

# **A Study on Financial Inclusion in India and Its Relation with Financial Literacy**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

## **Article Information**

DOI: 10.9734/JEMT/2022/v28i130388

## **Open Peer Review History:**

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/81853>

**Received 09 November 2021**

**Accepted 19 January 2022**

**Published 21 January 2022**

**Review Article**

## **ABSTRACT**

Finance has become a crucial part of our economy for development of the society. For this purpose, a solid economic system is required not only in developing and under-developed countries but also for developing countries for maintaining growth. Through financial inclusion we will achieve equitable growth of our country. Financial inclusion means providing appropriate products and services to weaker sections at a reasonable cost. Now day's financial institutions provide complex sort of products. So it's difficult for the commoner to form choice among them. Therefore, literacy about financial products is required to form sound decisions. Financial Literacy isn't nearly markets and investing, but also savings, budgeting, financial planning, basics of banking and most significantly, about being "Financially Smart". Financial Literacy is considered important factor for promoting financial inclusion. Financial literacy is about enabling the commoner to know the varied needs and benefits of varied financial products and services provided by institutional players. During this paper, review of literature of monetary inclusion and financial literacy is provided. Various determinants of monetary literacy and its relationship with financial inclusion have also been reviewed and studied.

**Keywords:** *Financial inclusion; financial literacy; financial knowledge; financial behavior.*

## **1. INTRODUCTION**

With the help of inclusive finance, the rural population has made a significant contribution to

the overall economic development [1,2,3,4]. As a result, promoting access to financial services for all people will deeply connect them to the significant growth of the entire financial system

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[1,5,6]. The most important factor contributing to the rural population's financial exclusion is access to financial services. According to Chao et al. (2021), financial inclusion is inextricably linked to poverty reduction.

Financial exclusion is still a widespread issue. According to Findex data from 2014, 2 billion adults are unbanked; this figure fell to 1.7 billion in 2017, representing nearly 40% of adults worldwide [7,8]. Financial inclusion is one of the most pressing issues confronting the world's economies. The Reserve Bank of India (RBI) prioritizes it as well. Financial inclusion is commonly defined as enabling the delivery of bank services to the majority of disadvantaged and low-income groups at a cost that is affordable to them. Financial inclusion aims to provide financial services at an affordable price to all segments of society, including vulnerable segments such as low-income groups, weaker sections, slum dwellers, and other marginalised and disadvantaged people.

Financial illiteracy is a major impediment to the financial inclusion process [9-16]. Consumers are now required to specify a wide range of financial products and services. Financial literacy, specifically the importance and relevance of financial education about financial products, services, and activities [17,18] has played a critical role in assisting people in selecting appropriate financial products [19,20,21]. Financial literacy is inextricably linked to the development of every country's financial systems. It has dramatic implications for financial personal decision making [22-26] and economic development by increasing economic security and decreasing unemployment [27,28,29]. Financial education improves people's understanding of various financial products and concepts through various instructions, information, and advice to develop financial risk and opportunity recognition skills. Investors should improve their financial knowledge to improve portfolio performance because a person with a low level of knowledge of financial activities is more likely to make financial errors. Financial education entails financial planning, investing, and saving, with formal financial methods such as financial calculators, methods, and financial education-related seminars used to assist people in making sound financial decisions [30,31].

"In the Reserve Bank, we treat financial inclusion and financial literacy as twin pillars," says Dr. Subbarao, Governor of the Reserve Bank of

India. Financial literacy increases demand by educating people on what they can and should demand. Financial inclusion operates on the supply side, supplying what people demand in the financial market." Financial literacy promotes social inclusion and improves community well-being.

For the purpose of conducting review a set of articles for 28 years from 1993 to 2021 were identified and consulted using the keywords such as 'Financial Inclusion', 'Financial Inclusion-Importance and difficulties', 'Measurement of financial inclusion', 'Financial literacy and Its determinants', 'Relationship between Financial Inclusion and Financial literacy'. Furthermore, important financial Journals such as 'Journal of Financial Economics', 'Journal of Development Economics', 'Journal of Banking and Finance', 'Journal of Consumer Affairs', 'Journal of Financial Economic Policy', 'International Journal of Business and General Management' and book named 'Portfolios of the Poor' by Daryl Collins have been explored to gather the required literature regarding the research topic.

## 2. CONCEPT OF FINANCIAL INCLUSION

Reserve Bank of India described financial inclusion as a process of giving equal access to all the financial products and services that are needed by low income group people at reasonable cost in a fair manner by formal financial institutions.

Financial inclusion helps to develop the savings habit among rural people and thus plays very important role in socio-economic development of the economy. It also helps the unbanked people to bring into official banking sector by protecting their wealth and other financial assets.

Apart from the financial products, there are various financial services available to common man like loans, insurance facility, financial literacy and pension facility (Fig 1).

According to the census 2011, the nation's banking facilities are available to 58.7 percent of rural and urban people. As compared to the past census of 2001, there has been rise in availability of banking services. (Fig. 2).

