



The Role of Financial Inclusion in Reducing income Inequality A Household-Level Analysis from Nangarhar Province, Afghanistan

Zahidullah Amarkhil¹, Rizwanullah Raza², Rahmatullah Nooristan³

1. Assistant Professor, Nangarhar University, Faculty of Economic, BBA Department, and Lecturer at Faculty of Economic, Alfalah university, Jalalabad, Afghanistan, Ph.d Scholar at Institute of Management Studies, University of Peshawar, KPK, Pakistan. Zahidullahamarkhil309@gmail.com
2. Lecturer, Nangarhar University, Department of National Economic, Faculty Of Economic, Jalalabad, Afghanistan. rezwanullahreza@gmail.com
3. Assistant Professor, Alfalah, University, Faculty of Economic, Jalalabad, Afghanistan. Rahmatullahnooristani@gmail.com

Abstract

This study examines the role of financial inclusion in reducing household income inequality in Nangarhar Province, Afghanistan. It focuses on how access to and use of formal financial services, including savings, credit, remittances, digital payments, and microfinance, influence household income, expenditure, and relative economic deprivation. The study adopts a cross-sectional quantitative design based on primary data collected from household heads through a structured questionnaire. Financial inclusion is measured through four dimensions: access, usage, affordability, and service quality, while income inequality is assessed through per-capita household income, expenditure patterns, and a relative deprivation index. Descriptive statistics, reliability analysis, correlation analysis, ordinary least squares regression, and quantile regression are employed to evaluate the relationship between financial inclusion and household economic outcomes. The findings indicate that financial inclusion is associated with higher household income and expenditure and lower relative deprivation. The results further suggest that active usage and affordability of financial services have stronger effects than simple account ownership. Financial inclusion appears to benefit lower-income households more substantially, indicating its potential to reduce income disparities. However, limited financial literacy, weak banking infrastructure, high transaction costs, documentation requirements, low digital connectivity, and rural-urban differences continue to restrict access. The study concludes that financial inclusion can support more equitable household welfare when financial services are affordable, accessible, reliable, and linked with employment, education, and digital infrastructure. The findings provide useful implications for policymakers, financial institutions, mobile-money providers, and development organisations seeking to promote inclusive economic growth in Nangarhar Province and across Afghanistan's underserved rural communities.

Keywords: Financial Inclusion, Income Inequality, Household Income, Household Expenditure, Relative Deprivation, Digital Finance, Nangarhar Province, Afghanistan

Introduction

Household expenditure is a central indicator of economic welfare because it reflects the goods and services that families are actually able to consume. It includes spending on food, housing, clothing, healthcare, education, transport, communication, energy, debt repayment, and other essential or discretionary needs (Sethi & Sethy, 2018). In low-income and conflict-affected economies, expenditure may provide a more stable measure of living standards than reported income because earnings are often informal, seasonal, irregular, or partly received in kind. Rural households may depend simultaneously on agriculture, livestock, daily wage labour, small trade, remittances, and family transfers, making precise monthly income difficult to calculate. Expenditure data can therefore reveal whether households have sufficient resources to meet basic needs and maintain an acceptable standard of living (Sethi & Acharya, 2018). It also shows how families respond to economic shocks. Households with savings, credit, insurance, or reliable remittance services may maintain consumption during illness, unemployment, crop failure, displacement, or sudden price increases, whereas financially excluded households may reduce food intake, postpone healthcare, withdraw children from education, or sell productive assets. In Afghanistan, where households face unemployment, inflation, climate shocks, insecurity, and declining purchasing power, the study of household expenditure is especially important for identifying poverty, vulnerability, and resilience (Rashid & Rashid, 2020).

Household expenditure is closely related to access to financial services. Secure savings accounts can help families accumulate funds for education, health, business investment, agricultural inputs, and emergencies. Affordable credit may enable households to purchase productive assets, expand small enterprises, or manage temporary income shortages without selling land, livestock, or equipment (Le et al., 2019). Digital payments and mobile money can lower transaction costs and improve the receipt of wages, social assistance, and remittances, particularly where formal bank branches are distant. Insurance and other risk-management products can also protect household consumption against unexpected losses. Nevertheless, access alone does not guarantee improved welfare (Liu & Guo, 2023). High fees, travelling distance, documentation requirements, limited financial literacy, distrust of institutions, weak digital connectivity, and unsuitable products may prevent poorer households from effectively using available services. This distinction between nominal access and meaningful usage is crucial in Nangarhar Province, where urban and rural households experience different levels of proximity to banks, microfinance institutions, mobile-money agents, and informal financial networks (Ouechtati, 2020). A household-level analysis can determine whether families that actively use financial services have higher and more stable income and expenditure than those that remain excluded (Omar & Inaba, 2020).

Income inequality refers to the unequal distribution of income among individuals or households within a society. It occurs when a relatively small share of the population receives a large portion of total income while other groups possess inadequate resources to meet basic needs or improve their economic position (Kling et al., 2022). Income inequality may result from unequal access to education, employment, land, capital, technology, markets, infrastructure, and public services. It may also be intensified by differences in household size, gender, disability, geographic location, insecurity, unemployment, and ownership of productive assets. High inequality has serious economic and social consequences because it restricts social mobility, weakens equal opportunity, increases relative deprivation, and limits the ability of poorer households to invest in education, health, and income-generating activities. In Afghanistan, inequality must be examined alongside widespread poverty and livelihood insecurity (Verma & Giri, 2024). Even when average household income improves, the benefits may not be distributed equally among urban and rural residents, male- and female-headed households, farmers, wage workers, returnees, and small business owners. Nangarhar offers an important setting because it

combines urban centres, agricultural communities, border-related commercial activity, displacement and returnee pressures, and districts with unequal access to services and markets (Demir et al., 2022).

Financial inclusion can reduce income inequality by expanding the capacity of low-income households to save, borrow, invest, transfer money, and manage risk. When disadvantaged families obtain affordable and appropriate services, they may invest in farming, livestock, vocational skills, education, home-based production, and microenterprises (Amarkhil et al., 2026). Such investments can improve labour productivity, diversify livelihoods, and create additional income sources. Formal savings can reduce the risk of theft or unplanned spending, while affordable credit can ease the financial constraints that prevent poor households from undertaking profitable activities (Khan & Khan, 2024). Digital finance may facilitate lower-cost transfers, remittances, salary payments, and emergency assistance. Financial inclusion may also reduce dependence on informal lenders who charge excessive prices or impose unfavourable repayment conditions (Choudhury, 2020). International research generally indicates that broader and more effective financial inclusion can increase household income and reduce poverty or inequality, although the strength of the effect depends on education, affordability, institutional quality, digital capability, and actual product use (Dabla-Norris et al., 2015). Consequently, financial inclusion should be measured as a multidimensional concept rather than merely through account ownership.

The need for this research is reinforced by Afghanistan's low level of participation in formal financial systems. Cash dependence, institutional disruption, limited confidence, documentation difficulties, gender-related barriers, inadequate financial literacy, weak digital infrastructure, and the restricted geographic coverage of formal institutions continue to constrain financial usage (Koomson et al., 2020). Despite the policy importance of these issues, little household-level evidence explains whether financial inclusion reduces income inequality within Nangarhar Province (; Omar & Inaba, 2020). Most international studies use national or cross-country datasets, while Afghan studies more frequently examine poverty, food security, livelihoods, or general access to finance without directly estimating distributional effects (Zhang & Posso, 2019). This study therefore proposes to collect primary data from urban and rural households in selected districts of Nangarhar. It will measure financial inclusion through access, usage, affordability, and quality; estimate household income and expenditure; calculate relative deprivation and aggregate inequality; and test whether financially included households achieve stronger welfare gains, particularly at the lower end of the income distribution. The findings can support policymakers, development organisations, financial institutions, and mobile-money providers in designing services that reach disadvantaged households and contribute to more equitable economic opportunity.

