ISSN: P-2789-1879/E-2789-1887 Volume 9, Issue 4, Winter 1404 Pp1-32

فصل‌نامه‌ی علمی – تحقیقی رنا
Rana Academic & Research Journal

نوع مقاله: علمی – تحقیقی
تاریخ دریافت :۱۴۰۴/۱۱/۲۶
تاریخ پذیرش :۱۴۰۴/۱۲/۲۲
تاریخ نشر :۱۴۰۴/۱۲/۲۹

The Impact of Financial Inclusion on Economic Growth: Empirical Evidence from Afghanistan

تأثیر شمولیت مالی بر رشد اقتصادی: شواهد تجربی در افغانستان

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Abstract

Financial inclusion plays a vital role in promoting economic growth, particularly in developing economies. This study investigates the impact of financial inclusion on economic growth in Afghanistan over the period 2010–2020. Financial inclusion is measured using three indicators: number of bank accounts, bank credit to bank deposits percentage, and number of bank branches, while economic growth is proxies by per capita gross domestic product (GDP). The study employs a quantitative research approach using secondary data collected from World Development Indicators and Da Afghanistan Bank. Descriptive statistics, correlation analysis, and panel regression analysis were applied to examine the relationship between the variables. The results reveal that all indicators of financial inclusion have a significant positive impact on economic growth in Afghanistan, with bank branches showing the strongest effect. The findings suggest that expanding access to banking services and improving financial intermediation can enhance economic growth. The study provides useful insights for policymakers and financial institutions in designing strategies to promote financial inclusion and sustainable economic development in Afghanistan.

Keywords: Financial inclusion; economic growth in Afghanistan; per capita gross domestic product (GDP)

چکیده

شمول مالی نقش حیاتی در ارتقای رشد اقتصادی، به ویژه در اقتصادهای در حال توسعه، ایفا می‌کند. این مطالعه به بررسی تأثیر شمول مالی بر رشد اقتصادی در افغانستان در دوره 2020-2010 می‌پردازد. شمول مالی با استفاده از سه شاخص اندازه‌گیری می‌شود: تعداد حساب‌های بانکی، درصد اعتبار بانکی به سپرده‌های بانکی و تعداد شعب بانک، در حالی که رشد اقتصادی با تولید ناخالص داخلی سرانه (GDP) نشان داده می‌شود. این مطالعه از یک رویکرد تحقیق کمی با استفاده از داده‌های ثانویه جمع‌آوری‌شده از شاخص‌های توسعه جهانی و بانک مرکزی افغانستان استفاده می‌کند. آمار توصیفی، تحلیل همبستگی و تحلیل رگرسیون پنلی برای بررسی رابطه بین متغیرها به کار گرفته شد. نتایج نشان می‌دهد که همه شاخص‌های شمول مالی تأثیر مثبت قابل توجهی بر رشد اقتصادی در افغانستان دارند و شعب بانک قوی‌ترین تأثیر را نشان می‌دهند. یافته‌ها نشان می‌دهد که گسترش دسترسی به خدمات بانکی و بهبود واسطه‌گری مالی می‌تواند رشد اقتصادی را افزایش دهد. این مطالعه بینش‌های مفیدی را برای سیاست‌گذاران و مؤسسات مالی در طراحی استراتژی‌هایی برای ارتقای شمول مالی و توسعه اقتصادی پایدار در افغانستان ارائه می‌دهد.

واژگان کلیدی: شمولیت مالی؛ رشد اقتصادی در افغانستان؛ تولید ناخالص داخلی سرانه (GDP)

Citation: Idrees Ahmad. (2026). **The Impact of Financial Inclusion on Economic Growth: Empirical Evidence from Afghanistan.** Rana Academic & Research Journal. Volume 9. Issue 4. Pp. 1-32

[1] **ارجاع:** احمدی، ادریس. (1404). **تأثیر شمولیت مالی بر رشد اقتصادی: شواهد تجربی در افغانستان** فصل‌نامه‌ی علمی – تحقیقی رنا. دوره 9. شماره 4. صص 1-32

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Rana Academic & Research Journal
Volume 9, Issue No: 04- Winter 2026

1. Introduction

Banking is one of the most responsive industries in the world globally. In the economy of any country, banks are considered extremely vital, and they are hence considered the backbone of an economy (Ateed and Rehman, 2020). The sector of banking is considered the King in the world of economy and money. Banking is the king of global economy and finance. Maximum participation of a country's population in its financial systems is broadly recognized as a key determinant of its economic prosperity and institutional stability. Banks play an important role in sustained and economic activities of a country, moreover it truly influences and facilitates various economic activities which include elimination of poverty, resources mobilization, distribution and production of public finance (Saiti, Noordin and Afghan, 2018). The promotion of the financial inclusion is done by the financial institutions such as the commercial banks. Granting loans and depositing money is considered the primary function of the banks (Kunt and Klapper, 2016), whereas the secondary or intermediate role is played by the banks amongst the savers and the investors for the mobilization of the savings (Onaolapo, 2018). There is a trend which is seen in the developing countries of Africa and Asia. In these countries majority of the people are incapable to utilize the facilities provided by the financial institutions, yet alone they don't even possess a bank account. Many factors are considered responsible for such behavior, and it includes, low income, complex financial services and goods, distant financial institutions and majorly financial illiteracy (Oji, 2007). In Afghanistan, the banking system is developed, and it has 15 fully approved commercial banks, three branches of the foreign banks and there are around 390 branches of the banks throughout the country. The total assets of the banks of Afghanistan are approximately about \$4.17 billion, there are estimated \$3.7 billion deposits and the average loan-to-deposit percentage of 18.78%. The Afghan National Bank, Pashtany Bank, and New Kabul Bank are the three State-Owned banks in Afghanistan. (Formerly privatized owned

