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Determinants of Financial Inclusion in Morocco: Evidence from a PLS-SEM Analysis

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Abstract

This article aims to analyze the determining factors behind the persistence of barriers to financial inclusion in Morocco. It also seeks to highlight the relationship between several economic, social, cultural, regulatory and institutional constraints on the access and use of financial services by underserved populations. Thus, our methodology is exclusively quantitative and relies on a survey conducted through a questionnaire targeting a sample of 562 individuals from diverse socio-economic backgrounds. The collected data were analyzed using the partial least squares method (SmartPLS). The study reveals the importance of improving financial education, digital infrastructure, and regulatory flexibility to overcome financial exclusion. It also underscores the need to strengthen trust in financial institutions, adapt financial products to user needs, and implement inclusive public policies that promote financial empowerment for all segments of the population.

Keywords: financial exclusion; barriers; PLS-SEM; human development; vulnerable population

1. Introduction

Financial inclusion has emerged as a top priority for a growing number of countries and now occupies a central place in global development agendas. Many governments view it as a powerful tool to combat poverty, narrow gender gaps, reduce social exclusion, and ultimately enhance the economic and social well-being of their citizens. Despite this widespread recognition, a significant portion of the world's population remains outside the formal financial system. According to the [World Bank \(2014\)](#), approximately 2.5 billion adults—representing nearly 38% of the global adult population at the time—had no access to, or made no use of, formal financial services. In Morocco, where roughly one-third of adults remain unbanked, financial inclusion is both a major development opportunity and an urgent necessity. Progress, however, continues to be hampered by a wide range of interconnected barriers.

Against this backdrop, the Moroccan government launched the National Financial Inclusion Strategy (SNIF) in 2016, led by the Ministry of Economy, Finance and Administrative Reform in close partnership with Bank Al-Maghrib. Developed through extensive multi-stakeholder consultations, the strategy establishes a shared national vision, sets clear priority areas, and identifies concrete levers for action. It places particular emphasis on the most vulnerable segments of the population, including youth under 25, women, rural residents, and micro-enterprises ([Bank Al-Maghrib & MEFRA, 2019](#)).



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This study makes several original contributions. First, from a theoretical and conceptual standpoint, it adopts an integrated multidimensional framework that simultaneously examines four categories of barriers—economic, social, cultural, and institutional/regulatory—within a single structural model, in contrast to prior African and Moroccan studies that examined these determinants in isolation. Second, and most distinctively, it conceptualizes financial inclusion as a four-dimensional construct encompassing not only access and use, but also satisfaction and financial resilience, thereby extending prior Moroccan research that has been confined to the access and use dimensions owing to data limitations. Third, from a contextual standpoint, the study addresses the scarcity of structural-equation-based evidence on financial inclusion in Morocco, where existing analyses rely predominantly on probit models or composite indices applied to secondary data. Fourth, from a methodological standpoint, it applies PLS-SEM to individual-level primary data from a relatively large sample. Taken together, these contributions provide a more comprehensive and context-specific understanding of the multidimensional barriers to financial inclusion in Morocco.

Our analysis aims to examine the main barriers related to the limited expansion of financial inclusion in Morocco, while highlighting the combined association of economic, social, cultural, regulatory, and institutional constraints. The article proceeds as follows: the second section reviews the existing literature; the third section describes the research methodology; and the final section presents and discusses the results of the quantitative analysis.

2. Literature Review & Hypotheses

2.1. Multidimensional Barriers to Financial Inclusion

2.1.1. Economic Barriers

The high cost of designing and delivering small-scale financial products to low-income groups remains a core obstacle to inclusion, since these services must generate returns that outweigh both operational and financing expenses to remain viable (Bag, 2013; Moore & Craigwell, 2003; Natamba et al., 2013). Consequently, banks in sub-Saharan Africa tend to cluster their networks in densely populated urban centers and tailor offerings primarily for affluent clients (T. B. Beck & Samuel Munzele, 2012). This economic logic also shapes the double-edged nature of credit: while loans empower individuals to invest in life-enhancing goods and services, the accompanying debt can spark repayment stress and erode well-being (Liu et al., 2020).

These cost-driven dynamics feed directly into broader patterns of involuntary exclusion, where insufficient income intersects with discrimination, unprofitable branch locations, steep pricing, and ill-suited products (Caplan et al., 2020; Nowacka et al., 2021). For example, Nigeria's unbanked population often lacks identification, earns lower wages, shows weaker financial knowledge, and is disproportionately female (King, 2011). Similarly, research in rural Ghana reveals that income levels strongly predict credit demand, insurance purchases, and savings behavior (Bending et al., 2009; Demircuc-Kunt & Klapper, 2012). Extending this evidence, recent panel analysis using fully modified ordinary least squares on data from 2004 to 2020 demonstrates that expanding financial inclusion not only boosts human capital across ECOWAS, lower-middle-income, and low-income nations but also correlates with shrinking income inequality through greater service access and utilization (Akpa et al., 2023).

Geographic and infrastructural constraints reinforce these economic barriers and show a strong association with financial exclusion. In Peru, major banks concentrate loans, deposits, and ATMs in thriving cities like Lima, Arequipa, and others, sidelining less-developed highland and jungle areas (Boitano & Abanto, 2020)—a pattern mirrored in the

DRC's small, bank-heavy financial system ([African Development Bank, 2022](#)). As a result, rural dwellers face sharply reduced inclusion odds due to absent providers and facilities ([Njanike & Mpofu, 2024](#)). In Peru, outdated roads, lagging telecommunications, and scarce internet among the poorest perpetuate this divide ([Vargas, 2022](#); [Sotomayor & Talledo, 2018](#)). Across sub-Saharan Africa, mismatches between financial products and small savers' needs, combined with chronically weak infrastructure, continue to stifle growth and deepen exclusion, underscoring the need for policies that prioritize affordability, suitability, and adaptability ([Ezzahid & Elouaourti, 2021b](#); [Chipunza & Fanta, 2022](#)). Beyond individuals, financial obstacles also constrain firms. Evidence from European and Central Asian firms shows that financial and labour obstacles are significantly related to lower firm employment, underscoring the broader economic cost of restricted financial access ([Bui, 2021](#)).

Taken together, this body of evidence converges to establish that economic constraints constitute one of the most robust determinants of financial inclusion in developing economies. These constraints operate through several interrelated mechanisms: the high cost of financial services, insufficient or irregular income, the geographic concentration of financial services in urban areas, the limited adaptation of products to the needs of low-income individuals, and the underdevelopment of financial infrastructure.

