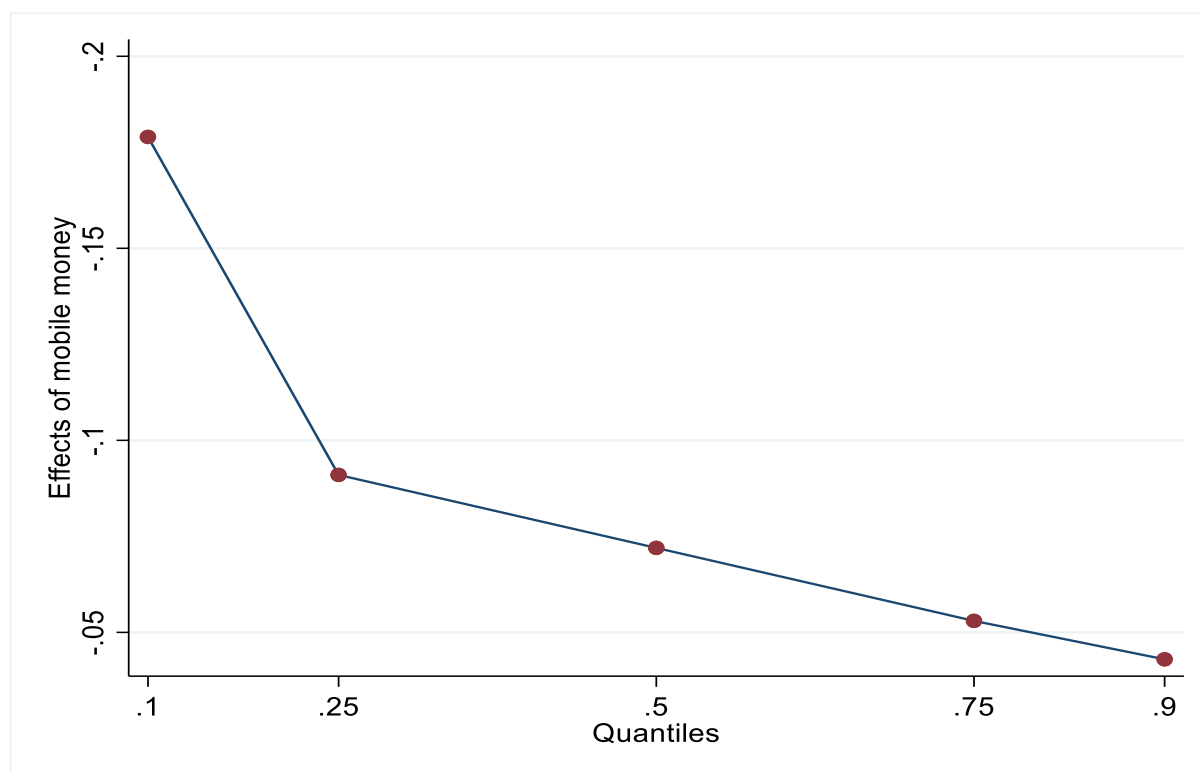
Note: Standard errors are shown in parentheses. ***p<0.01, ** p<0.05

Source: Authors

Figure 1 illustrates the effects of mobile money across different levels of gender inequalities. This graph shows that the effects of mobile money decrease as we move up the higher quantiles. The results across quantiles support our view that mobile money can have varying effects depending on the level of gender inequalities. These results can be explained by the fact that in countries with low gender inequalities, women already possess a minimum level of human and physical capital, which enables them to better exploit the opportunities offered by the development of financial services (Sen, 1999). In such cases, mobile money has a more pronounced impact, as it facilitates investment in education, health, and income-generating activities.

These findings show that mobile money is more effective at reducing gender inequalities in countries with relatively favourable conditions. In countries where gender inequalities are significant, constraints prevent inclusive access to financial services. The results are consistent with Duflo's (2012) approach, which shows that in countries with significant inequality, women struggle to convert financial resources into productive investments due to the social constraints and norms imposed on them. Finally, in many Sub-Saharan African countries, women continue to face restrictions on property rights, access to inheritance, and control over productive assets. Even where national legislation formally recognizes legal equality, customary and religious norms often limit women's effective ownership of land and property, thereby reducing their ability to access digital financial services for investment or entrepreneurial purposes. Recent work by Asongu et al. (2024) highlights that deep-seated structural inequalities reduce the inclusive effectiveness of mobile money innovations in SSA.

Figure 1: Quantile Regression Plot



Source: Authors

3.2. Robustness Analysis of the Baseline Results

To test the robustness of our estimation results, we proceed in two ways. The first uses an alternative measure of mobile money, and the second includes more control variables.

In the first sensitivity analysis, an alternative measure of mobile money (volume of mobile money transactions, % of GDP) is used to assess the stability of the results. The data for this mobile money variable are drawn from the International Monetary Fund. The results of this analysis are presented in Table 4. These results show that mobile transaction volume helps to reduce gender inequalities in Sub-Saharan Africa. These results are similar to those in Table 2 and demonstrate that the adoption of mobile money is essential for reducing gender inequalities in SSA.