Kabul Bank) (Wafi, 2019). In Afghanistan, majority of the population, almost about 85% of the legal adults in the country do not own a bank account in any of the country's financial institution. This average is the highest for the countries with low income. Thus, it can be said that the financial inclusion in Afghanistan is one of the lowest around the world. As per Asli (2008) financial inclusion / the reach to the financial services can be described as the price lacking and as well as non-price impediments in the fiscal services (Saddique, & Anwar, 2019). In the Financial Inclusion project 2020, the financial inclusion Center, describes the financial inclusion as a service which can be easily accessed by everyone who uses them, and the financial services be easily provided to them in a convenient manner, at affordable price with dignity and respect. The services of the finance can be provided by many providers in a competitive market and which is stable to clients which are financially capable. In a survey which was conducted in 2011, the definition of financial inclusion was expanded to note that the full financial inclusion requires the clients or the people participating in the services should be illiterate financially (Gardeva & Rhyne, 2017).Regardless of any country's geographical location, internal and external affairs and institutional stability, the facts stands firm that its growth process is heavily indeed entirely depends on its financial growth and stability. The role of access to finance was emphasized by the Growth Theories. The financial access aids in making life simpler, the handling and dealing with money cheap and safe as it avoids the cash and bartering of payments. The greater access of the financial services allows the people who are poor or have less financial capabilities to prepare for their potential, spend in the shelter and land and thus to use the efficiency properly. It has been commonly documented that the path of Growth needs the gain access to the firms and families in the financial crops, which includes the credits, insurance, savings as well as investment instruments. The household economy as well as sustained long term economic progress in the household as well as broad spectrum view is dependent upon the financial services and products. In an increasingly shock prone global economy or an economy which is not stable and financial weak, the access to the economic services can be a vital car driver in increasing the household revenue as well strength (Stijn Hono

han, and Suarez, 2016). In Afghanistan, the extremely low access point, costly financial services for the financial illiterate clients as well as inadequate financial services do not meet the proper needs of the low-income household, and thus this explains the low rate of financial inclusion in Afghanistan. There are certain factors which are considered important behind the failure of the financial sector in Afghanistan, and which includes the vast religious differences, security concerns, lack of trust in the financial sector by the clients and the extremely low rates of the financial literacy amongst the adults. There is also a huge gap in research related to the inclusion in the financial services in Afghanistan, although there are minor researches which have worked in exploring the performances of financial sector of the country. Whereas on the contrary, there exists a lack of the empirical evidence for the relationship amongst the inclusion of financial as well as economic growth in the country Afghanistan. Thus, for fulfilling the gap, the current study has been devised in investigating the financial inclusion impact on the economic growth in Afghanistan. To achieve the inclusive growth as well as sustainable development has always remained an important objective in the macroeconomic of the economics no matter whatever be the level of development (Sethi & Sethy, 2019). Amongst the economists, there exists a general agreement that that the financial growth stimulates the economic growth. A regression analysis was conducted by Nyasetia (2015) for establishing the relationship amongst the financial investments and deepening in Kenya, and the strong positive link was found out amongst the investments and savings. For growth, financial Growth enables the favoring conditions. As per the empirical research, the growth of the financial system further contributes in the growth of the economics (Rajan and

Rana Academic & Research Journal Volume 9, Issue No: 04- Winter 2026

Zingales, 2013). There is empirical evidence which emphasizes that the nexus amongst the growth as well as finance through the problems of direction of the causality is very complicated to detect. The stability, outreach of banking as well as efficiency of the system was assessed by Beck, Demirguc-Kunt and Peria (2017) by the usage of the total, bank level and the data surveillance. It was found out the that the advantage of the quality of Bank as well as the positions of liquidity has been improved significantly over the years, thus strengthening the economic system and making it more resistance to shocks and other hurdles and the rate at which the interest spiked had declined as well.

A study was conducted by Dahiya and Kumar (2020), in Indian economy considering three dimensions of financial inclusion i.e. usage, penetration and accessibility and its impact on economic growth. The findings suggested there is considerable impact of the financial inclusion on the economic growth in India. They also recommend that further studies should consider institutional determinants of financial inclusion like number of banks, number of accounts, deposits and credits etc. in context of developing economy. Likewise, according to Ain, Sabir and Asghar (2020), there is a need to examine that of the financial inclusion and its impact on that of growth of economy in developing economies. There is no significant empirical witness and evidence on the impact of the financial inclusion on economic Growth in Afghanistan. This reveals a gap in literature study. Thus, taking the suggestions and in order to fill the gap the current study investigated the impact of financial inclusion on the economic growth in Afghanistan.

H1: Number of Bank Accounts and Economic Growth

H2: Bank Credit to Bank Deposits Percentage and Economic Growth

H3: Number of Bank Branches and Economic Growth

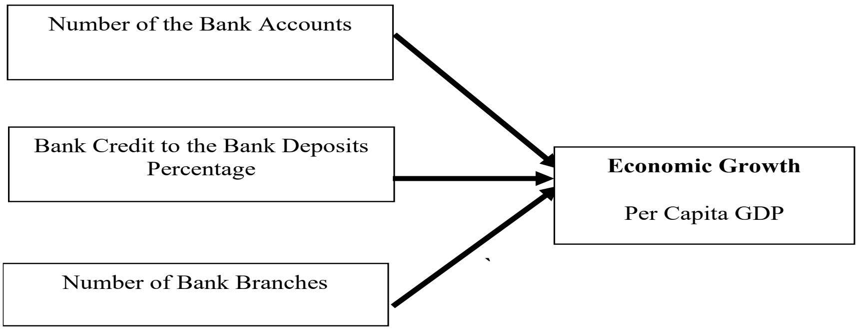
The concept of the financial inclusion is a new concept and has a significant importance. The relationship of the financial inclusion with the economic growth in under the research. The industrial significance of the study includes to support theory of the financial inclusion because it has a major aspect in the growth of the economy. In this current study, the methodological significance is that the makers of the policy will be provided with the knowledge of the financial inclusion and its relationship with the economy of Afghanistan. So that the according policies would be made for the betterment of the economy. The social significance is that the population will be encourage towards the financial inclusion for the betterment of the economy. Similarly, the academic significance included are that the results of the current study will also be used by the researchers to gain more knowledge about the financial inclusion for further researcher.