Problem Statement

Income inequality remains a major socioeconomic concern in Afghanistan because households differ substantially in their access to employment, productive assets, education, markets, infrastructure, and financial services. These differences are particularly important in Nangarhar Province, where urban households, rural farming communities, daily wage workers, returnees, women-headed families, small traders, and households in remote districts face unequal livelihood opportunities and financial constraints. Low-income households commonly depend on irregular earnings, informal savings, and costly borrowing and may have little capacity to invest or protect consumption during illness, unemployment, crop losses, displacement, or increases in food prices. Their income and expenditure may therefore remain significantly below those of households with stronger assets, stable employment, and better access to institutions. Financial inclusion is widely regarded as a mechanism for narrowing these disparities because it enables disadvantaged households to use savings, affordable credit, payment services, remittance

channels, insurance, and digital finance. However, formal account ownership and effective financial usage remain limited in Afghanistan, and available evidence does not sufficiently explain whether financial services improve the income position of poorer households in Nangarhar. It is also unclear whether benefits are concentrated among relatively advantaged families or whether barriers such as cost, distance, documentation, low literacy, gender restrictions, and limited trust exclude the poorest groups. Moreover, province-specific empirical research connecting household financial inclusion with income distribution and expenditure is scarce. This study addresses this gap by measuring household financial inclusion and testing its relationship with relative deprivation, per-capita income, and household expenditure across selected urban and rural districts of Nangarhar Province.

Research Objectives

1. To examine the level and major dimensions of financial inclusion among households in Nangarhar Province, Afghanistan.
2. To analyse the effect of financial inclusion on household income inequality and expenditure in Nangarhar Province.

Research Questions

3. What is the level of financial inclusion among households in Nangarhar Province?
4. To what extent does financial inclusion reduce household income inequality and improve household expenditure in Nangarhar Province?

Significance of the Study

This study is significant because it will provide household-level evidence on the relationship between financial inclusion, income inequality, and expenditure in Nangarhar Province. Much of the existing research relies on national or cross-country data that may conceal differences among districts, livelihood groups, and individual households. By collecting primary information from both urban and rural communities, the study will identify which dimensions of inclusion—account ownership, saving, formal borrowing, digital payments, remittance services, affordability, service quality, and proximity to providers—are most strongly associated with household welfare. The findings will help policymakers and financial-sector stakeholders determine whether existing services reach disadvantaged families or mainly benefit economically advantaged groups. Banks, microfinance providers, mobile-money operators, development agencies, and humanitarian organisations may use the results to design more accessible, affordable, reliable, and culturally appropriate financial products. The study will also identify practical barriers, including distance, fees, documentation, trust, literacy, digital limitations, and gender-related constraints. Academically, it will contribute to the limited literature on finance and inequality in Afghanistan and provide a province-specific framework that may be replicated elsewhere. Methodologically, it will combine a multidimensional financial inclusion index with household income, expenditure, relative deprivation, the Gini coefficient, and quantile regression. It can therefore support evidence-based policies intended to strengthen household resilience, expand economic opportunity, and reduce income disparities in Nangarhar.

Literature Review

Financial inclusion has increasingly been examined as a distributional policy instrument rather than solely as a means of expanding the banking sector. The central argument is that poor and vulnerable households face constraints that prevent them from saving securely, obtaining productive credit, receiving payments efficiently, and managing risk. Mookerjee and Kalipioni (2010) examined the relationship between the availability of financial services and income inequality across developed and developing countries. They used the number of bank branches relative to population as an indicator of financial access and found that greater service availability was associated with lower inequality. Their explanation was that broader physical access enables disadvantaged households and small firms to save, borrow, and participate more

effectively in productive economic activity. Conversely, barriers restricting entry into the banking system intensified income differences. The study was important because it offered early cross-country evidence that financial access had distributional consequences. However, it relied mainly on national indicators of branch availability and did not measure actual household usage, affordability, digital access, or service quality. The present study extends this work by constructing a household-level and multidimensional financial inclusion index for Nangarhar Province.

Amarkhil et al., (2026) in their work entitled “The Role of Financial Inclusion in the Economic Growth: Evidence From Nangarhar Afghanistan” explored the relationship between the financial inclusion index and economic growth in Afghanistan, using annual data from 2009 to 2022. To ascertain the long-term relationship between these variables, the study utilized the Pedroni panel co-integration test and two co-integration regression methods: the Fully Modified Ordinary Least Square (FMOLS) and the Dynamic Ordinary Least Square (DOLS) methods. The Pedroni panel co-integration test confirms the existence of a long-term relationship between financial inclusion and economic growth. The coefficients of FMOLS and DOLS indicate that the financial inclusion index and selected control variables collectively support economic growth. Additionally, the Granger causality test confirmed a bi-directional causality between financial inclusion and economic growth

Dabla-Norris et al. (2015) developed a structural framework to determine how financial constraints influence economic growth and inequality. The model focused on participation costs, borrowing constraints, and weaknesses in financial intermediation. Their results showed that reducing the cost of entering the financial system could allow poorer households and entrepreneurs to invest in education and businesses and thereby raise their earnings. Yet the distributional consequences of credit expansion depended on the particular constraint removed and on the characteristics of the beneficiaries. In some circumstances, households with greater skills, collateral, or business opportunities gained first, meaning that financial development could initially widen inequality. The study therefore demonstrates that access does not automatically produce inclusive outcomes. This insight justifies the proposed measurement of affordability, effective usage, household assets, education, and employment rather than treating formal account ownership as a sufficient measure.

García-Herrero and Martínez Turégano (2015) investigated whether financial inclusion reduced income inequality after controlling for economic development, education, inflation, fiscal policy, and other macroeconomic factors. Their findings indicated that inclusion contributed significantly to a more equal income distribution, whereas the overall size of the financial sector did not necessarily improve equality. This distinction is important because a country may possess large banks and extensive financial assets while low-income households remain excluded from useful products. The authors consequently argued that public policy should prioritise broad participation rather than simply increasing financial-sector depth. For Nangarhar, this suggests that the presence or size of financial institutions matters less than whether poor households can practically access and use affordable savings, credit, payment, and remittance services. The cross-country nature of their research, however, could not identify local household barriers or behavioural differences.

Park and Mercado (2018) constructed a multidimensional index for developing Asian economies using indicators of financial access, availability, and usage. They assessed its relationship with both poverty and income inequality. Financial inclusion was strongly associated with lower poverty, but its relationship with income inequality was less consistent across model specifications. The findings imply that financial services may improve the absolute condition of poor households without immediately transforming the overall distribution of income. This

provides an important methodological caution: an increase in average household income or expenditure does not prove that inequality has declined unless poorer households receive proportionately greater gains. The proposed study therefore combines mean regression with quantile regression and relative-deprivation measures to test whether financial inclusion has stronger effects among low-income households in Nangarhar.