Financial inclusion is considered as crucial channel to encourage growth and diminish poverty. At smaller level, this has been demonstrated by several studies that greater

financial inclusion helps to reduce poverty, boost employment and increase savings. At larger level, financial inclusion has favorable impact on the economy and strengthens financial stability. Many studies have been conducted to investigate the various factors influencing financial inclusion. Using the World Bank's global finindex database, [32] discovered that income disparities between 148 countries and individuals within these countries affect the level of financial

inclusion. Based on data from 123 countries, [33] found that education and income play the most important roles in determining bank account ownership and savings into these accounts. Based on data from India, [34] contend that women use fewer financial products than men. Other factors influencing financial inclusion include the development of a bank's network, marital status, a country's region, and socioeconomic factors [35,36].

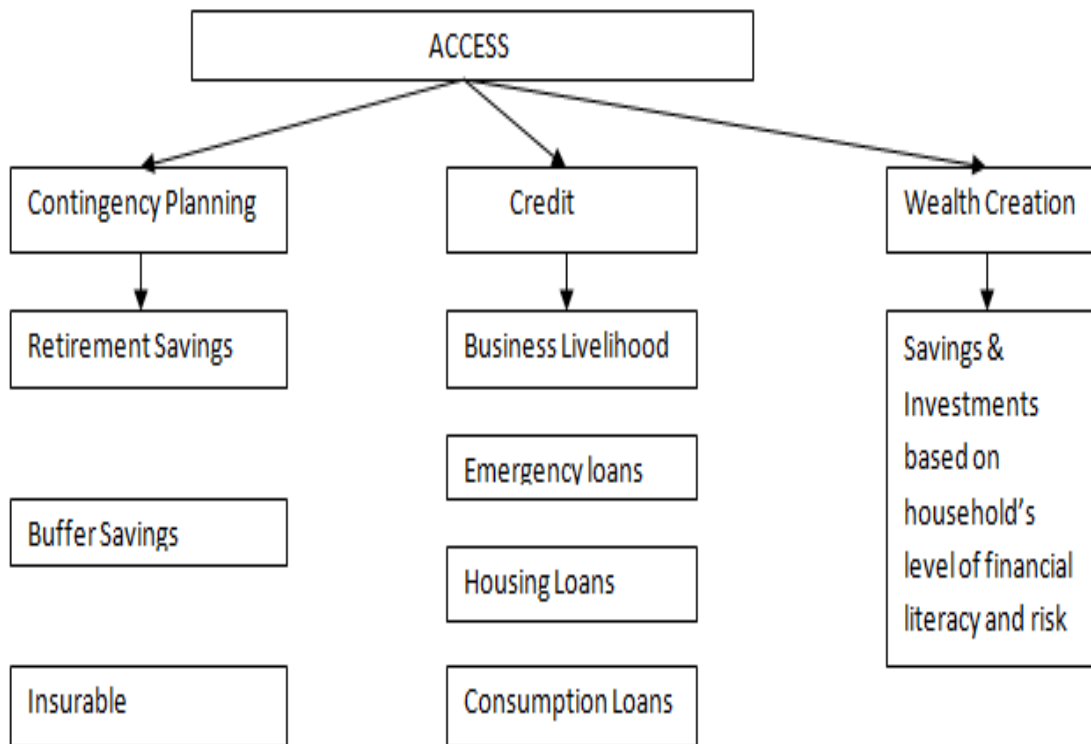


Fig. 1. Household access to financial services

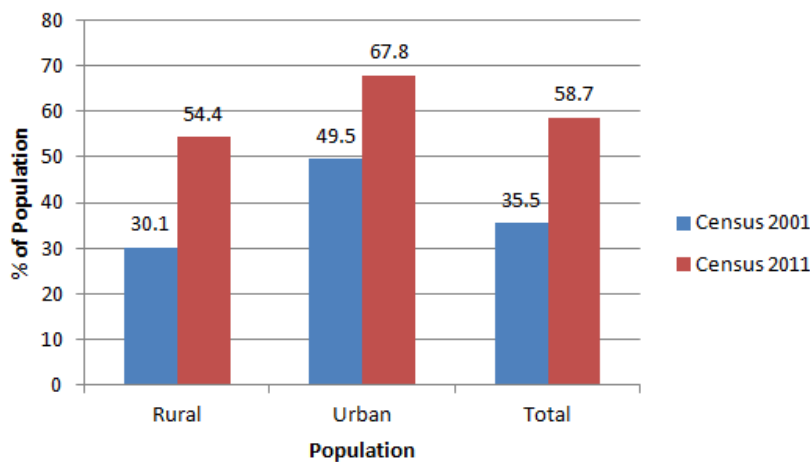


Fig. 2. Availability of banking services

### **3. FINANCIAL INCLUSION: ITS IMPORTANCE AND COMMON DIFFICULTIES**

The significance of financial inclusion stems from a variety of factors. For starters, a lack of access to financial services may force financially excluded institutions to deal primarily in cash. Second, individuals' motivation to save money decreases as a result of their inability to access formal saving channels. Their motivation to save may be reduced if they do not have access to safe and formal savings channels. In the absence of adequate savings, households may be forced to rely on outside sources of funds whenever a need arises. These sources are frequently unregulated and have high interest rates. Borrowers may be at risk of default due to the high interest rate. Third, a lack of credit products means that people are unable to invest and, as a result, improve their living conditions. Fourth, money transfers may become difficult due to a lack of remittance products, resulting in a high level of risk. Fifth, if the borrowers do not have insurance products, they will be unable to manage their own risk. If the general public has access to an organized financial system, they will be able to obtain standardized financial products from regulated institutions. Having savings products, insurance products, and credit purchases make financial planning easier. Consumption can be smoothed out over time with the help of saving products. Cash payments are much riskier than remittances. Not only is this to prevent theft, but it is also to have written proof of payment. Significantly, credit histories are established, allowing borrowers to borrow at more favourable terms in the future. With increasing computerization, most financial service providers rely on earlier databases to make offers rather than having personal interactions with customers. This place financially disadvantaged people at a significant disadvantage because they are hesitant to emphasize in such databases [37]. Financial inclusion is widely debated as having benefited the economy as a whole [38]. For starters, this could be a useful tool for reducing income inequality in the economy. People with low incomes are those who do not have access to financial services. Individuals will have a better chance of balancing their income levels once they have access to these services. Second, more financial resources are made available for transfer from lenders to borrowers. Third, greater financial stability may be expected if financial activity shifts from unregulated to regulated