The general objective of the study is investigating the impact of the financial inclusion on the economic Growth in Afghanistan. While below are the general objectives of the study. To investigate the impact of number of bank accounts on the economic Growth in Afghanistan. To analyze the impact of bank credit to bank deposits percentage on economic Growth in Afghanistan. To explore the impact of number of bank branches on the economic Growth in Afghanistan.

2. Theoretical Framework

The following is the conceptual framework of the study.

Independent Variable: **Dependent Variable:**



The present study is anchored in two major theories: **Financial Intermediation Theory** and **Endogenous Growth Theory**, both of which highlight the role of financial systems in driving economic development.

Financial Intermediation Theory explains that banks and other financial institutions act as intermediaries between savers and borrowers, mobilizing savings and channelizing them into productive investments. Greater financial inclusion — measured by wider access to bank accounts, credit, and branches — strengthens this intermediation process, thereby stimulating economic activity and supporting overall economic growth.

Endogenous Growth Theory, developed by Romer (1986) and Lucas (1988), emphasizes that long-term economic growth is driven by internal factors such as human capital, innovation, and financial development. Unlike classical models that treat technological progress as external, endogenous growth models argue that innovation and productivity improvements result from deliberate investments made by households, firms, and governments. Financial inclusion plays a critical role in this framework because access to financial services enables households and firms to invest in education, entrepreneurship, and technology. Secure savings, affordable credit, and reliable banking services allow individuals to channel resources into productive activities that enhance skills, knowledge, and innovation. These investments generate positive spillovers across the economy, reinforcing sustained growth.

In the context of Afghanistan, where financial exclusion remains widespread, both theories suggest that expanding access to banking services can reduce inefficiencies, mobilize savings, and improve resource allocation. By integrating more people into the financial system, the economy benefits from higher levels of investment in human capital and productive enterprises, which in turn accelerates per capita GDP growth.

Based on these theoretical foundations, the study hypothesizes that:

- **H1:** The number of bank accounts has a positive impact on economic growth.
- **H2:** The ratio of bank credit to deposits positively influences economic growth.
- **H3:** The number of bank branches positively contributes to economic growth.

3. Review of the Literature

The current chapter presents the theoretical and the empirical review of the literature. In the below section the theories regarding the construct of the study are presented and then the relevant literature regarding the variables of the study is presented.

As indicated by Asli Demirguc-Kunt (2008) the financial inclusion or having approach to the financial services can be called as absence of non-price or the price barriers that usage of the financial services. For a nation to accomplish complete integration coming up next are of incredible significance. Monetary governments should be the accessible to all: this is frequently seen as the objective of monetary incorporation. Monetary governments gave should also be of importance: quality monetary consideration incorporates the accompanying attributes: moderateness, relaxation, detail fitting, health, pride of treatment, and customer assurance. Monetary combination comprises agreement of complete set-up of the important economic presidencies; this refers to meeting of complex financial governments that includes vital praise, investing capital, security and payment governments (Gardeva and Rhyne, 2011). Monetary prohibition has been characterized it with regards to a larger trouble of social avoidance of particular gatherings of people from the standard of common public. Leyshon and Thrift (1995) characterized monetary rejection as suggested to those cycles who serve to forestall some specific social gatherings and people from accessing the conventional monetary framework. Carbo, Groundskeeper and Molyneux (2005) have characterized monetary rejection as extensively the failure of some cultural gatherings to get to the monetary framework. As per Conroy (2005), monetary avoidance is a cycle that keeps poor and burdened social gatherings from accessing the official monetary frameworks of their nations. As per Mohan (2006) monetary prohibition means the absence of access by specific sections of the common public to appropriate, negligible attempt, sensible and secure economic objects and governments from traditional providers.

According to top World Bank scholars Demirgüç-Kunt et al., the World Bank has "made it a core priority to promote financial inclusion" as they put it (2020, p.S2). It is based on study results that suggest that access to and usage of formal financial services may have a positive impact on development and well-being (Barajas et al., 2020). Demirgüç-Kunt et al. (2017), in their assessment of the relationship between financial inclusion and inclusive development, found that the influence of payment services and bank account ownership was the greatest. Pro-poor growth, shared growth, and inclusive growth—the preferred World Bank nomenclature since 2009—can all be considered as financial

Rana Academic & Research Journal
Volume 9, Issue No: 04- Winter 2026

inclusion's financial-related equivalents. As a result, financial development should aim to benefit all members of society, not only the wealthiest individuals and corporations. In addition to the World Bank's assistance for financial inclusion and financial literacy, the G20 group seems to be an important player in the field. Financial inclusion was one of the G20's top priorities during the Seoul conference in 2010. (see recently, Buch, 2017). To execute the G20's action plan to improve financial inclusion, the Global Partnership for Financial Inclusion (GPFI) was established (GFPI, 2020). There is no specific mention of financial inclusion in the 17 SDG agenda, but it is a goal that is included in the descriptions of many of the other objectives (see, for example, UNSGSA, 2018). Finally, the OECD organizes the International Network on Financial Education (INFE) to promote financial literacy and financial inclusion (OECD, 2020). With this widespread support for financial inclusion comes a fair amount of criticism. Without delving into specifics, the main point of this argument is tied to the broader criticism of financial growth. This raises the basic issue of whether financial progress has an influence on overall development, which often proxies by GDP growth per capita. It is reasonable to infer that evidence supports a clear and conditional yes to this issue (Levine, 1997). Generally speaking, financial growth has a good effect, although this is not always the case. It is possible to see a link between general growth and financial growth (Demetriades & Hussein, 1996). Regulated settings may not lead to financial progress in particular places or eras (De Gregorio & Guidotti, 1995). Although microfinance has little influence and does not have a revolutionary role, there may be a general issue of too much financing (Arcand et al., 2015). (Banerjee et al., 2015). The average impact is positive since there are still a sufficient number of successful examples. Financial inclusion is a less-studied area, but this conclusion may be applied carefully to it. Due to the lack of an alternative to the functioning financial sector in contemporary capitalist countries, we do not agree with Mader (2017)'s criticisms of "financialization." This may lead to over indebtedness and sub-optimal judgments because of a lack of understanding (Schicks, 2014). One approach to lessen such difficulties, although not the only one, is boosting financial literacy, as we shall argue later (Schicks, 2014).