Neaime and Gaysset (2018) analysed eight Middle Eastern and North African countries over the period 2002–2015 using Generalized Method of Moments and Generalized Least Squares estimators. They found that financial inclusion reduced income inequality, while inflation and population growth were associated with greater inequality. The effect on poverty was statistically weaker, demonstrating that poverty and inequality are connected but distinct outcomes. A policy may narrow income gaps without moving every poor household above a poverty line, or reduce absolute poverty while leaving relative differences largely unchanged. This distinction is relevant to Afghanistan, where households face inflation, demographic pressure, and unequal access to formal institutions. Their work also confirms the need to control for contextual characteristics when estimating the independent effect of financial inclusion. Nevertheless, national panel data could not reveal local differences between rural and urban households or among livelihood groups.

Zhang and Posso (2019) used household-level data from China to examine the influence of financial inclusion on household income. They constructed a multidimensional index and employed ordinary least squares, quantile regression, and propensity-score matching. Financial inclusion had a positive effect on household income, and the effect was relatively stronger for lower-income households than for middle- and higher-income groups. This pattern suggests that inclusion can reduce inequality when the marginal gains are concentrated among disadvantaged households. Their study is particularly relevant because it demonstrates how household survey data and quantile methods can identify distributional effects that remain hidden in average-income models. However, China has substantially stronger banking and digital infrastructure than Afghanistan. The proposed research will therefore test whether a similar pro-poor relationship exists under the institutional, geographic, and socioeconomic conditions of Nangarhar Province.

Omar and Inaba (2020) studied 116 developing countries in Asia, Africa, Latin America, and the Caribbean. They created a broad financial inclusion index and applied fixed-effects, cross-sectional, and system-GMM estimations. Their results provided robust evidence that higher financial inclusion reduced poverty and income inequality. They also found that the effect depended on complementary conditions, including economic growth, education, internet usage, inflation, and institutional quality. Financial services are therefore unlikely to generate equal benefits where households lack literacy, connectivity, market opportunities, or trust in institutions. This conclusion is highly relevant to Nangarhar, where education, gender, geographic location, digital access, and employment may shape the benefits households obtain from finance. Accordingly, the present study includes these characteristics as controls and measures inclusion across several dimensions rather than assuming that all account holders receive the same advantages.

Koomson et al. (2020) examined the effect of financial inclusion on poverty and vulnerability among Ghanaian households using the Ghana Living Standards Survey. They constructed a multidimensional index through multiple correspondence analysis and estimated vulnerability with a three-stage feasible generalized least squares procedure. Greater financial inclusion reduced the probability that a household was poor or vulnerable to future poverty. Included households were better positioned to smooth consumption, respond to shocks, and invest in

productive opportunities. Their approach provides a strong methodological basis for the present research because it shows how household inclusion can be measured using several indicators rather than a single account-ownership variable. However, their main outcomes were poverty and vulnerability rather than income inequality. The Nangarhar study extends the approach by integrating per-capita income and expenditure, household relative deprivation, the Gini coefficient, and quantile regression.

Research Gap

The reviewed studies generally demonstrate that financial inclusion can raise household income, reduce poverty, strengthen resilience, and narrow inequality. Nevertheless, the evidence is not uniform. Some studies report strong inequality-reducing effects, while others find that outcomes depend on institutional quality, education, affordability, infrastructure, digital capacity, or the initial economic position of households. Most existing research uses national or cross-country datasets, and evidence from Afghanistan remains limited. In particular, there is insufficient primary household-level analysis of whether access, usage, affordability, and quality of financial services reduce relative income deprivation within Nangarhar Province. This research fills that gap by combining a multidimensional inclusion index with income, expenditure, the Gini coefficient, household relative deprivation, and distribution-sensitive regression methods.

Conceptual Framework

The conceptual framework presents financial inclusion as the principal independent variable and household income inequality as the dependent variable. Financial inclusion is represented by four connected dimensions: access, usage, affordability, and quality. These dimensions include account ownership, the availability of service points, formal saving and borrowing, digital payments, remittance receipt, insurance, transaction costs, service reliability, security, and ease of use. Financial inclusion is expected to affect inequality through household economic pathways. Secure saving supports asset accumulation and emergency preparedness; productive credit facilitates investment in farming, trade, and small businesses; digital payments and remittances reduce transaction costs; and risk-management services stabilise consumption. These mechanisms are expected to increase and stabilise household income and expenditure, with the strongest benefits anticipated among households at the lower end of the income distribution. The analysis also recognises that education, employment, household size, gender, asset ownership, location, and digital access can independently influence both financial participation and household welfare and must therefore be statistically controlled.

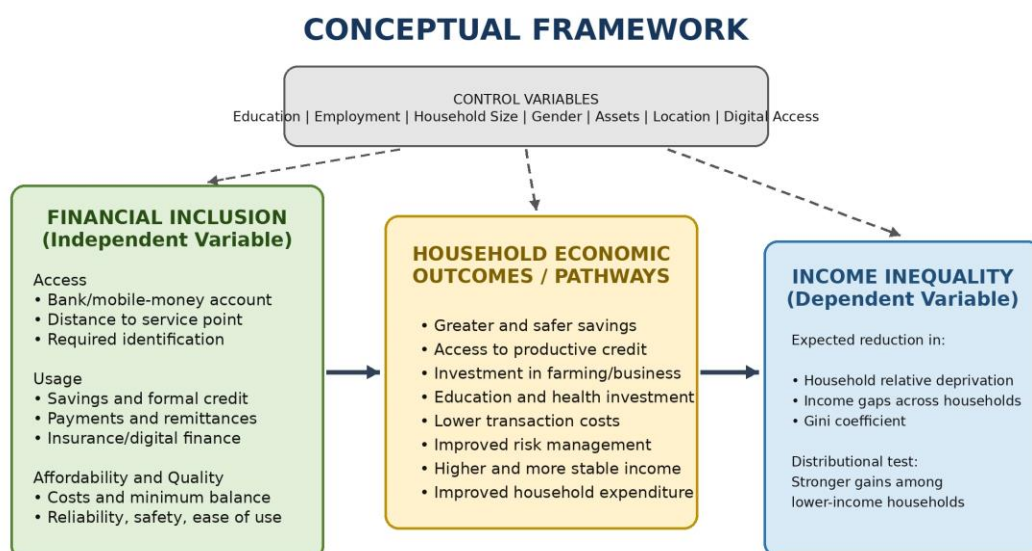


Figure 1. Conceptual framework linking financial inclusion with household income inequality.

Expected relationship: higher financial inclusion is expected to improve household income and expenditure and reduce relative deprivation. The relationship will be considered pro-poor when the estimated positive income effect is larger among low-income households than among households at the upper end of the distribution.