institutions. Fourth, increased access to finance accelerates the formation of more start-up companies, which regularly contribute to risk-taking and job creation [39]. Because financial inclusion entails providing access to financial services, it is possible that it will contribute to the expansion of the financial system. A number of economists have investigated the relationship between financial advancement and growth. There is an argument that they are related, but there is disagreement on the direction of causality [40]. A number of pragmatic studies suggests that the development of the financial system stimulates economic growth [41,42,43]. A study that used data from 109 developing and developed countries revealed that the direction of causality was generally from financial development to economic growth [44]. A study was conducted that found that economic growth is likely to benefit the poorest members of society [45]. They conducted a study of 72 developed and developing countries from 1960 to 2005 and discovered a positive relationship between financial depth [as measured by the ratio of private sector credit to GDP] and the change in the share of the lowest quintile in total national income. Other researchers also obtained similar results [46]. As the result of specific rule, during the period 1977 to 1990, they examined the impact of expansion of rural bank branches in India. According to this rule, it was observed that only one branch can be opened in one area with other branches working in area. This is only possible if it also opens branches in four other areas where there are no bank branches. As a result, there has been a significant reduction in rural poverty and an increase in non-agricultural output. Measuring financial inclusion has become difficult due to individuals' voluntary and involuntary exclusion. Individuals who have the ability to use financial services but choose not to do so are referred to as voluntary exclusions. This segment of the population must be separated when assessing financial exclusion. A household survey may be the best way to obtain such information, but there are very few surveys on the use of financial services available. As a result, researchers primarily employ a variety of measures to assess the use of financial services. One such metric is the number of credit and deposit accounts held by individuals. This data shows a lot of variation between countries. Poor people are better able to use these accounts in high-income countries. Another intermediary measure is number of bank branches. This factor also provides signal of distance from household to bank. Both the parameters mentioned above

provide little information on scope of financial system. The researcher has also collected the data from 160 countries in order to measure the access to financial services [47]. This data set uses the regression model by taking the data from household surveys and regulators. The results show a wide range of access to financial services across countries, ranging from 100% in the Netherlands to 5% in Nigeria and Tanzania. In India, this figure is 48%. This indicates that steps must be taken to promote financial inclusion.

#### 4. FINANCIAL INCLUSION BARRIERS

According to other authors, over 250 financial diaries of the poor have been discovered in India, Bangladesh, and South Africa [48]. This demonstrates that every individual uses financial instruments such as interest-free loans and informal savings during the course of a year. The use of these instruments resulted in a cash turnover that was greater than the individuals' net income. As a result of various barriers, the poor society does not have access to these financial services.

There are numerous other factors that act as impediments to achieving financial inclusion. In the United Kingdom, the Financial Inclusion Task Force differentiated between demand and supply side factors of financial exclusion in its action plan for 2008-2011. Demand side factors include respondents' gender, age group, financial literacy, income level, occupation type, and Financial Capability. Understanding of financial concepts is referred to as financial literacy. Financial capability consists of knowing how to best manage money, being willing to put that knowledge into practice, and having the means to do so. Long documentation, branch timings, distance from branch, and so on are all supply side factors.

##### 4.1 Factors Related to Supply

On the supply side, appropriate financial products are not available to the individuals which act barrier. Also, the various rules and regulations of financial products terms are not according to low income people. Minimum balance is necessary in order to open accounts which are considered as very high amount by some individuals. Sometimes banks close the accounts due to infrequently use by individuals. In the UK framework, a lot of research has been conducted on financial inclusion. This stated the

fact that overdrawing on current accounts of individuals lead to account closure [49].