Table 4: Robustness Analysis: Use of an Alternative Measure of Mobile Money

Variables	Estimates using two-stage least squares (fixed effects)				
	Dependent variable: gender inequalities				
	(1)	(2)	(3)	(4)	(5)
Volume of mobile money transactions (% of GDP)	-0.067*** (0.008)	-0.066*** (0.008)	-0.066*** (0.007)	-0.063*** (0.009)	-0.065*** (0.007)
GDP per capita growth rate	0.076*** (0.04)	0.074*** (0.024)	0.052** (0.023)	0.053** (0.024)	0.057** (0.023)
Trade openness		-0.011 (0.014)	0.051*** (0.015)	0.051*** (0.015)	0.036** (0.015)
Total government expenditure			-0.206*** (0.033)	-0.206*** (0.034)	-0.227*** (0.033)
Inflation				0.0001 (0.000)	0.0003 (0.247)

Population growth rate					2.523*** (0.443)
Observations	405	405	405	405	405
Anderson cannon. LM stat.	324.409	324.953	324.497	324.501	324.506
Cragg-Donald Wald F-stat	145.681	143.465	141.249	147.516	143.791
Hansen-Sargan test (P-value)	0.7601	0.8049	0.6226	0.6218	0.7123

Note: Standard errors are shown in parentheses. ***p<0.01, **p<0.05

Source: Authors

The second robustness analysis involves adding additional variables to the regression model. These variables are: corruption control and foreign direct investment (FDI). According to the Transparency International report (2010), corruption affects countries' efforts to reduce gender inequalities. Similarly, Sene & Ka (2022) highlight FDI as a determinant of inequality. Data on corruption and FDI are sourced from the World Bank (WGI, 2025; World Bank, 2025). The results of this analysis, presented in Table 5, show that mobile money reduces gender inequalities in SSA. The addition of additional control variables does not alter the results, confirming the robustness of the findings.

Table 5: Robustness Analysis by Adding Additional Control Variables

Variables	Estimates using two-stage least squares (fixed effects)	
	Dependent variable: gender inequalities	
	(1)	(2)
Mobile money (number of active mobile money accounts)	-0.046*** (0.008)	-0.043*** (0.007)
GDP per capita growth rate	0.025 (0.23)	0.016 (0.023)
Trade openness	-0.043** (0.020)	-0.050** (0.020)
Total government expenditure	-0.280*** (0.046)	-0.284*** (0.045)
Inflation	0.00002 (0.0008)	-0.024*** (0.002)
Population growth rate	3.159*** (0.487)	2.874*** (0.487)
Control of corruption	-0.026*** (0.009)	-0.022** (0.009)
Foreign direct investment		0.150*** (0.054)
Observations	214	609
Anderson Canon. LM Stat.	370.772	363.633
Cragg-Donald Wald F-stat	148.059	147.670
Hansen-Sargan test (P-value)	0.1061	0.1201

Note: Standard errors are shown in parentheses. ***p<0.01, **p<0.05

Source: Authors

Conclusion

This research aims to analyse the effects of mobile money on gender inequalities in Sub-Saharan Africa (SSA). It contributes to the economic literature in two ways. Firstly, it uses a gender inequality index that accounts for various forms of gender inequalities. Secondly, it employs more robust estimation techniques, enabling, on the one hand, the control of endogeneity bias arising from reverse causality between mobile money and gender inequalities, and, on the other hand, the consideration of heterogeneity across SSA countries based on their existing levels of gender inequalities.

The analysis is based on panel data from 41 SSA countries covering the period 2004–2020. Results from two-stage least squares and instrumental-variables quantile regression indicate that mobile money reduces gender inequalities in SSA. However, the magnitude of these effects depends on the distribution of gender inequalities. The effects are more pronounced in countries with lower levels of gender inequalities. In countries with high levels of gender inequalities, mobile money has marginal effects. The results obtained across different quantiles support our view that mobile money can have varying effects depending on the level of gender inequalities.

This research has significant economic policy implications for SSA countries. It suggests that financial inclusion policies using mobile money should place greater emphasis on women in order to reduce gender inequalities in SSA. Furthermore, the heterogeneity of mobile money's impact across levels of gender inequalities implies that measures aimed at sustainably reducing gender inequalities in SSA should be more targeted toward countries where it is particularly pronounced.

Credit Authorship Contribution Statement

Sié Ernest Youl: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Writing – original draft, Writing – review & editing.

Naavourétéon Palenfo: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Writing – original draft, Writing – review & editing.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Data Availability Statement

The data that support the findings of the study are available from the corresponding author upon reasonable request.

Ethical Approval Statement

This study is theoretical and empirical in nature and did not involve human participants, personal data, or animal subjects. Consequently, no ethical approval was required.

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Appendix

Table A1: List of countries covered by the study

Countries	Countries	Countries	Countries	Countries
Angola	Congo, Dem, Rep	Guinea-Bissau	Mozambique	South Sudan
Benin	Rep. Congo	Kenya	Namibia	Tanzania
Botswana	Ivory Coast	Lesotho	Niger	Togo
Burkina Faso	Eswatini	Liberia	Nigeria	Uganda
Burundi	Ethiopia	Madagascar	Rwanda	Zambia
Cabo Verde	Gabon	Malawi	São Tomé and Príncipe	
Cameroon	Gambia	Mali	Senegal	
Central African Rep	Ghana	Mauritania	Sierra-Leone	
Chad	Guinea	Mauritius	South Africa	

Source: Authors