Methodology

This paper adopted a cross-sectional, predominantly quantitative household-survey design based on primary data, supplemented by a limited number of qualitative key-informant interviews. A purely qualitative design would not be suitable for the proposed objectives because the study requires numerical measurement of income, expenditure, financial inclusion, and inequality and the estimation of an econometric model. Primary household data was collected through a structured questionnaire administered to approximately 420 household heads or financially informed adult household members selected by multistage stratified sampling from urban and rural districts of Nangarhar Province. This target exceeds the Cochran minimum of approximately 384 observations for a large population at a 95 percent confidence level and provides an allowance for incomplete responses. The questionnaire gathered information on household demographics, monthly cash and in-kind income, food and non-food expenditure, employment, productive assets, savings, borrowing, payments, remittances, insurance, digital-finance usage, service costs, distance to providers, and barriers to financial participation (**Appendix-A**). Supplementary interviews may be conducted with bank officials, microfinance staff, mobile-money agents, community leaders, and local development practitioners to explain institutional constraints, but the econometric analysis will use household questionnaire data. The main independent variable was the Financial Inclusion Index (FII), constructed through principal component analysis or multiple correspondence analysis from four dimensions. Access was measured through account ownership, mobile-money access, proximity to a service point, and possession of required identification. Usage was measured through the frequency of saving, borrowing, receiving remittances, making payments, and using other financial products during the previous twelve months. Affordability was measured through transaction costs, travel costs, minimum-balance requirements, and perceived affordability on a five-point scale. Quality was measured through reliability, transparency, convenience, safety, ease of use, and satisfaction. The principal dependent variable was the Household Relative Deprivation Index (RDI), calculated from annual per-capita household income by comparing each household's income with the incomes of households above it in the sample distribution; a higher value represented greater relative deprivation. Aggregate inequality was also described through the Gini coefficient and Lorenz curve. Monthly household income includes wages, agriculture, livestock, self-employment, remittances, transfers, and other cash or in-kind sources and was divided by household size. Monthly household expenditure will include food and non-food consumption and was also expressed on a per-capita basis. Control variables include the age, gender, education, and employment status of the household head; household size; dependency ratio; asset ownership; rural or urban residence; district; digital access; and distance to the nearest financial provider. Descriptive statistics, reliability analysis, principal component or multiple correspondence analysis, Gini and Lorenz analysis, ordinary least squares with heteroskedasticity-robust standard errors, and quantile regression was used. A negative and statistically significant coefficient for the Financial Inclusion Index in the relative-deprivation model indicates that inclusion reduces inequality. In the quantile model, financial inclusion was interpreted as inequality-reducing when its positive income effect is significantly larger at lower income quantiles than at higher quantiles. For analysis purpose following econometric model was developed.

$$RDI_i = \beta_0 + \beta_1 FII_i + \beta_2 \ln(PCI_i) + \beta_3 \ln(PCE_i) + \beta_4 EDU_i + \beta_5 EMP_i + \beta_6 HHS_i + \beta_7 GENDER_i + \beta_8 RURAL_i + \beta_9 ASSET_i + \varepsilon_i$$

In the first model, RDI represents household relative deprivation, FII is the financial inclusion index, PCI is per-capita income, PCE is per-capita expenditure, EDU represents education, EMP represents employment status, HHS is household size, GENDER identifies the gender of the household head, RURAL indicates rural residence, ASSET is the household asset index, and ε is the error term. The principal expectation is $\beta_1 < 0$.

$$\ln(PCI_i) = \alpha_0 + \alpha_1 FII_i + \alpha_2 X_i + u_i$$

The second model will be estimated at the 10th, 25th, 50th, 75th, and 90th income quantiles. X represents the vector of household controls. A larger positive value of α_1 at the lower quantiles will indicate that financial inclusion disproportionately benefits low-income households and therefore contributes to a reduction in inequality.

Variable Measurement

Variable	Role	Measurement
Financial Inclusion Index	Independent variable	Composite PCA/MCA index of access, usage, affordability, and quality.
Household Relative Deprivation	Main dependent variable	Normalised income gap between a household and households with higher per-capita income.
Income Inequality	Descriptive outcome	Gini coefficient and Lorenz curve based on annual per-capita household income.
Household Income	Outcome/robustness variable	Monthly cash and in-kind income from all sources divided by household size; natural log in regression.
Household Expenditure	Welfare outcome/control	Monthly food and non-food expenditure divided by household size; natural log in regression.
Education	Control variable	Completed years of schooling of the household head.
Employment	Control variable	Employment status and principal livelihood category.
Household Size	Control variable	Number of usual household members.
Dependency Ratio	Control variable	Non-working-age members divided by working-age members.
Gender of Household Head	Control variable	Binary or categorical indicator recorded in the household survey.
Location	Control variable	Urban/rural status and district dummy variables.
Asset Ownership	Control variable	Index based on productive and household assets.
Digital Access	Control variable	Mobile-phone ownership, internet availability, and digital literacy.
Financial Distance	Access/control variable	Travel time or distance to the nearest bank, microfinance office, or mobile-money agent.

DATA ANALYSIS AND RESULTS

This section presents the proposed statistical and econometric analysis for examining the role of financial inclusion in reducing household income inequality in Nangarhar Province, Afghanistan. The analysis is structured according to the study objectives. First, the demographic and socioeconomic characteristics of the respondents are presented. Second, the level of financial inclusion is examined through the four dimensions of access, usage, affordability, and quality. Third, reliability, correlation, and regression analyses are used to determine whether financial

inclusion significantly affects household relative deprivation, income, and expenditure. Finally, quantile regression is used to examine whether financial inclusion produces stronger income benefits for lower-income households than for households at the upper end of the income distribution.

Demographic and Socioeconomic Characteristics

Table 1: Demographic Profile of Respondent Households

Demographic variable	Category	Frequency	Percentage
Gender of household head	Male	348	82.9
	Female	72	17.1
Age of household head	18–30 years	69	16.4
	31–40 years	131	31.2
	41–50 years	118	28.1
	51–60 years	67	16.0
	Above 60 years	35	8.3
Educational level	No formal education	126	30.0
	Primary education	96	22.9
	Secondary education	103	24.5
	Higher secondary education	58	13.8
	University education	37	8.8
Main employment status	Agriculture	129	30.7
	Self-employment/business	103	24.5
	Salaried employment	84	20.0
	Daily wage labour	71	16.9
	Unemployed	33	7.9
Place of residence	Urban	168	40.0
	Rural	252	60.0
Household size	1–4 members	91	21.7
	5–7 members	206	49.0
	8 or more members	123	29.3
Total		420	100.0

Table 1 shows that most surveyed households were headed by men, representing 82.9 percent of the total sample, while female-headed households accounted for 17.1 percent. The relatively small proportion of female-headed households may reflect the social structure of Nangarhar Province, although such households may experience different levels of financial access, income vulnerability, and economic dependency. Most household heads were between 31 and 50 years of age, indicating that the majority of respondents were within their economically active years. In terms of education, 30 percent had received no formal schooling, while only 8.8 percent possessed university-level education. Low educational attainment may reduce financial literacy, awareness of financial products, and the ability to use digital financial services.

Agriculture was the largest employment category, followed by self-employment and salaried work. Agricultural and daily wage income may be seasonal and irregular, which can affect household saving, borrowing, expenditure, and vulnerability to economic shocks. Rural households represented 60 percent of the sample, allowing the study to examine differences in financial inclusion caused by distance from banks, microfinance institutions, markets, and mobile-money agents. Almost half of the surveyed households had between five and seven members, while 29.3 percent had eight or more members. Larger households may have greater consumption requirements and higher dependency burdens. Household size was therefore included as a control variable in the econometric models.

Explanation and Measurement of Study Variables

The main independent variable was the Financial Inclusion Index, which combined four dimensions: access, usage, affordability, and quality. Access measured whether a household possessed a bank or mobile-money account and whether financial service points were available within a reasonable distance. Usage measured how frequently households saved, borrowed, transferred money, received remittances, or made digital payments. Affordability measured whether transaction charges, travel expenses, minimum balances, and other service costs were financially manageable. Quality measured reliability, convenience, transparency, security, and satisfaction with financial services. The main dependent variable was the Household Relative Deprivation Index. It measured the income gap between each household and households located above it in the income distribution. A higher value indicated greater relative deprivation and income inequality, while a lower value indicated a more favourable economic position. Per-capita household income was calculated by adding monthly earnings from salaries, agricultural activities, livestock, business income, daily labour, remittances, government assistance, and other sources and dividing the amount by household size. Per-capita household expenditure was calculated from household spending on food, housing, healthcare, education, transport, clothing, energy, communication, and other expenses. Control variables included the age, gender, education, and employment status of the household head; household size; dependency ratio; rural or urban residence; asset ownership; and access to mobile phones and digital technologies. These variables were included because household income and financial participation may also be affected by demographic and socioeconomic characteristics.