Another prevalent barrier to financial inclusion is the physical distance from house to automated teller machine (ATM) or bank branch. Low income people are not able to present proofs to formal financial institutions at the time of availing various financial products. Banks also conduct various identity checks of the customers before opening accounts. Such types of regulations usually result in lack of access to various financial services. So, this is also referred as big obstacle.

##### 4.2 Factors Related to Demand

One demand side factor of financial inclusion is financial literacy. It is the ability to understand and effectively make use of various financial skills including how to manage the available finance, making budgets for the same and then investing. Financial capability is another demand-side factor. This is also significant because the complexity of financial products is increasing in this world. Financial capability is required throughout people's lives as financial markets and personal circumstances change [50]. Other demand side factors include psychological and cultural barriers caused by bank mistrust. This could be because of negative experiences or images that people have. As a result, all of these factors contribute to self-exclusion from institutional financial services.

#### 5. THE SCALE OF FINANCIAL INCLUSION

Financial inclusion can be viewed through different lenses such as Access, Quality, Usage and Welfare. Financial inclusion can be measured by identifying the relevant key financial inclusion indicators of access, usage, quality and welfare and by taking stock of current available data both on the supply and the demand side and assess the adequacy of the data for development of a financial inclusion data set. The status of financial inclusion in India's seven northeastern states is also measured [51]. This is followed by an analysis of the RBI's financial inclusion policy, which provides indications and implications for future actions that the country's apex bank can take. The focus should be on the majority who are excluded to include them in the formal financial sector. An index was also developed for insurance inclusion

for India and her states rank the states according to insurance inclusion index, and compare the insurance inclusion index with the latest financial inclusion index for Indian states [52]. The level of financial inclusion was analyzed in three countries Bangladesh, India and South Africa. The findings conclude that the rural households of all the three countries are using interest free loans and informal saving club, thereby it is clear that they are in need of money and it has to be provided by the financial institutions in a formal way. A financial inclusion index is created to measure and compare various levels of financial inclusion in and across economies at a given time [53]. The authors also present the usage of the index and conclude that it can be used to monitor and verify the policies initiated for financial inclusion and it can be used across boundaries. Based on the four lenses Access, Quality, Usage data were collected on both demand and supply side of financial services by the [54] to empirically analyze the financial exclusion of people in Sub-Saharan Africa with special reference to Franc Zone. They suggest that the regulation and supervision of banks should be strengthened to attain stable economic development. Various analyses have been carried out and various suggestions have been given by the writers to uplift the weaker sections of the society. Author suggested some policies to enhance the financial capability of the country through financial inclusion through evaluation of existing policies of the country and by analyzing the data of under banked and unbanked households [55]. Other researcher identify various aspects of financial inclusion by developing an axiomatic measures of financial inclusion and by examining the supply side data on banking services and also by examining the effects of major banking policies on financial inclusion across states in India during 1972-2009, using panel data econometrics techniques [56]. Geographic penetration of banks and credit availability were suggested as two targets to foster financial inclusion in India [57]. Researchers also analyze 16 Indian states by developing an index for financial inclusion by considering various indicators such as number of rural offices, amount of rural deposits [105]. The state of West Bengal was analyzed by taking in to consideration three parameters, branch, credit and deposit penetration in particular [59]. It is an innovative empirical paper on underpinned population and he states that 38% of the respondents are not able to get sufficient income to open an account. The dominant role of moneylenders is the source of finance in rural

areas is the compulsion of policy measures for 100% financial inclusion. The goal of financial inclusion is to broaden the scope of the organized financial system's activities to include people with low incomes and those who are inaccessible through the formal financial system, making them partners in the country's economic growth [60]. There are many more difficulties faced by the banks to create a 'financial climate' in the rural areas. Integrating the people who are excluded financially in to the economy and active collaboration for the development of the country can be achieved by well functioning financial system. The active financial system to all the people in the country eradicates the information and transaction cost and reduces the long run development rates [61]. The financial inclusion – A road ahead of financial stability of the country has gained momentum in the recent scenario. It has to go a long way both in urban as well as rural population [62]. The expansion of banking in rural areas lowered poverty and magnified the non-agricultural employment. The committees were framed by many countries and it has assumed greater significance in recent years [63].

## 6. MEASUREMENT OF FINANCIAL INCLUSION

Financial inclusion can be viewed via four lenses, according to [64,65] in order of complexity. To begin, there is access, which refers to the availability of various financial products and services to customers from legitimate financial institutions. Second, quality relates to how well the available items and services meet the needs of the clients. Third, utilisation is a metric that evaluates how customers utilise financial services over time, such as the frequency and duration with which they use that financial product or service, such as average saving balances or number of transactions per account (Figure 3). So, different indicators have been used in order to measure the extent of financial inclusion. These indicators include Geographic branch penetration, Geographic ATM penetration, bank accounts per adult, Demographic branch penetration, Demographic ATM penetration, Demographic loan penetration, demographic deposit penetration, Loan-income ratio, Deposit-income ratio and Cash-Deposit Ratio [21].