In order to determine if a policy is effective, it is necessary to use empirical data. The usual measure of financial inclusion is that an adult has an account in a formal financial institution. Since savings accounts are so widespread in developing nations, the term "account" is sometimes used somewhat broadly to include both current and savings accounts. A formal financial institution is one that abides by all of the country's banking laws. In practice, this concept may be more ambiguous than it seems to be due to the fact that the financial institutions that serve the public typically exist in a series. Many people disagree over whether financial institutions should be classified as formal or semi-formal. Semi-formal or less-regulated banks, for example, may be considered as either formal or semi-formal institutions, depending on whether or not they are subject to regulation (because they do meet the standard regulatory level). An entity's status as an official financial institution is ultimately decided by the authorities (usually the central banks). Account ownership, or how many adults possess an account as a percentage of total adults in the United States, still plays a major role in the discussion, but it is evident that ownership alone is not enough. There is no doubt that having a bank account, even if it is a basic one, is critical, particularly if it is expensive. However, there are two further degrees of financial inclusion beyond the basic one. Active usage of a bank account is the second, intermediate stage of financial inclusion. In the third and most advanced stage, financial services are rationally used. Several indicators are provided by the World Bank for the first and second levels of development. Those above the age of 15 who have an account are counted in the first level (Demirgüç-Kunt and colleagues, 2020).

The term "account" is defined in a fairly wide sense. Second-level examples include checking whether there was any money in a savings account or if a current account was utilised for transactions in the previous year. If these definitions of "use" are anything to go by, they are going to have to be taken as the lower limit. They are useful in places where banks are few or nonexistent. It is reasonable to say that advanced economies have now reached the third degree of financial inclusion. One method to tell whether individuals are investing rationally is to look at their returns, which should be commensurate with the amount of risk they are taking. People who borrow money at high interest rates when they can get it at cheaper rates are engaging in less-than-optimal financial practices (practices). The "Global Findex database" (Demirgüç-Kunt et al., 2020) was produced by the World Bank in 2011 as a database on financial inclusion in the global economy. Around 140 nations are included in the database. A representative sample of the adult population of a nation is comprised of data on around 1,000 people. There were two updates to the survey, which took place in 2014 and 2017. As a result, we rely on the most recent data to reflect the year 2017. Four questions in a survey were used to gauge financial literacy throughout the world in 2014. The Standard and Poor's Global Financial Literacy Survey is the name given to this study. In order to design policy, it is vital to understand what factors influence financial inclusion. While some studies have been conducted, the amount of study in this area is significantly less than in the domain of financial development. Inevitably, there is a connection between the two aims of financial development and financial inclusion. As with growth and inclusive growth, there is also a significant difference: advancement in financial development will provisionally benefit the less-included elements of society, but this is not a guarantee if the goal is not to increase the financial well-being of those who are less fortunate, then it would just be an unintentional impact. Financial development has been shown to be more beneficial to income in the lower income brackets, according to Beck et al. (2007a), an authoritative article. Financial inclusion is not automatically a result of general financial progress, despite this being the case. There is no doubt that lower-income groups are less financially integrated, but this is not the same thing. Since financial progress is beneficial, what can be done specially to help? What do we currently know about the factors that influence financial inclusion? Often, we use the Global Findex database to analyze these market factors from both supply and demand perspectives. Financial development has been linked to an increase in financial inclusion, thus we look at the factors that contribute to financial development here. Private credit, i.e., loans made by the financial sector to private borrowers, is the most important indicator of financial progress (deliberately neglecting politically-motivated loans to the public sector). There are a variety of ways to increase private credit. It is essential to have an infrastructure for lending, as well as the ability to choose who and how much money is given out. In addition, a framework is required to assure the trustworthiness and enforceability of loan agreements. Though financial development and financial inclusion should be seen as a symbiotic relationship (Beck et al., 2007b), there has been little systematic empirical research in this area. Price and non-price obstacles to banking services usage and access in developing nations are studied by Beck et al. (2008) utilizing survey data from 209 banks in 62 different countries. They conclude that these constraints have a detrimental impact on metrics of financial inclusion or access to finance. Minimum balances for checking accounts, yearly fee, and documentation necessary to start an account have been found to be extremely restrictive. Further, the article examined the link between these obstacles and the regulatory framework of the nations in which they were implemented. Different metrics of bank regulations, bank disclosure policies, and media freedom are shown to have high connections. The following year, Beck et al. (2009a) outlined a range of measures that may be implemented in order to broaden the population's access to financing. They claim that building credit information systems may have a favourable impact on the availability of finance, particularly loans, in developing nations. In the same way, measures for recouping debt from contracts may contribute easily to increasing access. Access to previously neglected populations may be increased by encouraging openness and competitiveness (see also Barajas et al., 2020). On the other hand, the evidence for direct governmental action is less clear. In this regard, Barajas et al. (2020) provide a specific suggestion: distribute government payments through bank accounts. Allen et alwork .'s on the supply-side aspects of financial inclusion is the most detailed in this regard (2016). A collection of supply-side characteristics and financial inclusion are examined using the first edition of the Findex database from 2011, which includes 123 countries with roughly 1,000 randomly surveyed participants each (i.e., around 20 countries were dropped due to incomplete information). Account ownership, saving in the last year, and at least three withdrawals from any account during a regular month are all factors that go into determining this. At the national level, supply-side factors are readily accessible. Financial inclusion is linked to lower costs of financial services, such as the costs of opening a bank account or the costs of direct credit; (ii) better physical infrastructure, such as bank and ATM penetration; and (iii) a more reliable politico-economic climate. These three groups of determinants are all significant while controlling for individual characteristics. Deposit insurance, consumer protection, and the ownership of financial institutions by the government or foreign banks are all characteristics that have little or no impact on financial inclusion (see Allen et al., 2016). The introduction of modern financial technologies, in particular mobile money (see Demirgüç-Kunt et al., 2018), may help alleviate the high level of financial exclusion that exists today. Almost everyone in the world, including in developing nations, has at least one kind of mobile phone, and these phones may be used to provide financial services. Yes, there are examples of success in this area. In only 15 years, mobile money has grown to hundreds of millions of users, many of whom are now utilizing formal financial services for the first time, making it possible for more people to become financially included (Suri, 2017). Money transfers in case of unfavorable shocks are the most well examined of all the potential advantages of mobile money (see also Aron, 2018). There are, however, certain restrictions. On the other hand, according to the findings of a case study conducted in rural Uganda by Hamdan et al. (2020), there is a significant disconnect between mobile money account holders and those who actually utilise their accounts. In addition, mobile money account holders reach new demographics, yet some remain underserved, such as women, the elderly, and those with lower incomes. The provision of mobile money is still lacking, particularly in distant locations that are already impoverished. Last but not the least, it seems that many customers have difficulty interpreting fees, leading them to place a high value on financial services that are based on "misinterpreted" costs. In general, financial technology may aid with financial inclusion, but it may leave out crucial portions of the population. The conduct of smaller consumers, not giant corporations, makes up the demand side aspects in financial markets crucial to addressing financial inclusion. For the most complete study, go no further than Allen et al. (2016). There is a strong focus on nation fixed effects in this study, which examines the link between personal attributes like income and financial inclusion.