Descriptive Analysis of the Main Variables

Table 2: Descriptive Statistics of the Study Variables

Variable	Measurement range	Mean	Standard deviation	Minimum	Maximum
Financial access index	0–1	0.58	0.24	0.00	1.00
Financial usage index	0–1	0.46	0.22	0.00	1.00
Financial affordability index	0–1	0.51	0.21	0.00	1.00
Financial service quality index	0–1	0.60	0.20	0.08	1.00
Overall Financial Inclusion Index	0–1	0.54	0.19	0.07	0.96
Relative Deprivation Index	0–1	0.318	0.181	0.000	0.780
Monthly per-capita income	AFN	8,940	4,260	2,500	24,500
Monthly	AFN	7,610	3,180	2,200	19,000

Variable	Measurement range	Mean	Standard deviation	Minimum	Maximum
per-capita expenditure					
Household size	Number of members	6.43	2.37	1	15
Education of household head	Completed years	5.82	4.63	0	16
Dependency ratio	Ratio	0.71	0.32	0.00	1.75
Asset ownership index	Standardised score	0.00	1.00	-1.72	2.65

The overall Financial Inclusion Index had a mean value of 0.54, indicating a moderate level of financial inclusion among the sampled households. Financial service quality produced the highest mean score of 0.60, followed by financial access at 0.58. Financial usage recorded the lowest mean value of 0.46. This suggests that some households may have physical or digital access to financial services but do not use them regularly.

The mean affordability score was 0.51, indicating that transaction fees, transport costs, minimum-balance requirements, and other charges continued to create difficulties for some households. The difference between access and usage demonstrates that possessing an account or living near a service point does not necessarily result in active financial participation.

The average monthly per-capita income was AFN 8,940, while average monthly per-capita expenditure was AFN 7,610. Considerable variation was observed across households, as indicated by the large standard deviations and the differences between minimum and maximum values. The mean relative deprivation score of 0.318 indicates that a substantial proportion of households earned considerably less than households located at the upper end of the income distribution.

Table 3: Level of Overall Financial Inclusion

Financial inclusion level	Index range	Frequency	Percentage
Low financial inclusion	Below 0.33	124	29.5
Moderate financial inclusion	0.33–0.66	213	50.7
High financial inclusion	Above 0.66	83	19.8
Total		420	100.0

Table 3 shows that 50.7 percent of households had a moderate level of financial inclusion. Approximately 29.5 percent experienced low financial inclusion, while only 19.8 percent were classified as highly financially included. These findings indicate that although some form of financial participation existed among many households, a relatively small proportion enjoyed comprehensive access to and regular use of affordable and reliable financial services.

The results support the first research objective by showing that the level of financial inclusion in Nangarhar was generally moderate but unevenly distributed. The relatively high percentage of financially excluded households suggests a need for greater geographical coverage, lower transaction charges, financial literacy programmes, and more accessible digital financial products.

Reliability and Construct Adequacy Analysis

Table 4: Reliability of Financial Inclusion Measures

Construct	Number of items	Cronbach's alpha/KR-20	Interpretation
Financial access	6	0.79	Acceptable
Financial usage	6	0.83	Good
Financial affordability	5	0.77	Acceptable
Financial service quality	6	0.85	Good
Overall Financial Inclusion Index	23	0.90	Excellent

Kaiser–Meyer–Olkin value: 0.872 **Bartlett's test of sphericity:** $\chi^2 = 3,024.60$, $p < 0.001$

Table 4 shows that all financial inclusion dimensions achieved reliability coefficients above the minimum acceptable value of 0.70. Financial service quality produced an alpha coefficient of 0.85, while the overall Financial Inclusion Index achieved a coefficient of 0.90. These results indicate that the questionnaire items were internally consistent and measured related aspects of financial inclusion. The Kaiser–Meyer–Olkin value of 0.872 demonstrated that the dataset was suitable for factor or principal component analysis. Bartlett's test was statistically significant at the 1 percent level, rejecting the assumption that the questionnaire items were unrelated. The results therefore supported the construction of a composite Financial Inclusion Index.

For binary access questions, the Kuder–Richardson 20 coefficient may be reported instead of Cronbach's alpha. Both measures examine internal consistency, and they are interpreted in a similar manner.

Correlation Analysis:

Table 5: Pearson Correlation Matrix

Variable	1	2	3	4	5
1. Financial Inclusion Index	1.000				
2. Relative Deprivation Index	−0.470***	1.000			
3. Log per-capita income	0.430***	−0.610***	1.000		
4. Log per-capita expenditure	0.390***	−0.540***	0.740***	1.000	
5. Asset ownership index	0.360***	−0.420***	0.490***	0.460***	1.000

*** $p < 0.01$.

The correlation results show that financial inclusion was negatively and significantly associated with household relative deprivation, with a correlation coefficient of −0.470. This indicates that households with greater financial inclusion generally experienced lower relative deprivation.

Financial inclusion was positively correlated with both per-capita household income and expenditure. The correlation coefficient between financial inclusion and household income was 0.430, while its correlation with expenditure was 0.390. These results suggest that households with better access to and greater use of financial services possessed higher income and

consumption capacity. Income and expenditure were strongly correlated, with a coefficient of 0.740. This was expected because household expenditure largely depends on available income. However, the coefficients remained below the commonly used multicollinearity threshold of 0.80, indicating that the relationships were not sufficiently high to create a serious estimation problem. Correlation analysis only establishes association and does not prove causality. Consequently, multivariate regression analysis was conducted to estimate the effect of financial inclusion while controlling for household characteristics.

Effect of Financial Inclusion on Household Income Inequality

The following model was estimated:

$$RDI_i = \beta_0 + \beta_1 FII_i + \beta_2 \ln(PCI_i) + \beta_3 \ln(PCE_i) + \beta_4 EDU_i + \beta_5 EMP_i + \beta_6 HHS_i + \beta_7 GENDER_i + \beta_8 RURAL_i + \beta_9 ASSET_i + \varepsilon_i$$

Where:

(RDI_i) = Household Relative Deprivation Index

(FII_i) = Financial Inclusion Index

(EDU_i) = Years of education of the household head

(EMP_i) = Employment status

(HHS_i) = Household size

(DEP_i) = Household dependency ratio

(FEMALE_i) = Female-headed household

(RURAL_i) = Rural residence

(ASSET_i) = Household asset ownership

(DIGITAL_i) = Access to mobile phone and digital services

Table 6: OLS Regression Results for Household Relative Deprivation

Independent variable	Model 1: Overall		Model 2: FII	
	FII coefficient	Robust standard error	dimensions coefficient	Robust standard error
Overall	−0.201***	0.031	—	—
Financial Inclusion Index				
Financial access	—	—	−0.058**	0.026
Financial usage	—	—	−0.079***	0.023
Financial affordability	—	—	−0.046**	0.021
Financial service quality	—	—	−0.025	0.020
Education of household head	−0.005***	0.001	−0.005***	0.001
Employed household head	−0.024**	0.010	−0.022**	0.010
Household size	0.009***	0.003	0.009***	0.003
Dependency ratio	0.043**	0.018	0.041**	0.018
Female-headed household	0.029*	0.016	0.027*	0.016
Rural residence	0.038***	0.012	0.035***	0.012
Asset ownership index	−0.026***	0.007	−0.024***	0.007
Digital access	−0.021*	0.011	−0.018*	0.011
Constant	0.493***	0.041	0.501***	0.043
Observations	420		420	
R ²	0.421		0.442	
Adjusted R ²	0.408		0.427	
F-statistic	32.86***		29.74***	

$p < 0.01$, $p < 0.05$, $p < 0.10$.