In Morocco, these economic dynamics appear particularly decisive. Despite a decade of double-digit growth in account ownership, approximately 15 million Moroccan adults remain unbanked, with rural communities facing significant barriers to financial access ([United Nations Secretary-General's Special Advocate for Inclusive Finance for Development, 2023](#)). The spatial dimension of this exclusion is striking: historically, only 19% of rural respondents used a financial product, compared to 53% in urban areas ([Murphy-Schmehl, 2024](#)), reflecting the persistent concentration of financial infrastructure in cities. Moreover, the deployment of banking infrastructure for rural coverage remains an economic challenge in itself, requiring substantial investment to close the rural-urban gap ([International Monetary Fund, 2021](#)), while the prevalence of a cash-reliant economy and the limited supply of products tailored to low-income households further constrain inclusion ([Murphy-Schmehl, 2024](#)). Drawing on these converging elements, we expect economic barriers to relate negatively to financial inclusion in Morocco.

2.1.2. Social Barriers

Beyond purely financial hurdles, a range of social and behavioral factors actively contributes to self-exclusion from formal financial systems. For instance, in Nigeria, eligibility requirements, cost concerns, and financial apathy all shape participation in banking services ([Adeyemi et al., 2012](#)). South Africa offers a compelling case: while the country has successfully extended basic account access to many formerly unbanked individuals—a foundational pillar of inclusion—widespread gaps in financial knowledge continue to stall deeper socioeconomic progress, leaving much of the population reliant on cash and hesitant about fees despite 70% holding transactional accounts ([Gordon Institute of Business Science, 2023](#)). Numerous studies reinforce this link, showing that greater financial education directly boosts inclusion levels by equipping people with the skills to navigate banking products confidently ([Allen et al., 2012](#); [Camara et al., 2014](#)). As [Guérineau and Jacolin \(2014\)](#) highlight, inadequate financial literacy, often tied to broader educational deficits, emerges as a critical driver of voluntary withdrawal from the system.

Demographic characteristics further deepen these exclusionary patterns, with gender, education, and geography playing pivotal roles. Involuntary exclusion frequently stems from low income, discriminatory practices, unviable branch locations, and mismatched products ([Caplan et al., 2020](#); [Nowacka et al., 2021](#)), a reality starkly illustrated in Nigeria where the unbanked often lack proper documentation, earn less, demonstrate limited

financial understanding, and are predominantly women (King, 2011). Higher education, male gender, mobile phone ownership, greater earnings, and older age consistently predict stronger inclusion (Zins & Weill, 2016), while in Peru, women, youth, and rural residents face systemic barriers to formal finance (Sotomayor & Talledo, 2018).

Personal circumstances like marital status and age introduce additional layers of complexity. Contrary to expectations that married individuals benefit from pooled resources and greater stability (Reyers, 2019), evidence suggests marriage actually reduces the likelihood of formal financial engagement (Martinez et al., 2013; Soumare et al., 2016; Song et al., 2020). Age effects remain mixed: while some studies portray younger people as more exposed to financial risk (Dimova & Adebawale, 2018; Song et al., 2020), others indicate older adults enjoy greater resilience (N'dri & Kakinaka, 2020), and several report no significant influence at all (Obadha et al., 2020).

Collectively, the literature highlights that social factors significantly shape an individual's participation in the formal financial system. These factors encompass several interrelated dimensions: the lack of financial literacy, gender-based discrimination, and geographical isolation, marital status, and age-related discrimination.

In the Moroccan context, these social mechanisms are particularly pronounced. The gender dimension is the most striking: in 2021, only 33% of women held an account compared to 56% of men, leaving a gender gap of 23 percentage points (United Nations Secretary-General's Special Advocate for Inclusive Finance for Development, 2023). This gap is partly rooted in social norms, as many women view formal finance as irrelevant due to limited labour-force participation (under 20%) and reliance on cash or on their husband's accounts (CGAP, 2025), illustrating the combined weight of gender and marital status. Geographical isolation reinforces these disparities. Rural residents, especially rural women, face higher mobility constraints and lower financial and digital literacy compared with urban residents (CGAP, 2025; International Monetary Fund, 2021). Age-related disparities are equally documented, with young and older adults historically displaying lower access to financial services, although the gap between young and older adults narrowed from 52% in 2017 to 28% in 2021 (International Monetary Fund, 2021). Taken together, these elements point to a negative association between social barriers and financial inclusion in Morocco.

2.1.3. Cultural Barriers

People often step away from formal banking not because they cannot afford it, but simply because they do not feel the need—or because long-standing cultural and religious practices steer them elsewhere (Sain et al., 2018). In rural Peru, for example, women tend to save through trusted intermediaries, rely heavily on informal lending circles, perceive ethnic or racial bias in the system, and harbor deep mistrust stemming from past mismanagement of regulated savings and credit institutions overseen by the SBS (Daher et al., 2021). Similar influences shape financial behavior in Nigeria, where access hinges not just on eligibility and cost, but also on cultural background, financial indifference, and faith-based preferences (Adeyemi et al., 2012).

This mistrust can run even deeper when repeated bank failures erode public confidence, pushing individuals to opt out of the formal system altogether (Guérineau & Jacolin, 2014). For Muslim adults in particular, global data from over 65,000 individuals across 64 countries reveal a clear pattern: they are far less likely to hold a formal account or deposit savings in a bank compared with non-Muslims (Demirguc-Kunt et al., 2014). Yet, borrowing remains common—both formal and informal—with a marked preference for Sharia-compliant products, even at a higher cost (Demirguc-Kunt et al., 2014). Such choices reflect not only religious principles but also a broader wariness of conventional finance. Cultural norms tied to specific ethnic or religious identities further reinforce self-exclusion,

as well as an exaggerated belief in institutional discrimination—often greater than the evidence supports (T. Beck & Honohan, 2007).

These barriers, rooted in tradition, faith, perceived exclusion, and institutional distrust, create powerful disincentives, especially for rural women (Daher et al., 2021; Sain et al., 2018). While banks may be physically present, true engagement depends on cultural relevance, historical reliability, and genuine trust. Overcoming this requires more than outreach; it calls for financial solutions that respect local values, transparent governance, and proactive efforts to correct both real and perceived inequities.

A growing stream of research underscores that cultural and religious norms shape financial behavior, particularly in Muslim-majority contexts. These cultural factors operate through several channels: restrictive cultural norms, distrust of financial institutions, engagement in formal lending practices, religious barriers to conventional banking, and the limited awareness of cultural values on the part of banks. A recurring finding is that the prohibition of interest (riba) under Sharia law may discourage the use of conventional financial products, while culture and religion more broadly act as barriers to financial inclusion in Islamic countries (Asutay, 2012).

Cultural considerations of this kind stand out clearly in the Moroccan setting. A substantial share of the population relies on informal financing channels rather than formal institutions, a behavior often driven by lack of trust, limited awareness, or a perceived mismatch between available banking products and individual's values. The literature widely documents the religious dimension: many Moroccan citizens wish to avoid riba, which is prohibited under Sharia, and this motivated the official introduction of participatory (Islamic) banks in 2017 under Law No. 103-12. Empirical evidence confirms that the Islamic finance model constitutes a lever for the inclusion of population segments excluded for religious reasons (Ezzahid & Elouaourti, 2021b). However, the persistence of distrust and limited responsiveness of banks to local cultural and religious values continue to constrain participation, suggesting a negative relationship between cultural barriers and financial inclusion in Morocco.