According to Allen et al. (2016), three regression analyses were performed, one for each measure of financial inclusion (account ownership, financial inclusion, and frequency of usage), and the results showed very similar trends. In all of the regressions, there are four factors that consistently show a strong correlation to financial inclusion. Higher income, greater education, smaller households, and participation in the labour market are all associated with a higher level of financial inclusion (not being unemployed or out of the workforce). However, there are other variables at play, such as gender differences in financial inclusion, which are only relevant for the third of these three measures (frequency of account use). Although this study reflects the marginal contribution of gender, the entire impact of gender is likely to be considerably bigger. Women are also less educated than males, earn less, and so on and on. Rural communities, which are less developed but also have lower wages and less educational opportunities, have a similar problem. Married people have a higher rate of financial inclusion than those who are single parents with children. This might be because they have a more stable social status. It is not as simple to figure out how age affects financial inclusion since earning money and building wealth are both related to financial inclusion. However, the quadratic term has a negative sign, indicating that the relationship is not linear and that the benefit of adding years to one's age diminishes as one gets older. Allen et al. (2016) do not take into account the importance of financial literacy in relation to financial inclusion. Is there a positive marginal benefit of financial literacy beyond the effects of education, income, and employment? To our knowledge, this has not been investigated yet.

80 percent of individuals in the world's poorest nations are unbanked, according to CGAP (2007), the Consultative Group to Assist the Poor. Unbanked individuals are those who do not have access to basic banking services, such as remittances and savings that are taken for granted in the developed world and by the majority of people living in metropolitan areas. There are several obstacles to traditional banking techniques, including a lack of knowledge, illiteracy and exorbitant costs. Economic growth is stifled by a lack of financial services. Poor people have little choice but to rely on the informal cash economy, making them more susceptible to risk and unable to save or borrow money effectively. Direct pooling and investing of society's savings is prevented by knowledge asymmetries and transaction costs that are mitigated by financial markets and institutions. The exchange of products and services is made easier by the provision of payment services by financial organizations. In addition, they generate and analyze data about investors and investment projects so that money may be appropriately distributed. Because of a lack of functional and well-

developed financial institutions and markets, people's earnings and quality of living fall. Everyone has the chance to benefit from the finest investments when financial institutions and markets work efficiently, allowing for more development, more equitable distribution of wealth, and less poverty. Expansion of the banking sector and increased access to credit would unquestionably aid in the reduction of income inequality and poverty. A country's economic development must be taken into account when assessing financial inclusion. The nonpayment of power bills through banks in a developed nation may be considered as an example of financial exclusion. However, in an undeveloped nation, the financial system is not yet evolved enough for such a scenario to be deemed financial exclusion (Demirguc-kunt, Levine and Ross 2009). Several of the Millennium Development Goals (MDGs), such as increasing income and reducing poverty, as well as MDGs like improving education, gender equality, and health, may be significantly impacted by the financial sector. Families can now afford to send their children to school instead of depending only on them as a labor force because of increased income and output. If you have the money, you can do everything you want in life. The capacity of women to manage their own financial well-being and have a stronger voice in their families and communities is made possible by the availability of affordable financial services. As financial markets advance, discrimination becomes less of a factor; capital is made available to those with promising investment opportunities, regardless of other factors; this includes firms of any size, ownership, or profitability, as well as households of any current income or wealth, regardless of gender or ethnicity. Indeed, financial development has the potential to lessen inequality by expanding access to financial capital as well as capital itself (Asad, 2009).As per Sen (1999) thoughts, Growth entails decreasing poverty or enlarging choice. Hardship speaks to a multifaceted perspective on destitution that incorporates hunger, ignorance, disease and chronic weakness, frailty, voice lessness, uncertainty, mortification and an absence of admittance to fundamental foundation (Narayan, Patel & Schulte 2000). A soothsayer (1979) contends that motivation behind Growth is to diminish destitution, disparity, and joblessness. Sampson, (2012) characterizes monetary Growth regarding goals. These are very regularly portrayed as the formation of occupations and abundance, and the progress of nature of life. Financial Growth can likewise be depicted as a cycle that impacts development and rebuilding of an economy to upgrade the financial prosperity of a network. In the broadest sense, monetary Growth incorporates three significant territories: Rules that government embraces to meet wide financial targets including swelling control, high work and supportable development, Policies and projects to offer types of assistance including building parkways, overseeing parks and giving clinical admittance to the hindered and at last arrangements and projects unequivocally coordinated at improving the commercials air through explicit endeavors, business money, promoting, neighborhood Growth, commercial upkeep and postponement, innovation move, land Growth and others. The principal aim of monetary Growth is developing the economic success of the system all activities which include job formation, go to work upkeep, charge base upgrades and nature of life.