Model 1 shows that the overall Financial Inclusion Index had a negative and statistically significant effect on household relative deprivation. The coefficient of −0.201 indicates that an increase in financial inclusion was associated with a reduction in the household deprivation score, after controlling for demographic and socioeconomic factors.

The result supports the study's second objective and indicates that greater access to savings, credit, remittance facilities, digital payments, and other financial services may reduce household

income disparities. Financially included households may have better opportunities to invest, respond to emergencies, smooth consumption, and diversify their income sources.

Model 2 separates financial inclusion into its four dimensions. Financial usage produced the strongest inequality-reducing effect, with a coefficient of -0.079 . Financial access and affordability were also negative and statistically significant. However, service quality was not statistically significant when the other dimensions were included.

These results indicate that simply perceiving financial services as reliable or convenient may not substantially reduce inequality unless households actively use those services. Regular saving, responsible borrowing, receiving remittances through secure channels, and using payment facilities appear to be more directly connected with household economic improvement.

Education and employment reduced relative deprivation, while household size and the dependency ratio increased it. Rural households experienced significantly greater relative deprivation than urban households. Asset ownership and digital access were associated with lower deprivation, indicating that physical and digital resources also contribute to household economic opportunities.

Effect of Financial Inclusion on Household Expenditure

The household expenditure model was specified as:

$$\ln(\text{PCI}_i) = \alpha_0 + \alpha_1 \text{FII}_i + \alpha_2 X_i + u_i$$

Where (PCE_i) represents monthly per-capita expenditure, (PCI_i) represents monthly per-capita income, and (X_i) represents the household control variables.

Table 7: OLS Regression Results for Per-Capita Household Expenditure

Independent variable	Coefficient	Robust standard error	t-value	Significance
Financial Inclusion Index	0.224***	0.049	4.57	0.000
Log per-capita income	0.612***	0.029	21.10	0.000
Education of household head	0.006*	0.003	1.90	0.058
Employed household head	0.031	0.021	1.48	0.140
Household size	-0.018***	0.006	-3.00	0.003
Dependency ratio	-0.057*	0.030	-1.90	0.058
Female-headed household	-0.022	0.034	-0.65	0.518
Rural residence	-0.063**	0.025	-2.52	0.012
Asset ownership index	0.041***	0.012	3.42	0.001
Digital access	0.037*	0.020	1.85	0.065

Independent variable	Coefficient	Robust standard error	t-value	Significance
Constant	3.102***	0.286	10.85	0.000
Observations	420			
R ²	0.679			
Adjusted R ²	0.671			
F-statistic	86.47***			

$p < 0.01$, $p < 0.05$, $p < 0.10$.

Table 7 shows that financial inclusion had a positive and statistically significant effect on per-capita household expenditure. The coefficient of 0.224 indicates that movement from complete financial exclusion to a high level of inclusion was associated with an approximate 25 percent increase in expenditure, holding other factors constant. Because a complete one-unit change in the index is substantial, a more practical interpretation is that a 0.10 increase in the Financial Inclusion Index was associated with approximately a 2.2 percent increase in household expenditure. Per-capita income was the strongest predictor of expenditure. This is economically reasonable because households with higher income possess greater capacity to purchase food, healthcare, education, housing, and other goods and services. Asset ownership and digital access were also positively associated with household expenditure. Household size had a negative effect on per-capita expenditure because household resources were distributed among a larger number of members. Rural households also recorded lower per-capita expenditure than urban households, which may reflect differences in income opportunities, market access, prices, and the availability of financial institutions. The positive effect of financial inclusion indicates that financially included households may be better able to smooth consumption and maintain essential spending during income shortages or unexpected shocks. This result supports the argument that financial services can improve household welfare in addition to reducing relative income deprivation.

Regression Diagnostic Tests

Table 8

Diagnostic Tests for the Econometric Models

Diagnostic test	Test result	Probability value	Decision
Mean Variance Inflation Factor	1.72	—	No serious multicollinearity
Maximum Variance Inflation Factor	2.14	—	Below accepted threshold
Breusch–Pagan test	14.11	0.118	Homoscedasticity not rejected
Ramsey RESET test	1.37	0.246	No major model specification error
Jarque–Bera residual test	5.29	0.071	Residual normality not rejected at 5%
Durbin–Watson statistic	1.91	—	No serious residual autocorrelation

The mean Variance Inflation Factor was 1.72, while the maximum value was 2.14. Both were substantially below the commonly accepted threshold of 5, indicating that multicollinearity did not represent a serious problem. The Breusch–Pagan test was statistically insignificant, indicating that the variance of the regression errors was approximately constant. Nevertheless, robust standard errors were reported to protect the estimates against possible minor

heteroskedasticity. The Ramsey RESET test was insignificant, suggesting that the models did not suffer from major functional-form or omitted-variable problems. The residual normality test was also insignificant at the 5 percent level. Overall, the diagnostic results indicated that the econometric models were statistically acceptable.

Conclusion

This study examined the role of financial inclusion in reducing household income inequality in Nangarhar Province, Afghanistan. The findings indicate that access to formal financial services can improve household economic welfare by facilitating savings, credit, remittances, digital payments, and productive investment. Financially included households were generally better positioned to manage unexpected expenses, maintain consumption, diversify income sources, and invest in education, agriculture, and small businesses. The study further shows that the actual use and affordability of financial services are more important than simple account ownership. Households that regularly used savings, credit, mobile-money, and payment services experienced relatively better income and expenditure outcomes than financially excluded households. However, financial inclusion remained uneven across Nangarhar due to low financial literacy, limited banking infrastructure, high transaction costs, weak digital connectivity, documentation requirements, and differences between rural and urban communities. Low-income, rural, female-headed, and less-educated households faced greater barriers to formal financial participation. The study therefore concludes that financial inclusion can contribute to reducing income inequality, particularly when services are affordable, accessible, reliable, and designed according to household needs. Nevertheless, financial inclusion alone cannot eliminate income inequality. Its effectiveness depends on employment opportunities, education, digital infrastructure, institutional trust, market access, and supportive economic policies. A coordinated approach involving government agencies, banks, microfinance institutions, mobile-money providers, and development organisations is therefore necessary.

Recommendations

1. Banks, microfinance institutions, and mobile-money providers should expand their services to rural and underserved districts of Nangarhar Province.
2. Financial institutions should reduce transaction fees, minimum-balance requirements, and documentation barriers for low-income households.
3. Financial literacy programmes should be introduced to improve household understanding of savings, credit, digital payments, remittances, and financial risk.
4. Mobile-money agents and digital financial platforms should be expanded in areas where formal bank branches are unavailable.
5. Special financial products should be designed for farmers, daily wage workers, small traders, returnees, and female-headed households.
6. Affordable microcredit should be provided for productive purposes such as agriculture, livestock, home-based enterprises, and small businesses.
7. Financial institutions should develop Shariah-compliant savings and credit products to increase public trust and participation.
8. The government and telecommunications companies should improve mobile-network and internet coverage in rural areas.
9. Consumer-protection mechanisms should be strengthened to ensure transparency, data security, fair pricing, and responsible lending.
10. Government assistance, salaries, and development payments should gradually be delivered through secure digital financial channels.
11. Financial inclusion policies should be linked with employment generation, vocational training, education, and market-development programmes.