2.1.4. Institutional and Regulatory Barriers

Obtaining the necessary identification documents to open a bank account stands out as one of the most frequently mentioned hurdles preventing people from using formal financial services (Akudugu, 2013). In Nigeria, for instance, those without banking access often lack proper paperwork, earn lower incomes, exhibit limited financial knowledge, and are disproportionately women (King, 2011). Addressing this could involve streamlining documentation processes, creating exemptions for specific groups, bolstering financial education, and strengthening oversight of financial sectors—particularly in nations like the DRC (Lahrichi et al., 2025, Njanike & Mpofu, 2024). Meanwhile, information asymmetries between banks and potential clients severely restrict the supply of formal services, as unreliable accounting and financial records make it difficult for lenders to assess creditworthiness, especially among households and small businesses (Guérineau & Jacolin, 2014).

Institutional quality emerges as another pivotal factor shaping financial inclusion across Africa. Research consistently highlights that stronger governance leads to greater penetration, accessibility, and usage of financial services (Bawuah, 2025). Weak financial systems in the region are frequently linked to poor governance, political instability (T. Beck & Honohan, 2007), and subpar institutional frameworks (Singh et al., 2009). Conversely, ineffective governance, flawed regulatory policies, corruption, political unrest, and limited democratic accountability undermine financial system efficiency, heighten insecurity, and ultimately deepen exclusion (Khan et al., 2022; Zeqiraj et al., 2022).

Development partners, including the [African Development Bank \(2022\)](#), have actively supported these efforts by promoting interoperable digital financial services and revising regulatory frameworks to reach over 25 million vulnerable individuals, including women, youth, and rural residents. Beyond documentation challenges, studies in Colombia—though focused on businesses—identify collateral requirements, service costs, and insufficient savings as major roadblocks to inclusion ([Karpowicz, 2016](#)), echoing broader findings on how financial frictions impede growth ([Claessens et al., 2010](#)). Strengthening corporate governance and contract enforcement can ease these constraints, but success ultimately depends on robust, transparent institutions capable of inspiring trust and enabling equitable access ([Njanike & Mpofu, 2024](#); [Akudugu, 2013](#)).

The literature consistently identifies institutional and regulatory factors as critical determinants of financial inclusion. These factors materialize through several interrelated obstacles: the complexity of required documents, institutional instability, an unfavorable regulatory framework, the limited reliability of financial documents, and cumbersome administrative procedures. A recurring finding is that meaningful and sustainable access to financing requires proper institutional policy frameworks as well as legal and regulatory conditions, since regulatory rigidities and weak institutional quality systematically constrain the expansion of formal financial services ([International Monetary Fund, 2021](#)). More broadly, the literature on financial market design emphasizes that transparency and information disclosure shape market efficiency and participants' confidence ([Westerholm, 2013](#); [Pham, 2015](#); [Swan & Westerholm, 2016](#)), factors that indirectly relate to trust in financial systems.

The Moroccan case clearly illustrates these institutional and regulatory factors. Account-opening procedures have traditionally been constrained by documentation and know-your-customer (KYC) requirements. The COVID-19 period illustrates this clearly. During the pandemic, Bank Al-Maghrib temporarily simplified these procedures. It deferred KYC rules and allowed people to open basic accounts remotely, using only phone number and a digitized national ID card ([World Savings and Retail Banking Institute–European Savings and Retail Banking Group, 2020](#)). This shows how administrative complexity had previously hindered access. Morocco also embarked on a series of legal and institutional reforms from 2000 onwards. However, further regulatory adjustments remained necessary for microfinance, agricultural finance, and digital financial services ([World Bank, 2021](#)). The country still lacks a fully integrated regulatory framework for emerging financial technologies, as current rules largely target traditional institutions. Empirical evidence also confirms that the regulatory framework relates significantly to technology adoption and, in turn, to financial inclusion in Morocco ([Maghniwi & Oukassi, 2025](#)). Overall, these elements highlight a negative connection between institutional and regulatory barriers and financial inclusion in Morocco.

2.2. Multidimensional Framework to Financial Inclusion

2.2.1. Access to Financial Services

Financial inclusion fundamentally involves making formal financial services readily available, accessible, and usable for every segment of society, effectively bridging gaps caused by distant bank branches while lowering associated costs and fees ([Sarma, 2008](#)). This process builds greater consumer trust, as individuals can securely transfer funds, receive payments, and monitor accounts in real time using just a mobile device ([Ezzahid & Elouaourti, 2021a](#)). Beyond convenience, inclusion unlocks affordable products and services that create jobs, boost income streams, and improve access to essential education and healthcare ([Ouedraogo & Thiombiano, 2025](#)).

Digital innovations play a transformative role, particularly for remote or low-income residents who traditionally could not maintain bank accounts (Anarfo et al., 2019). Platforms like M-Pesa in Kenya have evolved into versatile e-money systems supporting transfers, payments, savings, and cash conversions, streamlining transactions in real time (Ndung'u, 2018). Countries across Africa, including Kenya and Ghana, have seen mobile money correlate positively with broader internet penetration and financial growth (Lenka & Barik, 2018; Johnson & Arnold, 2012). Such technologies not only solve geographic isolation but also enhance confidence through instant, secure operations (Ezzahid & Elouaourti, 2021b).

At a macroeconomic level, deeper financial systems drive structural change and alleviate poverty in developing economies, with improved payment access delivering swift welfare gains (T. Beck, 2016). Mobile money stands out as a powerful tool for inclusive finance, curbing inequality, spurring investment, upgrading payment infrastructure, strengthening banks, fueling growth, heightening security by reducing cash handling, curbing corruption via transparent records, and connecting millions of unbanked individuals worldwide—especially in Africa (Grzybowski et al., 2023; Senyo et al., 2022; Sakyi-Nyarko et al., 2022). Financial education further amplifies these outcomes by equipping people with the knowledge to engage effectively (Allen et al., 2012; Camara et al., 2014).

2.2.2. Use of Financial Services

Financial inclusion streamlines everyday money management by tackling the challenges of distant bank branches and high service fees, while boosting user trust through secure, real-time mobile transactions for sending, receiving, and monitoring funds (Ezzahid & Elouaourti, 2021b). Platforms like M-Pesa exemplify this shift, functioning as versatile e-money wallets that handle transfers, payments, savings, and cash withdrawals, all processed instantly on a robust tech infrastructure (Ndung'u, 2018). Simply holding a bank account markedly raises the odds of securing credit, opening doors to funding for education costs like fees and materials, or smoothing school-related payments, which in turn supports higher attendance rates (Demirgüç-Kunt et al., 2017; Sakyi-Nyarko et al., 2022). This access extends to vital investments in housing or startups, enhances privacy, cuts cash-related risks, and eases entry into healthcare services (Heyert & Weill, 2024; Sakyi-Nyarko et al., 2022).