Economic development, according to Sen (1983), refers to the continuous and coordinated efforts of politicians and communities to improve the quality of life and economic health of a certain region. [Page needed] Quantitative and qualitative changes in economics may also be referred to. Development of human capital, vital infrastructure and regional competitiveness, environmental sustainability and social inclusion are only few of the activities included in this plan. The goal of economic development is to improve the economic and social well-being of the people who live in a country. A nation's economic, political, and social well-being are all part of the process of economic growth (O'Sullivan and Sheffrin, 2003). Economic development has been characterized in a variety of ways, making it difficult to settle on a single definition that can be considered sufficient in its own right.

Real per capita GDP growth in emerging Asia was assessed by Estrada et al. (2010). 125 emerging Asian nations were included in a panel study conducted during the period 1987-2008. Real per capita GDP growth is shown to be positively correlated with total financial development. Growth is more favorably influenced by financial depth than by financial structure. The effectiveness of investment has been shown to have a favorable effect on production growth. The financial-growth link between emerging and industrialized nations is the same in both cases. The results of this study are consistent with previous research on the finance-growth link. Development and openness in the financial sector both contribute to growth. After the financial crisis, the impact of financial openness on development in emerging Asian nations is more pronounced. A study by Prochniak and Wasiak (2017) assessed the influence of financial sector expansion and stability on economic growth in 28 EU and 34 OECD states. Theoretically, improved financial sector stability should lead to increased production. Data from 1993 to 2013 was utilized in this investigation. The financial sector is represented by a variety of factors, each of which has a distinct effect on growth. It has been shown that credit generation and its augmentation is a key factor in determining production growth. As a result, over indebtedness does not have a positive effect on the economy, particularly in the post-crisis era for the members of EU. Financial sector variables include the percentage of gross loans that are nonperforming, which has a negative impact on GDP growth. Bank capital-to-assets ratio shows a positive correlation with GDP growth in the Organization for Economic Co-operation and Development (OECD) nations, but a negative correlation in the European Union (EU). The second variable, market capitalization, reveals an intriguing correlation between production growth and both positive and negative correlations. After a certain point, production growth slows down when the amount of capital market development becomes too high. For nations with well-established capital markets, this is true. Countries with capital markets in the

Rana Academic & Research Journal Volume 9, Issue No: 04- Winter 2026

early stages of development, however, see quicker production growth as a result of capital market development. The model shows a negative correlation between inflation and government spending, and a positive correlation between investment and trade openness on economic growth.

4. Research Methodology

In current chapter of the study, the tools and techniques that were used in the current study are presented. The current chapter presents the design used in the current research, population of the study, data collection techniques that were used in the study and data analysis techniques used in the study.

Research Design

As stated by Lewis, Saunders & Thornhill (2003) the methodology of the research is an organized means of inquiry intended at recognizing variables and the relationship between these variables and is essentially adopted for the reason of collecting data for study hypotheses that are to be tested or deliver responses to the study questions. Based on the concept of the research onion by Saunders et al (2007), as the current study aim was investigation of the impact of the financial inclusion on economic growth, for this reason the quantitative research type was applied in the current study. Similarly, as the data was collected from the economic indicators for the measurement of the impact of the independent variable on the dependent variable, therefore descriptive research design was chosen in the current study.

Population, Sample and Sampling technique

The population of the study is the total number of the elements which would likely to be selected for the study (Brians, 2011). As the aim of the current study is to investigate the impact of financial inclusion on economic growth in Afghanistan, thus data of

Rana Academic & Research Journal Volume 9, Issue No: 04- Winter 2026

financial inclusion and economic growth of 40,008,355 population of Afghanistan (Worldometer, 2021) was considered as population of the current study. As the population is whole Afghanistan data for the variables so the sample was the same and based on all the banks data (i.e., census) for Afghanistan. While as a sample the data from year 2010 to 2020 was chosen as the sample data for investigation by using census sampling technique.

Data Collection

In order to investigate the impact of the financial inclusion on the economic growth, secondary data was used in this study. The secondary data for the current study was collected from different sources like, AFX Afghanistan stock exchange, World Development indicators, world Governance indicators and Da Afghanistan Bank. Data was collected from year 2010 to 2020 in this study.

Tools used for data Analysis

In order to find the impact of independent variable on dependent variable, this study used different analysis techniques. Descriptive analysis was used to find the normality if the data. Correlation analysis and regression analysis was used to achieve the objectives of the study. The data analysis was done through latest version of E-views software.

Regression Model

Below is the regression model of the study.

$$GDP = \alpha + \beta_1 NBA + \beta_2 BCtoBD + \beta_3 NBB + \varepsilon_i$$

Whereas;

GDP is gross domestic product

NBA is number of bank account

BC to BD is Bank Credit to the Bank Deposits Percentage

NBB is Number of the Bank Branches

Rana Academic & Research Journal Volume 9, Issue No: 04- Winter 2026

Measurement of the Variables

The current study has two variables i.e., independent variable (financial inclusion) and dependent variable (economic growth). The below section presents the measurement tools for the measurement of the variables of the study.

Dependent Variables

In this study, the economic growth is the dependent variable. In this study, per capital of gross domestic product was used to measure the economic growth. This proxy is also used by (Estrada and Park, 2010).

Independent Variable

Financial inclusion is the independent variable in this study. Different studies have used different indicators of the financial inclusion. In current study, we took the recommendations of Dahiya and Kumar (2020), to measure the financial inclusion taking the institutional factors like, number of the accounts in the banks, also number of the bank branches and bank credit etc. Thus, considering the measuring tools, this study measured financial inclusion via financial indicators inclusion that are given below

a. Number of the bank accounts (per one thousand adult populations) (Dahiya & Kumar, 2020).

b. Number of the bank main and sub-branches (per one lack people), (Dahiya & Kumar, 2020).

c. Amount of the bank credit to the amount of the bank deposit as the percentage (Dahiya & Kumar, 2020).

5. Findings

Overview

This section presents the results for the analyses that are conducted in the current study. The below section presents the results of the descriptive analysis, correlation analysis and regression analysis.