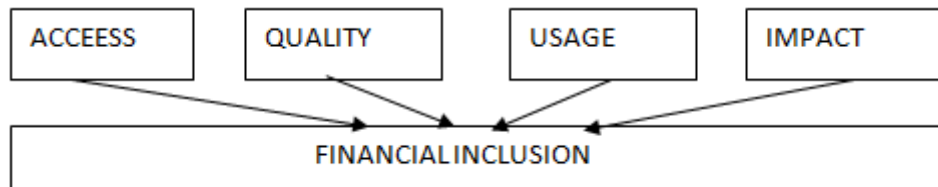
There are some indicators that provide only incomplete information on inclusiveness of financial system of the economy [59]. However,

several metrics, when taken in isolation, provide only a limited picture of an economy's financial system's inclusivity. The Index of Financial Inclusion must meet the following criteria. (i) It should include details on all areas of inclusion. (ii) It should be straightforward and straightforward to calculate. (iii) It must be comparative across countries or states.

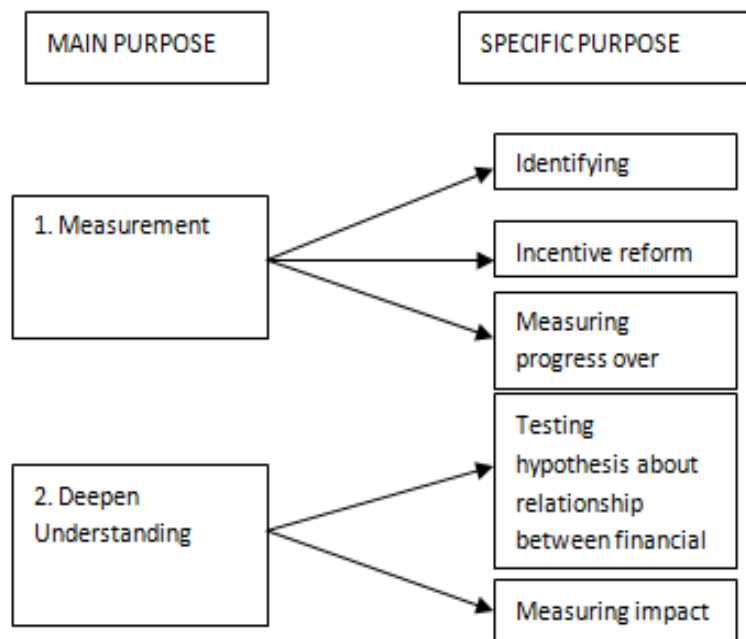
Measurement of financial inclusion leads to the achievement of two primary goals: first, measuring and observing the levels of financial inclusion, and second, expanding understanding of the elements that correlate with financial inclusion and, as a result, the effect of various policies [64]. These two primary goals can be subdivided further into more fundamental levels. This measurement data can be used to calculate the number of people who have access to various financial products or services, as well as the features of those products or services. If the

same data is collected repeatedly, it can be used to track progress over time (Fig. 4).

Author asserts that merely having the financial product or services does not lead to achievement of financial inclusion but it is about the usage of that financial product or service which leads to self-reliance and growth [65]. This automatically results in achieving financial inclusion. For example, if an individual opens bank account then this can be treated as indicator of financial inclusion. However, the use of a bank account in terms of the volume of transactions made and the interaction between an individual and a formal financial institution is the best indicator of financial inclusion. When measuring financial inclusion, the quality of financial products and services should also be considered. Because low-income groups are forced to rely on underperforming institutions, which are in turn reliant on government subsidies.



**Fig. 3. Four lenses of financial inclusion**



**Fig. 4. Two primary goals for measuring financial inclusion**

**Table 1. Schemes launched by the government of India**

<b>Scheme</b>	<b>Details and benefits</b>	<b>Eligibility</b>
PMJDY launched in 2014	<ul style="list-style-type: none"> <li>Accidental insurance cover of Rs. 0.2 million</li> <li>Life cover of Rs. 30000</li> <li>Overdraft facility upto Rs. 10000 to preferably lady of household</li> <li>RuPay ATM-cum-Debit Card</li> </ul>	<ul style="list-style-type: none"> <li>All citizen of India with valid proofs</li> <li>Preference is given to female of household</li> </ul>
PMJJBY Launched in 2015	<ul style="list-style-type: none"> <li>Pay premium is Rs.330 per annum</li> <li>The risk coverage under this scheme is Rs0.2 million in the event of death.</li> </ul>	<ul style="list-style-type: none"> <li>People between the ages of 18 and 50</li> <li>Having a PMJDY bank account</li> </ul>
PMSBY launched in 2015	<ul style="list-style-type: none"> <li>Pay premium of Rs. 12 per annum</li> <li>Risk coverage under this scheme is for Rs0.2 million for accidental death and full disability and Rs.0.1 million for partial disability</li> </ul>	<ul style="list-style-type: none"> <li>People between the ages of 18 and 70 who have a PMJDY bank account</li> </ul>
APY launched in 2015	<ul style="list-style-type: none"> <li>Fixed pension for subscribers ranging between Rs. 1000 to Rs. 5000</li> </ul>	<ul style="list-style-type: none"> <li>Minimum age of joining APY is 18 years and maximum age is 40 years</li> <li>Having bank account under PMJDY</li> </ul>