Mobile money has emerged as a key driver of inclusive finance, particularly in Ghana and across Africa. It helps reduce inequality and poverty, enhances financial systems, promotes growth and security, and expands access to financial services for unbanked populations. (Grzybowski et al., 2023; Senyo et al., 2022; Sakyi-Nyarko et al., 2022). In Ghana from 2014 to 2021, stronger institutions amplified mobile money's role in expanding inclusion (Bawuah, 2025).

On the savings front, inclusion fosters positive habits in lower-middle-income settings by making deposit collection simpler and more rewarding (Ezzahid & Elouaourti, 2021a). Models link these savings to investments that fuel broader economic expansion, countering rural barriers like physical distance through mobile banking and agent networks (Ouma et al., 2017). At its core, inclusion ensures seamless service reach for everyone, meeting basic needs with security and discretion while enabling entrepreneurship and meaningful life pursuits (Sarma, 2008).

2.2.3. Satisfaction with Financial Services

Across Africa, digital tools—particularly mobile money—have driven impressive strides in handling everyday transactions, cutting the expenses tied to managing funds and executing transfers at lower rates (Asongu & Nchofoung, 2021; Evans, 2018). Usage of mobile banking spiked amid the COVID-19 crisis, with farmers expressing moderate contentment over remittance speeds, daily limits, transaction frequencies, and phone top-

ups, yet strong approval for seamless fund movements and subsidy disbursements (Islam et al., 2024). At its heart, inclusion delivers cost-effective financial options that spark job creation, steady income flows, and better pathways to education and medical care (Ouedraogo & Thiombiano, 2025). True inclusion goes further than mere access; it ensures affordable services actually serve vulnerable populations, incorporating credit for routine needs, savings vehicles, and insurance for low earners (De Koker & Jentzsch, 2013). On the continent, where formal finance remains elusive for many, surveys show about 60% hold traditional accounts versus 88% using mobile platforms, highlighting how tech bridges gaps for the underserved at minimal cost (Asongu & Nchofoung, 2021).

These advancements resolve isolation from physical branches, slash service charges, and instill reliability as users handle transfers, receipts, and balance checks securely and instantly via smartphones (Ezzahid & Elouaourti, 2021b). Strong institutions amplify this: analyses of 120 nations from 2004–2019 link robust rule of law and regulatory standards to greater account ownership, especially in Africa’s fragile settings (Muriu, 2021). Parallel work across the continent from 2004–2020 confirms institutional strength as a core driver of inclusion (Nsiah & Tweneboah, 2023). When financial reach intersects with solid political and economic frameworks, income gaps narrow, vulnerabilities ease, business ventures flourish, and human development advances in WAEMU—bolstering community welfare and economic stability (Okereke et al., 2023; Ouechtati, 2023; Aracil et al., 2022). Inclusion further promotes discretion and protection by curbing cash-linked crimes, while formal accounts simplify credit for key investments in schooling, homes, or enterprises (Heyert & Weill, 2024).

2.2.4. Financial Resilience

Financial inclusion plays a pivotal role in spurring entrepreneurship via enhanced human capital, ultimately narrowing inequality gaps (Kling et al., 2020). Mobile money platforms like MOMO enable seamless transfers across distances and time, serving as a vital channel for broader economic participation, poverty alleviation, and equitable growth (N’dri & Kakinaka, 2020). Rural populations often face heightened risks due to limited job prospects, scarce amenities, and underdeveloped financial networks, making inclusion especially crucial for their stability. In developing Asia, indicators built from 37 economies reveal that higher per capita earnings, strong legal systems, and population traits drive inclusion, which in turn curbs poverty and income disparities while boosting savings essential for capital buildup and progress (Park & Mercado, 2015, 2018).

Savings habits flourish with inclusion in lower-middle-income settings, channeling resources into productive investments that sustain growth (Ezzahid & Elouaourti, 2021a; Park & Mercado, 2018). In rural Ghana, income thresholds shape credit needs, insurance uptake, and deposit behaviors (Bending et al., 2009). Vulnerable demographics—marked by education, gender, employment, and earnings—tend toward informal markets but gain resilience, shock absorption, and saving incentives through formal channels (Martinez et al., 2013). Robust systems mitigate risks, aiding shock recovery (Arner, 2007), while enabling long-range planning, productive ventures, and emergency buffers (Sanjaya & Nursechafia, 2016). Stable macro conditions and income-aware policies are key to these outcomes (Sha’ban et al., 2020).

On human development, inclusion consistently elevates well-being. FMOLS analysis of 2004–2020 data links it to human capital uplift in ECOWAS and low-income groups, alongside reduced inequality via service engagement (Akpa et al., 2023). Sub-Saharan surveys affirm positive welfare ties (Ofori-Abebrese et al., 2020), with stronger impacts in lower-income brackets (Abdelghaffar et al., 2023). Rural Nigerian households report enhanced living standards (Ibrahim et al., 2019), while gender-disaggregated panels highlight

women's amplified gains in 35 SSA nations (Dianda et al., 2024). Overall, inclusion delivers affordable tools, jobs, earnings, and vital services like education and healthcare, fostering resilient, inclusive societies (Ouedraogo & Thiombiano, 2025).

The analysis of this literature review has led to the formulation of four key hypotheses, which the present study examines empirically:

H1. *Cultural norms and beliefs hinder the advancement of financial inclusion.*

H2. *Economic barriers significantly lower the level of financial inclusion among individuals.*

H3. *Inadequate or overly rigid regulatory and institutional frameworks strongly constrain the development of financial inclusion in Morocco.*

H4. *Social factors act as a major impediment to the uptake of formal financial services.*

3. Materials and Methods

This study investigates the relationship between these barriers and financial inclusion in Morocco using a quantitative approach. The goal was to target individuals from various socio-economic backgrounds in order to gain a comprehensive understanding of the challenges they face. A self-report survey was employed, using closed-ended questions for demographic information and five-point Likert-scale statements for the studied variables (1 = strongly disagree, 5 = strongly agree). We organized the survey into several parts. The first part covered demographic information, namely the respondent's gender, age, educational background, income level, and area of residence (urban or rural). The subsequent parts measured the studied constructs: the four categories of barriers and the four dimensions of financial inclusion. Each scale aims to provide a robust understanding of the associations between the barriers and financial inclusion in the Moroccan context.

To ensure a diversity of perspectives on financial inclusion barriers, a non-probability sampling method was employed (Heckathorn, 2002). Data were collected through an online questionnaire created using Google Forms. To complement this online channel and avoid excluding individuals who are typically underrepresented in digital surveys, the same structured questionnaire was also administered in person to respondents with limited or no internet access, including older individuals and respondents with limited literacy, across both urban and rural areas. The inclusion criteria required respondents to be adults (aged 18 or above) and residents of Morocco. Data were collected from January to May 2025. After screening for completeness and consistency, a final sample of 562 valid responses was obtained, with no missing values. Data analysis was conducted using (SmartPLS 4.1.1.7) software and partial least squares structural equation modeling (PLS-SEM), an approach appropriate for estimating complex models with latent variables and formatively specified constructs. Both measurement and structural models were evaluated in accordance with established PLS-SEM guidelines (Hair et al., 2017). This approach sheds light on the main obstacles to financial inclusion in Morocco, including economic, social, cultural, institutional, and regulatory constraints.