12. Regular household-level surveys should be conducted to evaluate whether financial services are reaching economically disadvantaged groups.

Directions for Future Researchers

- Future researchers should conduct similar studies in other provinces of Afghanistan to compare regional differences in financial inclusion and income inequality.
- Longitudinal studies may be undertaken to examine how changes in financial access affect household income over time.
- Researchers may also compare rural and urban households, male- and female-headed households, returnees, farmers, and small business owners.
- Future studies should investigate the separate effects of mobile money, microfinance, Islamic finance, remittances, and digital financial literacy.
- Mixed-method research involving household surveys, interviews, and focus-group discussions may provide a deeper understanding of cultural and institutional barriers.
- Researchers may also examine whether financial inclusion affects poverty, food security, women's economic empowerment, business performance, employment creation, and household resilience.

Limitations of the Study

This study was limited to selected households in Nangarhar Province; therefore, its findings may not represent all households in Afghanistan. The cross-sectional design captured information at one point in time and could not fully establish long-term causal relationships. Household income and expenditure data were self-reported and may have been affected by recall errors, underreporting, or irregular seasonal earnings. Security, distance, and accessibility constraints may have restricted data collection in some remote areas. The Financial Inclusion Index combined several indicators, but it may not capture every informal financial practice used by Afghan households. Finally, factors such as local insecurity, inflation, employment conditions, social norms, and institutional trust may also influence income inequality but could not be examined comprehensively within the scope of this study.

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APPENDIX – A

Household Questionnaire

Questionnaire ID:		Date:	
District:		Village/Area:	
Enumerator name/code:		Start time:	
Urban/Rural:	Urban ☐ Rural ☐	End time:	
Respondent eligibility:	Household head / financially informed adult (18+)	Language used:	Pashto ☐ Dari ☐ Other ☐

Purpose and consent

You are invited to participate in an academic study examining household financial inclusion, income, expenditure, and income inequality in Nangarhar Province. Your participation is voluntary. The interview will take approximately 20-25 minutes. Your name is not required, your answers will remain confidential, and the information will be used only for research. You may decline any question or stop the interview at any time without penalty.

Do you voluntarily agree to participate? Yes ☐ No ☐

Enumerator instruction: If “No,” thank the respondent and end the interview.

General Instructions

- Ask each question exactly as written and record only one response unless the item states “select all that apply.”
- For Yes/No questions, code Yes = 1 and No = 0.
- For five-point scales, circle one number only. Higher scores should represent a higher level of the measured construct unless marked as reverse-coded.
- Record income and expenditure in Afghanis (AFN). Where the respondent reports weekly, seasonal, or annual values, convert them to a monthly amount after confirming the period.
- Do not calculate the Financial Inclusion Index, Relative Deprivation Index, or Gini coefficient during the interview; these will be calculated during data analysis.

SECTION A: DEMOGRAPHIC AND HOUSEHOLD CHARACTERISTICS

This section is separate from the study scales. Record the respondent’s actual response or select the appropriate category.

Code	Question	Response categories / entry
A1	Respondent’s relationship to household	Household head (1); Spouse (2); Adult child (3); Other informed adult (4)
A2	Gender of household head	Male (1); Female (2)
A3	Age of household head	Exact age in completed years: _____
A4	Marital status of household head	Single (1); Married (2); Widowed (3); Divorced/separated (4)
A5	Highest education completed by household head	No formal education (0); Primary (1); Middle (2); Secondary (3); Higher secondary (4); Diploma (5); Bachelor or above (6)

Code	Question	Response categories / entry
A6	Completed years of schooling of household head	_____ years
A7	Main employment/livelihood of household head	Agriculture/livestock (1); Salaried employment (2); Self-employment/business (3); Daily wage labour (4); Unemployed (5); Other (6): _____
A8	Current employment status of household head	Employed (1); Self-employed (2); Unemployed and seeking work (3); Not in labour force (4)
A9	Place of residence	Urban (1); Rural (2)
A10	District	_____
A11	Total number of usual household members	_____ persons
A12	Number of household members aged below 15 years	_____ persons
A13	Number of household members aged 65 years or above	_____ persons
A14	Number of employed/income-earning household members	_____ persons
A15	Number of household members with a disability or chronic illness affecting work	_____ persons
A16	Household returnee/displacement status	Neither (0); Returnee household (1); Internally displaced household (2); Both/other (3)

SECTION B: ACCESS TO FINANCIAL SERVICES

Response scale for all items: Yes = 1; No = 0.

Code	Statement	Yes (1)	No (0)
FA1	Any adult member of this household currently owns an account at a bank or other regulated financial institution.	[]	[]
FA2	Any adult member of this household currently owns a mobile-money or electronic-wallet account.	[]	[]
FA3	A bank branch, microfinance office, or authorised mobile-money agent is available within reasonable travelling distance.	[]	[]
FA4	The household possesses the identification documents required to open and use a formal financial account.	[]	[]
FA5	At least one adult household member personally controls or can independently use a financial account.	[]	[]
FA6	The household can obtain information about available savings, credit, payment, remittance, or insurance products.	[]	[]

Code	Statement	Yes (1)	No (0)
FA7	The household has access to a safe place to save money formally.	[]	[]
FA8	The household can apply for formal or regulated credit when needed.	[]	[]
FA9	The household can receive domestic or international remittances through a formal or digital channel.	[]	[]
FA10	A female adult in the household can access a bank, microfinance institution, or mobile-money service when needed.	[]	[]

SECTION B1: DISTANCE AND PHYSICAL ACCESS

Code	Measure	Entry
FD1	Travel time to the nearest bank branch	_____ minutes
FD2	Travel time to the nearest microfinance office	_____ minutes; Not available []
FD3	Travel time to the nearest mobile-money agent	_____ minutes; Not available []
FD4	Usual round-trip transport cost to the nearest financial service point	AFN _____
FD5	Number of financial service points used by the household during the last 12 months	_____

SECTION C: USAGE OF FINANCIAL SERVICES

During the last 12 months, how often did your household perform each activity? 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Very often.

Code	Statement	Response
FU1	Saved money in a bank, microfinance institution, mobile wallet, or regulated savings group.	1 2 3 4 5
FU2	Deposited money into a bank or mobile-money account.	1 2 3 4 5
FU3	Withdrew money from a bank or mobile-money account.	1 2 3 4 5
FU4	Borrowed money from a bank, microfinance institution, cooperative, or regulated lender.	1 2 3 4 5
FU5	Made a digital or mobile payment for goods, services, bills, school fees, or other expenses.	1 2 3 4 5
FU6	Sent money to another person through a bank, mobile-money service, or remittance provider.	1 2 3 4 5
FU7	Received wages, assistance, or business payments through an account or mobile wallet.	1 2 3 4 5
FU8	Received domestic or international remittances through a formal or digital channel.	1 2 3 4 5
FU9	Used a financial account to manage an emergency or unexpected expense.	1 2 3 4 5
FU10	Checked an account balance, transaction record, or payment confirmation.	1 2 3 4 5

SECTION D: AFFORDABILITY OF FINANCIAL SERVICES

Indicate your level of agreement. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree.