Source: *Financialservices.gov.in*

## 7. FINANCIAL INCLUSION IN INDIA

Financial inclusion means bringing the weaker section of the people in the financial sector so that they can have access to various financial products or services [67]. When large section of people has access to all financial products or services then it will lead to economic growth and employment opportunities. Financial inclusion entails having access to various banking services and all financial products required by low-income individuals and vulnerable groups at a low cost in a fair and transparent manner by various institutional professionals (RBI,2015). Financial exclusion is a significant issue in both developing and developed countries [68]. Even if the economy's financial system is fully upgraded, it has not resulted in complete financial inclusion in many countries [67]. Despite an increase in the number of bank accounts and bank branches in urban, semi-urban, and metropolitan areas, a large portion of India's population still lacks access to various financial products and services [69,70,71]. Government of India has taken many steps to overcome this issue. Pradhan mantri jan dhan Yojana scheme has been launched in 2014 for 20-65 age groups. Under this scheme, various services like insurance, banking and pension have been awarded to lower and middle income people at fair cost. These plans were created specifically for women's financial security

(Table1). These programmes have been formalized in order to help the economy grow and meet various development objectives.

## 8. CHALLENGES FOR SOLVING FINANCIAL INCLUSION IN INDIA

Another significant challenge is geographical access to various financial institutions [72]. However, there is vast population in the country. In the rural regions, people don't have access to these institutions due to the poor infrastructure and large distances. Only five percent of rural people can have access to the commercial bank branch within their region. According to survey, there are only 23% of rural population that make periodic use of ATMs [73]. This situation prevails mostly in all the Indian states where physical access is a major challenge [74].

The next major challenge is cost. Financial services are used only by a section of the population. Excluded people like rural and poor people don't have access to these financial products due to its heavy cost. Rural people have to meet their needs with less than \$1 USD per day. So, even a small amount has considerable impact on finances of the household. Even for low value transactions they can't go to the banks due to high transaction costs and heavy interest rates [75]. As a result,



even if people who are financially excluded are aware of and can access financial products, they may not be able to afford them.

Another challenge is related to the inadequacy of the financial products and services. Sometimes rural people may not be eligible for some financial products like formal loans. In order to obtain these loans, they have to open the bank accounts for which they require various proofs regarding person's identity, income, birth certificates etc. but poor people generally lack these documents. So they mainly rely on the informal sector (moneylenders etc.) for availing finance at cheap rates. As a result, financially disadvantaged people may be wary of formal products [76]. The majority of products available may fall short of meeting the expectations of financially disadvantaged people [61].

The next challenge is one of financial literacy. Financial literacy is extremely low in rural India. According to the NAFIS survey, only 11% of respondents have sound financial knowledge and engage in positive financial behaviour [73]. The majority of rural residents are unaware of the various financial products and services available to them, as well as their benefits [61]. Even if people are aware of financial products, their lack of financial literacy leads to confusion about loan terms and interest rates [76].

## **9. INITIATIVES TAKEN FOR FINANCIAL INCLUSION**

The issue of financial inclusion has become pivot for the Indian government. According to [76] the government has taken the initiative to launch the scheme of Jan Dhan Yojana in order to tackle the challenge. This involves providing access to various financial products/services to every citizen in India. Under this scheme one basic saving bank account is opened for every unbanked person. There is no requirement to maintain minimum balance in these accounts. Other facilities like remittance, credit, insurance and pension are also available at affordable cost. Moreover customers need not provide any identity proof in order to open these accounts. Under this scheme accident insurance coverage of Rs. 1 lakh is available to all the account holders. Insurance coverage has been increased to Rs.2 lakh to new account holders opened after august 28, 2018. Also, life insurance coverage of Rs.30000 is also available to all those account holders who have opened their account between august 15, 2014 to January 31, 2015.

Micro finance is also the other successful initiative that has been taken by the government. Since 1990, in order to tackle the challenge 3, Indian government has promoted the microfinance institutions by providing small credit. Under this, borrower's personal savings, guarantees and credit histories are not required to provide credit. Microfinance Institutions prosper as the self-employment rate of low-income women rises [77]. These institutions have also contributed to the abolition of financial inclusion in China [78].

Despite all efforts, the problem of financial exclusion persists. Despite the fact that many new bank accounts have been opened, the vast majority of them remain inactive [76]. Rural people remain restricted due to the various issues such as access, cost and literacy [79]. The efforts taken for increasing access are nearly insufficient because only 5 percent of rural people have access to commercial bank branches [72]. The possible solution to this issue i.e. Mobile banking is rarely being adopted by the individuals. Only 1.4 percent of households have access to the mobile banking [73]. These bank driven factors has not led to any major improvements to increase the financial inclusion [80]. Furthermore, microcredit remains insufficient and expensive, with interest rates ranging from 15% to 30% being the criterion [81]. In order to fulfill the objective of financial inclusion, other solutions are also required.