The aim of this research is to explore how various barriers—economic (EB), social (SB), cultural (CB), institutional, and regulatory (IRB)—are associated with financial inclusion (Table 1). This concept of financial inclusion is broken down into four main aspects: access to financial services (AFS), utilization of financial services (UFS), satisfaction with financial services (SFS), and financial resilience (FR) (Table 2). To explore these relationships, we use structural equation modeling with the partial least squares (PLS) method, which is particularly effective for data that does not follow a normal distribution. Financial inclusion is treated as a second-order construct, and we adopt a two-step process for estimating our

model. In the initial stage, we analyze the first-order measurement model and calculate latent scores for the dimensions that make up the second-order construct of financial inclusion. The second stage involves evaluating both the second-order construct and the structural model.

Table 1. Operationalization of barriers to financial inclusion.

Variable	Code	Items
Economic Barriers	EB1	High cost of financial services.
	EB2	Insufficient income.
	EB3	Financial services concentrated in urban areas.
	EB4	Products not tailored for low-income individuals.
	EB5	Limited infrastructure development.
Social Barriers	SB1	Lack of financial literacy.
	SB2	Gender-based discrimination.
	SB3	Geographical isolation.
	SB4	Marital status.
	SB5	Age-related discrimination.
Cultural Barriers	CB1	Restrictive cultural norms.
	CB2	Distrust of financial institutions.
	CB3	Engagement in informal lending practices.
	CB4	Religious barriers to banking.
	CB5	Banks' lack of awareness of cultural values.
Institutional and regulatory Barriers	IRB1	The complexity of required documents.
	IRB2	Institutional instability.
	IRB3	An unfavorable regulatory framework.
	IRB4	Limited reliability of financial documents.
	IRB5	Cumbersome administrative procedures.

Source: Authors.

Table 2. Operationalization of factors financial inclusion development.

Variable	Code	Items
Access to financial services	AFS1	Expanding access to formal services.
	AFS2	Improved geographical accessibility.
	AFS3	Strengthening financial literacy.
	AFS4	Financial innovations that enhance access.
	AFS5	Reducing administrative barriers.
Use of Financial Services	UFS1	Frequent use of bank accounts.
	UFS2	Turning to formal loans.
	UFS3	Embracing mobile payments.
	UFS4	Consistent institutional savings.
	UFS5	Services tailored to actual needs.
Satisfaction with Financial Services	SFS1	Satisfaction with access to services.
	SFS2	Affordable financial services.
	SFS3	Trustworthiness and security of institutions.
	SFS4	Clear and proactive communication.
	SFS5	Recommending services to others.
Financial Resilience	FR1	Reducing poverty and inequality.
	FR2	Financial protection through savings.
	FR3	Support during financial crises.
	FR4	Boosting economic growth.
	FR5	Enhancing living standards.

Source: Authors.

4. Results

4.1. Sample Description

Table 3 presents the descriptive statistics of the study variables.

Table 3. Descriptive statistics.

Variable	Modality	Frequency (n)	%
Gender	Female	266	47%
	Male	296	53%
Age	18–25 years	120	21%
	26–35 years	136	24%
	36–45 years	194	35%
	46–55 years	76	14%
	55 years and above	36	6%
Area of residence	Urban	382	68%
	Rural	180	32%
Education	Illiterate	28	5%
	Less than a Bachelor's degree	264	47%
	Bachelor's degree	182	33%
	Master's degree	69	12%
	doctoral degree	19	3%
Income (monthly)	<3045 MAD	163	29%
	3045–5000 MAD	204	36%
	5001–7000 MAD	119	21%
	7001–10,000 MAD	61	11%
	>10,000 MAD	15	3%

Source: Authors.

4.2. Evaluation of the First-Order Measurement Model

As part of the validation of the formative measurement model in the first stage of the two-stage approach to structural equation modeling (SEM), we assess the relevance of the indicators forming the latent constructs (Figure 1). This is done by examining the weights, the significance of these weights through p -values obtained via the bootstrapping (5000 resamples) resampling technique, and the multicollinearity indices by calculating the variance inflation factors (VIF).

As illustrated in Table 4, the analysis of the weights shows that all item weights are positive and significant ($p < 0.05$) for all constructs, indicating their individual contribution to the formation of the measured concept. This is further supported by Student's t -statistics, which are well above the critical threshold of 1.96 for a 5% significance level. According to Hair et al. (2017), the items for all constructs are significant and are retained in our study. Regarding multicollinearity, the VIF values remain generally below the critical threshold of 5, indicating no problematic multicollinearity among the items within each of the eight constructs studied. Taken together, based on these indicator weights and collinearity criteria, the formative measurement model is considered adequate for the purpose of this exploratory study. On this basis, the analysis proceeds to the second stage of the approach, which involves analyzing the second-order construct followed by the estimation of the structural model.