Code	Statement	Response
AF1	Account-opening costs are affordable for this household.	1 2 3 4 5
AF2	Minimum-balance requirements are affordable for this household.	1 2 3 4 5
AF3	Transaction and withdrawal charges are affordable for this household.	1 2 3 4 5
AF4	Travel costs required to reach a financial service provider are affordable.	1 2 3 4 5
AF5	The interest, service charge, or repayment cost of formal credit is affordable.	1 2 3 4 5
AF6	Mobile-phone and internet costs required for digital finance are affordable.	1 2 3 4 5

Code	Statement	Response
AF7	The household can maintain an account without reducing spending on essential needs.	1 2 3 4 5
AF8	The household can use formal financial services without relying on additional informal borrowing.	1 2 3 4 5

SECTION E: QUALITY, RELIABILITY, AND SUITABILITY OF FINANCIAL SERVICES

Indicate your level of agreement. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree.

Code	Statement	Response
FQ1	Financial service providers clearly explain fees, terms, and conditions.	1 2 3 4 5
FQ2	Financial transactions are completed accurately and on time.	1 2 3 4 5
FQ3	I feel that money and personal information are secure when using formal or digital financial services.	1 2 3 4 5
FQ4	Financial service providers treat household members respectfully and fairly.	1 2 3 4 5
FQ5	Available financial products meet the household's saving, borrowing, payment, or remittance needs.	1 2 3 4 5
FQ6	Complaint and problem-resolution procedures are accessible and effective.	1 2 3 4 5
FQ7	Financial services are convenient to use in the language understood by household members.	1 2 3 4 5
FQ8	Overall, the household is satisfied with the financial services available to it.	1 2 3 4 5

SECTION F: HOUSEHOLD INCOME

Record the average monthly amount received by all household members. Include cash and the estimated value of in-kind income. Enter zero where no income was received.

Code	Income source	Average monthly amount (AFN)	Regularity
INC1	Salaries and regular wages	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC2	Daily or casual labour	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC3	Agriculture and crop sales	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)

Code	Income source	Average monthly amount (AFN)	Regularity
INC4	Livestock and animal products	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC5	Business or self-employment	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC6	Domestic remittances	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC7	International remittances	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC8	Government, NGO, or humanitarian cash assistance	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC9	Pensions, rent, or returns from assets	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)
INC10	Other income: _____	AFN _____	Regular (1) / Irregular (2) / Seasonal (3)

INC11. Total average monthly household income: AFN _____

INC12. Estimated total annual household income: AFN _____

Indicate your level of agreement. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree.

Code	Statement	Response
IS1	The household's income is sufficient to cover basic monthly needs.	1 2 3 4 5
IS2	The household's income is predictable from one month to the next.	1 2 3 4 5
IS3	The household has more than one dependable source of income.	1 2 3 4 5
IS4	The household can manage a temporary loss of its main income source.	1 2 3 4 5
IS5	The household's income has improved during the previous 12 months.	1 2 3 4 5

SECTION G: HOUSEHOLD EXPENDITURE

Record the household's average monthly expenditure. For seasonal or annual payments, estimate the monthly equivalent. Enter zero where there was no expenditure.

Code	Expenditure category	Average monthly amount (AFN)
EXP1	Food and non-alcoholic beverages	AFN _____
EXP2	Housing rent or imputed housing cost	AFN _____
EXP3	Electricity, fuel, water, and cooking energy	AFN _____
EXP4	Healthcare and medicines	AFN _____
EXP5	Education and school expenses	AFN _____
EXP6	Transport	AFN _____
EXP7	Clothing and footwear	AFN _____
EXP8	Communication, mobile phone, and internet	AFN _____
EXP9	Debt repayments and financial charges	AFN _____
EXP10	Agricultural or business inputs	AFN _____
EXP11	Social, religious, and family obligations	AFN _____
EXP12	Other expenditure: _____	AFN _____

EXP13. Total average monthly household expenditure: AFN _____

EXP14. During the last 30 days, did the household reduce food, health, or education expenditure because of insufficient money? Yes (1) [] No (0) []

SECTION H: PERCEIVED INCOME INEQUALITY AND RELATIVE DEPRIVATION

Indicate your level of agreement. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree. Higher scores indicate greater perceived deprivation.

Code	Statement	Response
PI1	Compared with most households in this community, this household has a lower income.	1 2 3 4 5
PI2	This household cannot afford goods and services that are commonly available to better-off households.	1 2 3 4 5
PI3	The gap between this household's income and the income of richer households is large.	1 2 3 4 5
PI4	Limited access to savings or credit prevents this household from improving its economic position.	1 2 3 4 5
PI5	The household has fewer opportunities to invest in education, health, farming, or business than better-off households.	1 2 3 4 5
PI6	Unexpected expenses affect this household more severely than they affect better-off households.	1 2 3 4 5
PI7	The household frequently postpones essential purchases because of insufficient income.	1 2 3 4 5
PI8	The household's economic position has fallen behind that of other households during the previous 12 months.	1 2 3 4 5

SECTION I: HOUSEHOLD ASSETS AND DIGITAL ACCESS

Response scale for all items: Yes = 1; No = 0. Record whether the household currently owns or has reliable access to each item.

Code	Statement	Yes (1)	No (0)
AS1	A house or residential property	☐	☐
AS2	Agricultural land	☐	☐
AS3	Livestock used as a productive asset	☐	☐
AS4	Farm equipment or irrigation equipment	☐	☐
AS5	A shop, business premise, or income-generating equipment	☐	☐
AS6	A motorcycle, car, truck, or other transport asset	☐	☐
AS7	A refrigerator, solar system, generator, or other major household durable	☐	☐
AS8	A basic mobile phone	☐	☐
AS9	A smartphone	☐	☐
AS10	Reliable mobile network coverage at the household location	☐	☐
AS11	Regular internet access	☐	☐
AS12	At least one household member able to use mobile-money or digital payment applications	☐	☐

SECTION J: BARRIERS TO FINANCIAL INCLUSION

How serious is each barrier for this household? 1 = Not a barrier; 2 = Minor barrier; 3 = Moderate barrier; 4 = Serious barrier; 5 = Very serious barrier.

Code	Statement	Response
BR1	Long distance to a bank, microfinance office, or mobile-money agent.	1 2 3 4 5
BR2	High transport, transaction, account, or service charges.	1 2 3 4 5
BR3	Lack of required identity or supporting documents.	1 2 3 4 5
BR4	Insufficient income or inability to maintain a minimum balance.	1 2 3 4 5
BR5	Low financial literacy or difficulty understanding financial products.	1 2 3 4 5
BR6	Lack of trust in banks, microfinance institutions, or digital platforms.	1 2 3 4 5
BR7	Weak mobile network, electricity, internet access, or digital infrastructure.	1 2 3 4 5
BR8	Religious or cultural concerns about available financial products.	1 2 3 4 5

Code	Statement	Response
BR9	Restrictions affecting women's mobility or independent financial decision-making.	1 2 3 4 5
BR10	Fear of fraud, loss of money, debt, or inability to repay.	1 2 3 4 5

SECTION K: FINANCIAL RESILIENCE AND COPING

Indicate your level of agreement. 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree.

Code	Statement	Response
FR1	The household can raise emergency funds within seven days without selling essential productive assets.	1 2 3 4 5
FR2	The household maintains savings for emergencies.	1 2 3 4 5
FR3	The household can continue essential food expenditure during a temporary income shock.	1 2 3 4 5
FR4	The household can continue essential healthcare and education expenditure during a temporary income shock.	1 2 3 4 5
FR5	Access to financial services has improved the household's ability to manage unexpected expenses.	1 2 3 4 5
FR6	Access to financial services has supported investment in farming, business, education, or another income-generating activity.	1 2 3 4 5