Descriptive analysis

The descriptive analyses were conducted to analyze the data characteristics that were collected during the study for analysis. In this study, mean, standard deviation, minimum and the maximum values were calculated for measuring the descriptive statistics of the study. The results for the descriptive analysis of the current are presented in the below section.

Table 1: Descriptive analysis

S.no	*Variable*	*Variable type*	*Mean*	*SD*	*Min*	*Max*
1	Per capita Income (in US $)	Dependent	573.40	47.366	502.00	642.00
2	Number of the Bank Accounts	Independent	161.95	24.203	105.12	183.200
3	Bank Credit to the Bank Deposits Percentage	Independent	27.31	13.327	18.340	59.440
4	Number of Bank Branches	Independent	2.2430	0.2136	2.020	2.7800

Rana Academic & Research Journal Volume 9, Issue No: 04- Winter 2026

The above table 4.1 presents values of the mean, standard deviation, minimum and the maximum values of the independent and the dependent variables of the current study. The table is showing that mean value of Per capita Income (in US $) is 573.40 while the values of the standard deviation for Per capita Income (in US $) is 47.366 its minimum value is measured as 502.00 and maximum value of Per capita Income (in US $) is 642.00, similarly mean value of Number of the Bank Accounts is 161.95 while the values of the standard deviation for Number of the Bank Accounts is 24.203 its minimum value is measured as 105.12 and maximum value of Number of the Bank Accounts is 183.200, likewise, mean value of Bank Credit to the Bank Deposits Percentage is 27.31 while the values of the standard deviation for Bank Credit to the Bank Deposits Percentage is 13.327its minimum value is measured as 18.340 and maximum value of Bank Credit to the Bank Deposits Percentage is 59.440, lastly, mean value of Number of Bank Branches is 2.2430 while the values of the standard deviation for Number of Bank Branches is 0.2136 its minimum value is measured as 2.020 and maximum value of Number of Bank Branches is 2.7800.

The above descriptive analysis shows that the per capita income of the Afghanistan is very low as compared to the other developing countries. As the mean per capita income of the Bangladesh is measured as 950.23 by Ain, Sabir and Asghar (2020), while in Pakistan the mean per capital income is 1081.34 (Ateed and Rehman, 2020). Similarly, according to Dahiya and Kumar (2020), the mean number of the bank accounts in other developing countries is 500-600, while according to the above descriptive analysis, Afghanistan has a low number of the bank's accounts. Likewise, Afghanistan also lags behind in number of bank branches per 1000 individuals as mean value is 2.2430, while in other developing countries mean number of bank branches per 1000 individuals is between 5-10 which means that low number of bank branches per 1000 individuals.

Rana Academic & Research Journal Volume 9, Issue No: 04- Winter 2026

Correlation analysis

Correlation analysis aims to investigate the relationship that exists between the independent and the dependent variables of the study. To determine the relationship between the financial inclusion indicators and economic growth i.e., per capita income, the below table presents the values of the correlation coefficient.

Table 2: Correlation Analysis

Variables	*Per capita Income*	*No of Bank Accounts*	*Bank Credit to Bank Deposits %age*	*No of Bank Branches*

Per capita Income	1			
No of Bank Accounts	0.441*	1		
Bank Credit to Bank Deposits %age	0.311**	0.201*	1	
No of Bank Branches	0.491*	0.141*	0.144*	1

*p < .05; ** p < .01

The above table shows values for the correlation coefficients of the current study. In the above table, the correlation coefficients values show the relationship that is existing between the study variables. The table presents that value of the correlation coefficient showing the relationship between the number of bank accounts and per capita income is 0.441, this value shows that number of bank accounts has a strong positive relationship with per capita income, similarly, value of the correlation coefficient showing the relationship between the bank credit to bank deposits percentage and per capita income is 0.311, this value shows that bank credit to bank deposits percentage has a moderate positive relationship with per capita income, and value of the correlation coefficient showing the relationship between the number of bank branches and per capita income is 0.491, this value shows that number of bank branches has a strong positive relationship with per capita income.

The results of the correlation analysis show that indicators of the financial inclusion i.e., number of bank accounts (0.441), bank credit to bank deposits percentage (0.311) and number of bank branches (0.491) have a positive relationship with the economic growth i.e., per capita income of Afghanistan.

The results of correlation analysis show that indicators of the financial inclusion i.e., number of bank accounts (0.441), bank credit to bank deposits percentage (0.311), and number of bank branches (0.491) has a significant positive relationship with the economic growth i.e., per capital income.

Multicollinearity

Variance inflation factor (VIF) measurement technique was adopted to analyze the Multicollinearity between the variables of the study. The formula for measurement of the Variance inflation factor (VIF) is presented below:

$$VIF\ q = 1 / (1 - q)$$

In the above formula, q is correlation coefficient, which is obtained by regressing the explanatory variable on all the remaining explanatory variables in the model. The results of the Multicollinearity analysis are presented in the below table.

Table 3: Multicollinearity

Variable	*Coefficient Variance*	*Uncentered VIF*	*Centered VIF*
C	0.0243141	31.76518	NA
No of Bank Accounts	0.2145312	11.55743	1.191161
Bank Credit to Bank Deposits %age	1.146145	14.87316	2.341697
No of Bank Branches	0.356219	2.942682	1.313462

Multicollinearity examined and found that the variance inflation factor of all the explanatory variables is lower than 10 which shows that the variables are not correlated and faces no problem of multicollinearity.

Regression Analysis

The aim of the regression analysis is to investigate the extent of the relationship between study variables i.e., the impact of the independent variables on the dependent variable. At first, Hausman Specification test was performed so as to select the most reliable and efficient model between fixed effect model and random effect model for the identification of panel data analysis. The results are presented in the below tables.

Table 4: Hausman Test

Test Summary	*Chi-Sq. Statistic*	*Chi-Sq. d.f.*	*Prob.*
Cross-section random	17.231	7.610	0.1014

The aim of the Hausman's test is to indicate that which model is to be used. When the p value is higher than 0.05 that random effect model is used, while when the p value is 0.05 or less than fixed effect model is used. As the results of the Hausman's test indicates that the significant value is 0.1014 i.e., higher than 0.05, therefore the results concludes that random effect model should be used. The results of the random effect model are given below.