## **10. FINANCIAL LITERACY**

Financial literacy is the understanding of various principles and concepts required for successfully managing personal finance issues [82]. Others investigated personal financial knowledge as well as various theories for managing funds and information [83]. They interpreted the term knowledge to mean being aware of various practises, conditions, norms, and rules that are required for carrying out one's financial responsibilities. The term financial refers to all routine activities involving the acquisition and use of funds. This includes activities such as budgeting, credit card control, purchasing insurance, and investing. Financial literacy is defined as a person's ability to comprehend and apply various financial concepts [84]. Financial literacy is the about having awareness of the various financial instruments available in the market and their application in personal and professional life [85]. In general, the above definitions show that financial literacy includes

the ability to prepare a budget, save for the future, balance a bank account, and understand various debt management strategies. Financial literacy is about making effective decisions by using the combination of several skills, resources and knowledge to process the information [84].

Higher level of financial literacy has favorable impact on people's business and personal life [86]. The knowledge of finance helps in reducing psychological and social constrains. This increased financial literacy thus strengthens the welfare of the family in the personal life. Financial knowledge lowers the financial disputes, illness, stress, abuse of the children and conflicts among the families. People who are grown up in families that have higher financial knowledge and well being are less pessimistic, show less anti-social and aggressive behavior and have high morale. In the business life, the individuals who have higher financial literacy have higher efficiency. This leads to the higher productivity and the employees will better understand the various incentives that are being given by the companies and thus improve their satisfaction with the work life [87]. Employees with good financial education have lower absenteeism, which helps employers retain valuable employees [88]. Having a higher level of financial literacy reduces emotional stress and nervousness at work [89]. In their study, they reveal that organizations take various initiatives to increase financial knowledge, such as strengthening their manpower and promoting their employees' personal and private lives [90].

### 10.1 Determinants of Financial Literacy

Various factors like socio-economic status and lifestyle have also affected the financial literacy [91]. Financial Services Authority in 2014 has depicted that those who have completed their graduation from the universities have achieved the higher financial literacy score. This score has reached to 56.4%. Following that, individuals who have graduated from high schools have 35.7 percent financial literacy, whereas those who have graduated from primary schools have only 24.6 percent financial literacy. Others who have never attended school have only 16.3 percent financial literacy. This demonstrates that if a person has higher level of education, then he/she will have higher financial literacy level. The other aspect that affects the financial literacy is income. The individuals who possess higher income, they will have higher financial literacy level. Families with a higher income use a variety

of financial products such as insurance, real estate, deposits, and so on. People with low income levels, on the other hand, tend to remain financially illiterate by using few financial products. This is due to their inability to invest in other financial products due to their low income. Financial literacy is also affected by the type of the job that an individual have. For example, an individual who is working in an organization on higher level, that individual will have high experience and income that he/she will use to make investment in various financial products. Consequently, this will lead to have higher financial literacy level [92].

Other research has discovered that gender influences financial literacy [93,94,95,20,96, 97,98]. Women in Japan have lower levels of financial literacy, according to [93,94]. As compared to the men, women scored equivalently for general financial literacy questions but their score remained lower when they were asked their attitude towards risk and diversification against various financial products.

Financial literacy has numerous models that are suggested by [99,100]. Financial literacy is also affected by changes in the life cycle of the people. Consequently, age is considered as crucial factor for acquisition of financial literacy. People always learn from their mistakes [101,102] and they become more knowledgeable over time. Researchers proposed a theoretical framework in which financial literacy is represented by a hump-shaped life cycle [100,23]. A nonlinear relationship between financial literacy and age has also been demonstrated in other studies [103,104]. An initial increase in financial literacy may result from experience, while a subsequent decrease in financial literacy may result from a decline in cognitive abilities [105]. People's and their spouses' educational levels have a positive impact on financial literacy. Because those with a higher level of education have more opportunities. They can take more money management courses, which will result in a higher level of financial literacy [31,23]. Psychological theories could help to explain the relationship between education and financial literacy [104,106]. There is evidence that selecting a financial planning curriculum can positively affect students' financial literacy levels [107]. Experimental research shows that people learn primarily from their surroundings, most notably their parents [108]. Individuals can also learn about money management from their

educated parents and spouses who have a higher level of financial literacy.

Previous research has also shown that financial assets and household income are related to financial literacy [31,92]. Monetary factors also create a link between financial assets and income. People with a higher income and financial assets must understand how they can use their money to increase their future benefits. As a result of higher income and more assets, we concluded that respondents have a higher level of financial literacy.

Previous research has also suggested that financial knowledge leads to financial satisfaction. This implies that greater financial literacy leads to greater financial satisfaction [109,110]. Financial satisfaction can be used to predict financial literacy in the United States [111]. Difficulty in making monthly payments and present financial situation can be utilized as the measures of financial satisfaction. Financial satisfaction can be measured by judging the responses of participants to the question: 'Are you satisfied with your current financial?' this approach was used according to [112] and processes of measurement by [111, 110].