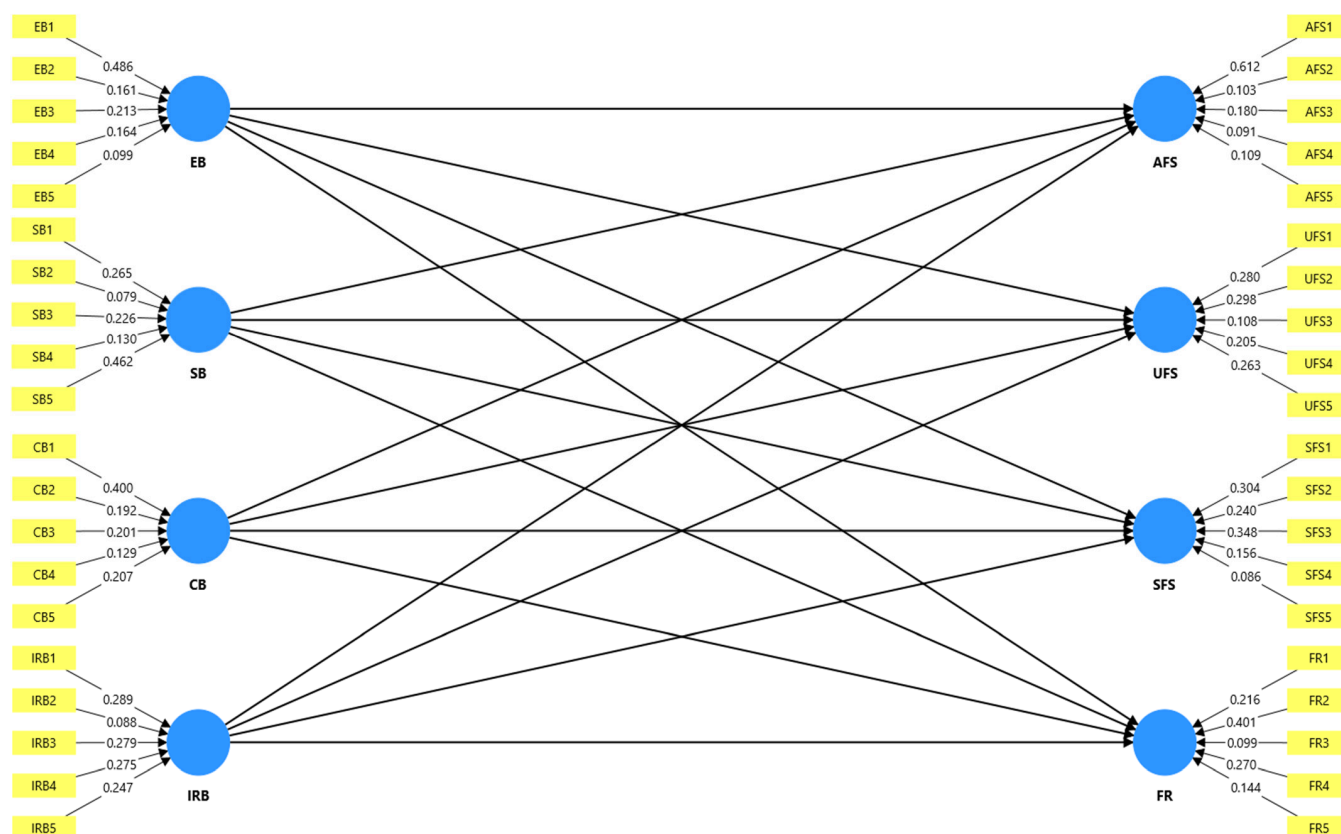


Figure 1. First-Order measurement model. Source: Authors.

Table 4. Weights and variance inflation factors of the First-Order construct items.

	Weights	Student's t-Statistics	p-Value	VIF
AFS1 → AFS	0.612	10.512	<0.001	4.368
AFS2 → AFS	0.103	2.620	0.009	3.802
AFS3 → AFS	0.180	3.422	0.001	3.029
AFS4 → AFS	0.091	2.354	0.019	3.382
AFS5 → AFS	0.109	2.982	0.003	2.622
CB1 → CB	0.400	13.214	<0.001	3.102
CB2 → CB	0.192	7.022	<0.001	2.915
CB3 → CB	0.201	6.336	<0.001	3.421
CB4 → CB	0.129	3.633	<0.001	4.586
CB5 → CB	0.207	6.717	<0.001	3.027
EB1 → EB	0.486	16.781	<0.001	3.578
EB2 → EB	0.161	5.789	<0.001	4.056
EB3 → EB	0.213	7.331	<0.001	2.777
EB4 → EB	0.164	7.014	<0.001	2.702
EB5 → EB	0.099	4.043	<0.001	4.315
FR1 → FR	0.216	5.807	<0.001	2.811
FR2 → FR	0.401	9.641	<0.001	2.962
FR3 → FR	0.099	2.136	0.033	3.532
FR4 → FR	0.270	6.608	<0.001	3.762
FR5 → FR	0.144	3.842	<0.001	2.743
IRB1 → IRB	0.289	10.476	<0.001	2.012
IRB2 → IRB	0.088	3.437	0.001	2.505
IRB3 → IRB	0.279	7.225	<0.001	2.441
IRB4 → IRB	0.275	7.598	<0.001	2.739
IRB5 → IRB	0.247	8.648	<0.001	2.649

Table 4. Cont.

	Weights	Student's t-Statistics	p-Value	VIF
SB1 → SB	0.265	12.251	<0.001	1.895
SB2 → SB	0.079	3.295	0.001	3.554
SB3 → SB	0.226	7.114	<0.001	3.555
SB4 → SB	0.130	2.779	0.005	4.358
SB5 → SB	0.462	18.008	<0.001	3.622
SFS1 → SFS	0.304	6.979	<0.001	2.730
SFS2 → SFS	0.240	4.903	<0.001	3.368
SFS3 → SFS	0.348	7.615	<0.001	3.540
SFS4 → SFS	0.156	2.973	0.003	3.442
SFS5 → SFS	0.086	2.034	0.042	2.969
UFS1 → UFS	0.280	9.360	<0.001	2.446
UFS2 → UFS	0.298	6.981	<0.001	2.478
UFS3 → UFS	0.108	2.803	0.005	3.500
UFS4 → UFS	0.205	4.894	<0.001	3.510
UFS5 → UFS	0.263	5.809	<0.001	3.119

Source: Authors.

4.3. Evaluation of the Second-Order Measurement Model

Figure 2 highlights the latent scores calculated in the first stage for the four dimensions (AFS, FR, SFS, UFS) are used as formative indicators of financial inclusion (FI), which is considered a second-order construct. Subsequently, we examined the significance of the weights as well as the multicollinearity of these new indicators.