Table 5: Random Effect model

Dependent Variable: Economic Growth
Method: Generalized Least Squares
Sample: 2010-2020
Periods Included: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.231	.213	3.142	0.026
No of Bank Accounts	0.335	.291	2.99	0.024
Bank Credit to Bank Deposits %age	0.281	.211	2.19	0.034
No of Bank Branches	0.421	.351	3.61	0.008
R-squared	.542	Mean dependent var		573.40
Adjusted R Square	.480	S.D. dependent var		47.366
Sum squared residual	.224	Schwarz criterion		-0.212
Log likelihood	.341	Hannan-Quinn criter.		-0.321
F-statistics	20.249			
		Durbin-Watson stat		1.821
Prob	0.0323			

The above table indicates the regression analysis of the current study. It shows the values of the R-square, Adjusted R square, Durbin Watson test, and values of the regression coefficient of the regression model. In regression analysis the R—square value is 54% which the variation of the independent variables on the dependent variable the adjusted R square value is .480, indicating that unit change in the independent variable financial inclusion i.e., no of bank accounts, bank credit to bank deposits %age and no of bank branches contributes 48 percent of change in the dependent variable i.e., economic growth. The F-statistics value i.e., 20.249 indicates the good fitness of the model. Similarly, the value of the Durbin Watson in the above table is 1.821, indicating that there is no auto correlation in the data.

Likewise, the above table is showing the values of coefficients indicating the impact of the independent variable on the dependent variable. When the coefficient value is higher at the relevant value of t at significant value, it indicates that the variable is contributing more towards the dependent variable. The above table shows that, the coefficient value for the no. of bank branches is 0.421 (t=3.61, f=0.008), which indicates that the number of the branches has more significant impact on the economic growth i.e., per capita income. similarly, the values of coefficients in the regression analyses for number of bank accounts and bank credit to bank deposits percentage are 0.335 (t=2.99, f=0.024) and 0.281 (t=2.19, f=0.034) respectively, indicating that number of bank accounts and bank credit to bank deposits percentage have a significant impact on economic growth. Thus H1, H2 and H3 of the current study are accepted.

6. Discussion

The findings of this study demonstrate that all indicators of financial inclusion — number of bank accounts, bank credit to deposits ratio, and number of bank branches — exert a significant positive impact on economic growth in Afghanistan. Among these, the number of bank branches showed the strongest effect, underscoring the importance of physical access to financial services in a country where digital penetration remains limited.

These results are consistent with international evidence. For instance, Dahiya and Kumar (2020) found that financial inclusion dimensions such as usage, penetration, and accessibility significantly contributed to economic growth in India. Likewise, Nyasetia (2015) reported a strong positive relationship between financial deepening and savings in Kenya, reinforcing the argument that expanding financial services stimulates investment and growth. The Afghan case aligns with these findings, suggesting that despite differences in institutional capacity and economic structure, the fundamental relationship between financial inclusion and growth remains robust across developing economies.

Nevertheless, Afghanistan presents unique challenges. Unlike India, where financial literacy programs and digital banking initiatives have accelerated inclusion, Afghanistan continues to face barriers such as low trust in financial institutions, limited literacy, and security concerns. These structural constraints explain why, despite the positive impact observed, overall levels of financial inclusion remain among the lowest globally. The results therefore emphasize that while financial inclusion can drive growth, its effectiveness depends on complementary policies that address institutional weaknesses and socio-cultural barriers.

The study also contributes to the theoretical debate. Within the framework of Financial Intermediation Theory, the findings confirm that banks play a vital role in mobilizing savings and channeling them into productive investments. From the perspective of Endogenous Growth Theory, the results suggest that greater access to financial services enables households and firms to invest in human capital and entrepreneurship, thereby generating long-term growth. The Afghan evidence supports both theoretical perspectives, demonstrating that financial inclusion is not only a social policy but also a structural driver of economic development.

Rana Academic & Research Journal
Volume 9, Issue No: 04- Winter 2026

In summary, the discussion highlights that Afghanistan's experience mirrors global patterns while also underscoring the importance of context-specific barriers. Expanding bank branches and improving financial literacy appear to be the most immediate strategies for enhancing inclusion and, consequently, economic growth.

7. Conclusion

The current study investigated the impact of financial inclusion on the economic growth in Afghanistan. The population of the current study was Afghanistan from where the data for the variables was collected from different sources like World Bank and world development indicators etc. Different statistical analysis techniques were applied in the current study. In this study, number of the branches, number of bank accounts and bank credit to bank deposits percentage were taken as the determinants of the financial inclusion. The results indicated that all the determinants of the financial inclusion i.e., number of the branches, number of bank accounts and bank credit to bank deposits percentage has a significant positive impact on the economic growth of Afghanistan. The study recommended that government should recognize the vital role played by the financial inclusion and thus develops policies for encouraging financial inclusion.

7. Recommendations

Based on the findings of this study, which confirm that financial inclusion significantly contributes to economic growth in Afghanistan, the following practical recommendations are proposed.

First, policymakers and financial institutions should promote bank account ownership by simplifying account opening procedures, reducing documentation requirements, and lowering minimum balance conditions. Expanding access to bank accounts, especially for low-income and rural populations, can enhance savings mobilization and economic participation.

Second, banks should improve the efficiency of credit allocation by increasing the proportion of deposits extended as productive loans. Priority should be given to sectors such as small and medium-sized enterprises and agriculture, as effective credit intermediation can stimulate investment and economic growth.

Third, the expansion of banking infrastructure should be encouraged, particularly in underserved and rural areas. Incentives such as regulatory support or cost-sharing mechanisms can motivate banks to increase the number of branches and service points, thereby strengthening financial access.

Finally, the adoption of digital and agent banking services should be promoted to complement physical branches. Digital financial services can overcome geographical and security constraints, reduce service delivery costs, and accelerate financial inclusion, ultimately supporting sustained economic growth.

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