## **11. RELATIONSHIP BETWEEN FINANCIAL LITERACY AND FINANCIAL INCLUSION**

The Reserve Bank of India regards Financial Inclusion and Financial Literacy as twin pillars, with financial inclusion acting on the supply side, i.e. creating access, and financial literacy acting on the demand side, i.e. creating demand for financial products and services. It is regarded as a critical factor in promoting financial inclusion and fostering economies for inclusive growth.

Financial inclusion necessitates financial literacy. Financial Inclusion is a goal that must be achieved, but Financial Literacy is the first step. It is intended to be a valuable tool for promoting financial inclusion, financial development, and, ultimately, financial stability. As a result, financial literacy has a clear positive impact on financial inclusion. If the critical socioeconomic goal of financial inclusion is to be met in India, financial literacy must go hand in hand.

Financial literacy improved Ghanaian businesses' access to finance, which improved firm growth [113]. Author used promotional statements like "Today, it is coming to your TV"

to promote financial literacy; your bank will send 31 text messages reminding you to save; local newspapers run weekly financial advice columns; and governments are mandating that financial institutions publish transparent product prices [114].

Another author observed the level of financial literacy among rural households in Krishna district and the penetration of banking facilities in the selected 25 mandals and documented that without enough financial literacy, people are at risk of making poor financial decisions because financial literacy and inclusion are twin pillars for overall financial stability and well-being [115].

Researcher conducted the study "Does financial literacy improve financial education?" "Cross-country evidence" sought to investigate the relationship between financial literacy and financial inclusion using data from the Bank of England's Findex on access to and use of financial services. The study found a heterogeneous effect on financial literacy, indicating that the effect of financial literacy on financial inclusion is marginal in countries with low per capita income, a less developed financial sector, and a small number of bank branches [10].

Researchers discovered a solid correlation between daily financial management skills and financial literacy [116]. Various researches discovered that financially literate individuals mostly collect large sum of money by participating in formal financial institutions and other financial markets [117,20,118]. The people who are aware of various financial products that are available for retirement also accumulate more wealth [89]. A number of countries have achieved these outcomes [119].

Various studies in developing countries have used survey data or randomized controlled trials to identify the role of financial literacy on financial inclusion and saving decisions. It was also discovered that financial literacy has a positive effect on the use of various financial services using cross-country data from the S&P Global finlit survey [10]. They also discovered that financial literacy has a positive impact across a wide range of income levels and subgroups within countries. Financial literacy in both formal and informal financial institutions has a significant impact on savings patterns [120]. They used survey data from over 22000 Nigerian respondents. They discovered that financial

literacy has a positive effect on saving behaviour and financial inclusion in Vietnam and Cambodia [119]. Randomized control trials have also shown that participation in financial markets and the use of formal sources of borrowing have a positive impact on financial literacy in developing countries [82]. Voluntary savings [122], asset diversification [123] and good financial product selection all have a positive impact on financial literacy [114].

Another author described the financial literacy as awareness of various financial products and services that are available in the market while financial inclusion provides the access of these products to an individual at an affordable rate [124]. This study is also supported by studies of [125] and other studies. Financial literacy enables the people to make effective utilization of financial products/services [126]. The studies have also depicted that the people who have sound knowledge about financial products mostly participate in financial markets [117, 127, 20, 128, 129, 130]. Access to financial services increased due to the improved financial literacy levels [131]. So, financial literacy can certainly be perceived as permissive factor that brings into light core measures of financial inclusion [132].

## 12. CONCLUSION

This study concludes that knowledge about financial services is one of the most influential forces in promoting inclusive finance after investigating the research findings. It also makes an important contribution to the development of financial communication skills among rural and low-income people. The proper understanding of various financial services has a significant impact on access to financial opportunities, particularly the expansion of the use of other financial services. Rural people are only familiar with a small number of banking services and activities; as a result, they are still restricted to these services. Most people believe that banks' only activities are deposits and withdrawals. This is why they avoid using other financial services.

Financial literacy is an essential component of financial inclusion and a prerequisite for bringing a large proportion of the excluded population into the financial sector. It guides people how to make better financial decisions, manage risk, and understand and manage their rights and responsibilities as financial product consumers. Financial literacy provides greater control over one's financial future, more effective use of

financial products and services and less vulnerability to fraudulent schemes. This study also concludes that a variety of factors, including income, education, job type, gender, age, and so on, have an impact on financial literacy. Obtaining financial access also presents a number of challenges. There are a number of challenges, including geographical access to various financial institutions, high transaction costs, documentation, and financial literacy. Several initiatives have been launched to address these issues. The government has launched the 'Pradhan Mantri Jan Dhan Yojana' scheme to provide equal access to all banking facilities such as credit, pension, and insurance. This has aided in narrowing the supply-demand gap for various financial products and services.

In the last ten years, there has been a significant shift toward overcoming financial exclusion. Initiatives and pilot programmes have been launched to put the policies into action. But still a lot of has to be done. It is critical not only to have access to these financial services, but also to actively use them.

## ACKNOWLEDGEMENT

This work was supported by the Indian Council of Social Science Research (ICSSR) for providing full-term centrally administered doctoral fellowship via file no. RFD/2019-20/GEN/MGT/61.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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