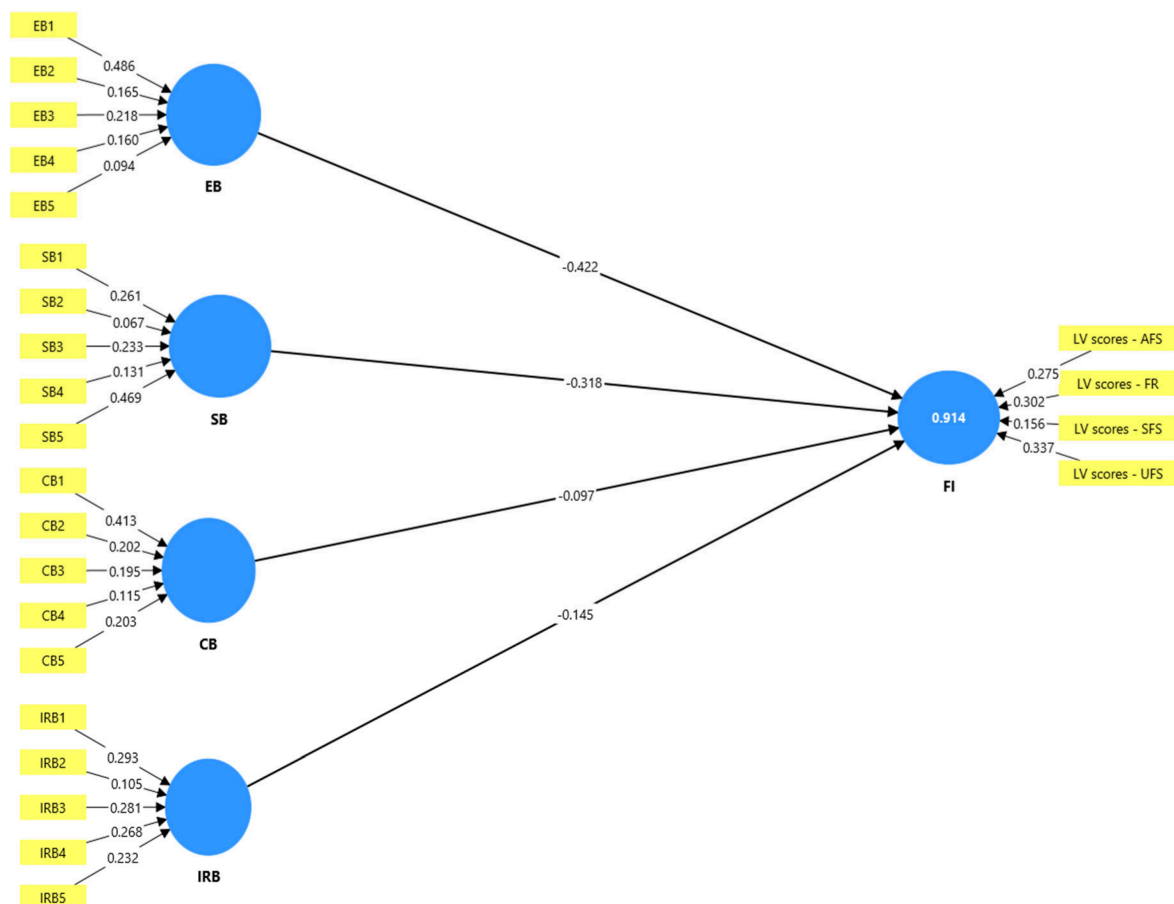


Figure 2. Second-Order Structural model. Source: Authors.

As presented in Table 5, the results indicate that all the latent scores associated with the dimensions AFS, FR, SFS and UFS are statistically significant, with p -values below 0.001. This suggests that each dimension plays a significant role in the formation of financial inclusion (FI). Regarding multicollinearity, the VIF values range from 3.956 to 4.756, which are below the critical threshold of 5. This suggests an absence of multicollinearity between the first-order dimensions. The dimensions therefore provide distinct and complementary information to the construction of the second-order construct FI. Based on these criteria, the second-order formative measurement model is considered adequate for the purpose of this exploratory study.

Table 5. Weights and variance inflation factors of the latent scores for the financial inclusion construct.

	Weights	Student's t-Statistics	p -Value	VIF
LV scores—AFS → FI	0.275	7.601	0.000	3.956
LV scores—FR → FI	0.302	11.046	0.000	4.741
LV scores—SFS → FI	0.156	7.095	0.000	4.756
LV scores—UFS → FI	0.337	11.612	0.000	4.633

Source: Authors.

4.4. Evaluation of the Structural Model

In order to evaluate the quality of the structural model, we looked into the coefficient of determination, the Standardized Root Mean Square Residual (SRMR), and the Normed Fit Index (NFI) as key indicators.

As shown in Table 6, the PLS model shows an R^2 of 0.914, meaning that 91% of the observed variance in the dependent variable is explained by all the independent variables included in the model, exceeding the 0.75 threshold generally associated with strong explanatory power (Hair et al., 2011; Henseler et al., 2009). The Q^2 predict value is 0.910, well above zero, reflecting a strong out-of-sample predictive relevance of the model. The prediction errors are relatively low, with an RMSE of 0.300 and an MAE of 0.177, indicating that the gaps between predicted and observed values remain limited. The MAE, in particular, reflects a good average prediction accuracy.

Table 6. The coefficient of determination.

Dependent Variable	R-Square	Q^2 predict	RMSE	MAE
FI	0.914	0.910	0.300	0.177

Source: Authors.

As presented in Table 7, the SRMR (Standardized Root Mean Square Residual) shows a value of 0.035 for the estimated model. The closer this value is to zero, the better the fit; a value below 0.08 is generally considered good (Hu & Bentler, 1998). This indicates that the model reproduces the structure of the observed correlations very closely. The NFI (Normed Fit Index) shows a value of 0.874, slightly below the 0.90 benchmark (Byrne, 2010). Within PLS-SEM, the NFI is a complementary, incremental index that does not account for model complexity, whereas the SRMR serves as the primary reference indicator (Hair et al., 2017). Taken together, the SRMR of 0.035 and the NFI of 0.874 reflect a good overall fit of the model.

To assess the risk of common-method bias, a full collinearity assessment was conducted using the variance inflation factor (VIF) approach. As shown in Table 8, all factor-level VIF values are below the 3.3 threshold (CB = 2.367; EB = 3.053; IRB = 2.659; SB = 3.117). According to Kock and Lynn (2012) and Kock (2015), values below this threshold indicate an absence of problematic multicollinearity and, accordingly, a very low risk of common-

method bias. These results suggest that the estimated relationships are not substantially affected by common-method variance.

Table 7. The SRMR and NFI indicators.

Dependent Variable	Estimated Model
SRMR *	0.035
NFI **	0.874

Source: Authors. Note: * SRMR < 0.08 (Hu & Bentler, 1998); ** NFI is a supplementary fit index in PLS-SEM, where model evaluation relies primarily on the SRMR (Hair et al., 2017).

Table 8. Full collinearity assessment (common-method bias).

Relationship	VIF
CB → FI	2.367
EB → FI	3.053
IRB → FI	2.659
SB → FI	3.117

Source: Authors. Note: VIF < 3.3 (Kock & Lynn, 2012; Kock, 2015).

5. Discussion

As shown in Table 9, the analysis of the structural relationships between the independent variables related to various barriers (CB, EB, IRB, and SB), and the dependent variable (FI), conducted using the bootstrapping resampling procedure, reveals that all the relationships are negative, statistically significant, and associated with varying effect sizes.

Table 9. Structural coefficient and their significance.

Hypothesis	Relationship	Path Coefficient (β)	t-Statistics	p-Value	f-Square	Decision
H ₁	CB → FI	−0.097	2.520	0.012	0.010	Supported **
H ₂	EB → FI	−0.422	9.756	0.000	0.198	Supported *
H ₃	IRB → FI	−0.145	6.824	0.000	0.025	Supported *
H ₄	SB → FI	−0.318	11.873	0.000	0.125	Supported *

Source: Authors. Note: * $p < 0.01$; ** $p < 0.05$.

Indeed, cultural barriers are significantly and negatively associated with ($\beta = -0.097$; $p = 0.012$), with an effect size of $f^2 = 0.010$, which corresponds to a small effect based on the thresholds proposed by Cohen (1988); accordingly, H1 is supported. This finding suggests that, although lower cultural barriers are associated with higher financial inclusion, the strength of this association remains limited (Daher et al., 2021; Sain et al., 2018). Similarly, economic barriers show a statistically significant and negative association with financial inclusion ($\beta = -0.422$; $p < 0.001$), with an effect size of $f^2 = 0.198$, which corresponds to a moderate effect (Cohen, 1988); this result supports H2. Among the four categories of barriers examined, economic barriers display the most substantial association with financial inclusion, although the effect remains moderate in magnitude (Akpa et al., 2023, Nowacka et al., 2021). At the same time, financial inclusion is significantly and negatively linked to institutional and regulatory barriers ($\beta = -0.145$; $p < 0.001$), with an effect size of $f^2 = 0.025$, which corresponds to a small effect (Cohen, 1988); this result supports H3, although statistically significant, the magnitude of this association remains small (Bawuah, 2025; Njanike & Mpofu, 2024). Finally, social barriers show a significant and negative relationship with financial inclusion ($\beta = -0.318$; $p < 0.001$), with an effect size of $f^2 = 0.125$, which corresponds to a moderate effect (Cohen, 1988); this result validates H4.

After economic barriers, display one of the more substantial associations with financial inclusion among the categories examined, although the strength of this effect remains moderate ([Gordon Institute of Business Science, 2023](#); [N'dri & Kakinaka, 2020](#)).

Because economic barriers display the strongest association in this sample with financial inclusion, our findings may carry direct implications across several stakeholders. The high cost of services and the limited adaptation of products to low-income households appear as priority levers, suggesting that financial institutions could develop low-cost basic accounts, micro-saving products, and offerings tailored to irregular-income populations, while leveraging digital channels to lower operational costs ([Demirgüç-Kunt et al., 2017](#)). Policymakers, in turn, could support fee-reduction mechanisms, subsidies, or incentives encouraging institutions to serve underserved segments, an avenue especially relevant in Morocco, where the use of financial services remains low despite double-digit growth in account ownership, partly because of a cash-reliant economy ([Murphy-Schmehl, 2024](#)). These dynamics also open opportunities for fintech-enabled, affordable products and reinforce, at the level of national inclusion programmes, the need to combine access-side measures with affordability-oriented interventions ([Demirgüç-Kunt et al., 2017](#)).

The moderate association observed for social barriers in this sample highlights the central role of financial literacy and targeted outreach. National programmes such as the SNIF could prioritize financial-education initiatives and tailored support for groups that remain on the margins of the formal system, particularly women and rural residents; persistent disparities clearly illustrate this, as 56% of men held accounts in 2021 compared with only 33% of women ([United Nations Secretary-General's Special Advocate for Inclusive Finance for Development, 2023](#)). A broad body of evidence indicates that financial literacy supports inclusion ([Grohmann et al., 2018](#); [Hasan et al., 2021](#)), which suggests that products and communication could be adapted to lower-literacy customers and that digital interfaces could be intuitive and trust-building. Embedding financial education within schools and community programmes would further provide a long-term structural lever.

Although the association of institutional and regulatory barriers is smaller in this sample, simplifying administrative and documentation requirements remains a relevant avenue. Streamlining account-opening and know-your-customer procedures, strengthening digital infrastructure, and ensuring affordable connectivity, especially in rural regions, appear as meaningful steps ([Aracil et al., 2022](#)). The interoperable digital payment infrastructure also offers a complementary channel to reach excluded populations: in Morocco, the central bank, together with the telecommunications regulator, has developed a regulatory framework and interoperable mobile wallet platform ([United Nations Development Programme, 2022](#)). Supporting a regulatory environment that fosters innovation while protecting consumers is essential to translate these institutional reforms into measurable inclusion gains ([World Savings and Retail Banking Institute–European Savings and Retail Banking Group, 2020](#)).

Finally, although cultural barriers are statistically significant in this sample, their small effect size calls for a cautious interpretation, as cultural and religious considerations appear to play a more limited role once the other barriers are taken into account. While Sharia-compliant (participative) financial products remain valuable for the segment that avoids conventional finance for religious reasons, prioritizing economic and social interventions is likely to yield more substantial improvements in inclusion ([Demirgüç-Kunt et al., 2017](#); [Naceur et al., 2017](#)). Participative-finance offerings represent a complementary rather than a primary strategy ([Ezzahid & Elouaourti, 2021b](#)). Overall, these findings encourage stakeholders to allocate resources in proportion to the relative weight of each barrier, focusing first on the economic and social dimensions that show the strongest association with financial inclusion.

6. Conclusions

This study delved into the underlying reasons for the continued existence of barriers to financial inclusion in Morocco. A particular focus on how economic, social, cultural, institutional, and regulatory constraints shape actual access to financial services. Using a structural equation model estimated through partial least squares (PLS-SEM), the findings reveal that each of these dimensions has a strong, statistically significant negative association: economic constraints ($\beta = -0.422$; $p < 0.001$), social constraints ($\beta = -0.318$; $p < 0.001$), cultural constraints ($\beta = -0.097$; $p = 0.012$), and institutional/regulatory constraints ($\beta = -0.145$; $p < 0.001$). These results clearly highlight the intertwined and reinforcing nature of these obstacles, underscoring the need for a comprehensive, coordinated strategy for effectively dismantling these deep-rooted structural hurdles.

These findings resonate with Morocco's sustained efforts to strengthen financial inclusion. Since 2016, the country has pursued a proactive policy framework through the National Strategy for Financial Inclusion, later reinforced by the New Development Model and its second phase launched in 2023. Within this period, the share of adults with access to formal financial services rose from 28.6% in 2017 to 44.4% in 2021 (Bank Al-Maghrib & MEFRA, 2022), reflecting steady but still incomplete progress toward broader inclusion. Against this background, the relative weight of each barrier in this sample offers practical guidance for prioritizing future interventions. Economic and social barriers show the strongest associations, pointing to affordability and financial literacy as particularly important levels. At the same time, institutional and regulatory barriers, as well as cultural barriers, remain significant contributors to financial exclusion and therefore warrant continued attention. Within the scope of this sample, addressing financial inclusion in Morocco thus calls for a comprehensive approach that simultaneously tackles the economic, social, cultural, and institutional/regulatory dimensions, while recognizing that each contributes to a different degree.

Nevertheless, we acknowledge several limitations. First, the study's exclusive focus on the Moroccan context may limit the generalizability of its findings to other socioeconomic or institutional settings. Second, while the survey successfully captured the main barriers, it did not encompass every factor discussed in the literature, particularly psychological obstacles. In addition, certain financial and access-related characteristics, such as employment status, bank account ownership, mobile money use, internet access, smartphone ownership, were not collected. Combined with the non-probability sampling approach, this means the findings should be interpreted as exploratory and specific to the studied sample rather than generalized to the entire Moroccan population. Future research could incorporate these variables to provide a more detailed understanding of the respondents' financial profiles and their relationship with financial inclusion. Relatedly, the redundancy analysis used to assess the convergent validity of the formative constructs could not be performed, as it requires a separate global item measuring the same construct, which was not included in the original questionnaire; incorporating such a measure represents a valuable avenue for future research. Finally, although the full collinearity assessment indicated a low risk of common-method bias, reliance on self-reported data still introduces the possibility of perception or social desirability bias at the individual level. These points call for cautious interpretation and open promising avenues for future research.

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