An Empirical Assessment of Mediating Role of Financial Self Efficacy on Financial Literacy and Financial Inclusion in Pakistan

Nimra Noor¹, Irem Batool², Hafeez Ur Rehman³*

¹Banking Service Officer at Allied Bank Limited Grain Market, Sahiwal Campus
²Associate Professor of Economics, Department of Economics and Statistics, University of Management and Technology, Lahore
³Professor, Department of Economics and Statistics, University of Management and Technology, Lahore.
*Corresponding Author’s Email: hafeez.rehman@umt.edu.pk

ARTICLE DETAILS

**ABSTRACT**

Financial inclusion refers to having an account in a recognized financial organization that enables people to formally save, borrow cash, and have insurance and use payment services. The study revealed that financial account ownership is just a nominal form of financial inclusion as people own the financial accounts just to keep their money safe (as in lockers) and to withdraw their salaries in the financial accounts. While the real financial inclusion is a much deeper concept that depends upon the users’ actual ease of access to the financial institution, the active utilization of various financial products (like saving accounts, loans and credits, insurance and remittances services, etc.) of the financial system and the user’s acquired satisfaction level by using the financial products and services. The study used this approach and measured the financial inclusion of individuals based on their real experiences in terms of access, usage and satisfaction level derived from financial institutions using their financial products and services. The target population of the study is the adult population aged above 20 years, having a financial account in district Sahiwal. The study used the self-administered questionnaire-based survey and collected the responses on individuals’ socio-demographic characteristics, financial inclusion, financial literacy and financial self-efficacy. Further, a study linked financial inclusion with the individual’s financial literacy and financial self-efficacy levels. Estimated results prove that financial literacy has a positive and significant impact on financial inclusion. Besides, it is also proved that an individual’s financial self-efficacy level serves as a mediator and further strengthens the individual ability to acquire, use more confidently and get economic benefits from financial accounts.

**Keywords:** Financial Literacy, Financial Self-Efficacy, Financial Inclusion, Pakistan.

© 2021 The Authors, Published by WUM. This is an Open Access Article under the Creative Common Attribution Non-Commercial 4.0
1. Introduction

Inclusive economic growth has become an important concern for developing country as it focuses on providing equal economic opportunities to people, especially those belonging to low income spectrum of the society, and involve them in the economic growth process (Beck, Demirguc-Kunt, Honohan, Demirgüç-Kunt, & Honohan, 2009; Helms, 2006; Ranieri & Ramos, 2013). It assists the people to escape from their poorness, and develop equality and the possibility of being employed by enabling them to borrow and invest in financial products or services (Beck, Demirguc-Kunt, & Levine, 2004). It empowers poor people to save themselves from economic shocks and improve their welfare as well as economic welfare (Park & Mercado, 2016). It ensures the long-term perspective of providing productive employment and makes efforts to include excluded people in the inclusive system.

Financial inclusion refers to having an account in a recognized financial organization that enables people formally to save, borrow loans, and avail of insurance schemes and payment services (Zins & Weill, 2016). Globally, about 1.7 billion adults i.e., 69 percent of the adult population do not own a financial account at a financial institution, and they neither use the financial services through a mobile money provider. The majority of the unbanked population lives in developing countries, and nearly half of them live in just seven countries i.e., Bangladesh, China, India, Indonesia, Mexico, Nigeria, and Pakistan. There is also wide variation in account ownership among individual economies. The unbanked adults reported many reasons (voluntary as well as involuntary) behind their exclusion from banks worldwide and in South Asia and East Asia (Demirguc-kunt, A., and Klapper, Demirguc-Kunt, & Klapper, 2012; en et al., 2012).

Table 1: Barriers to Financial Inclusion Worldwide

| Barriers                      | South Asia (%) | East Asia (%) | World (%) |
|-------------------------------|----------------|---------------|-----------|
| **Involuntary Reasons**       |                |               |           |
| Too Far away                  | 22             | 20            | 20        |
| Too Expensive                 | 23             | 18            | 25        |
| Documentation requirements    | 16             | 14            | 18        |
| Trust and confidence          | 9              | 6             | 13        |
| **Voluntary Reasons**         |                |               |           |
| Inadequate Money              | 65             | 64            | 65        |
| The family already has an account | 34             | 24            | 23        |
| Religious Reasons             | 8              | 1             | 5         |

Source: Global Findex Database 2017.

These factors can be country level factors or individual level factors such as national income level, adult population size, female participation in financial activities and literacy rate (Demirgüç-Kunt & Klapper, 2013). Women are also over-represented among the unbanked in
most economies. This is true even in economies that have successfully increased account ownership and have a relatively small share of adults who are unbanked.

According to a World Bank report (2015), South Asia has a very low level of financial inclusion (46%) as compared to East Asia & Pacific (69%). If we look at the South Asian regional statistics, we found that people complain about the lack of access, high cost, strict documentation requirements and lack of trust in financial institutions (Global Findex database 2017).

| Financial Inclusion (%) | Pakistan | Bangladesh | India | Sri Lanka | South Asia | Developing countries |
|-------------------------|----------|------------|-------|-----------|------------|----------------------|
| Account                 | 21       | 51         | 80    | 74        | 70         | 61                   |
| Financial Institution   | 18       | 41         | 83    | 74        | 73         | 65                   |
| Mobile Account          | 7        | 21         | 2     | 2         |            |                      |
| Saved at a financial    | 6        | 10         | 21    | 29        | 17         | 21                   |
| Borrow from a financial | 2        | 9          | 7     | 15        | 7          | 9                    |

Among South Asian countries; Pakistan has a low level of financial inclusion (18%) as compared to Sri Lanka (74%), India (80%) and Bangladesh (51%). Global Findex Statistics 2017 revealed that Pakistan is at the top of the list where people report that lack of insufficient funds, heavy documentation, lack of trust, lack of access, religion, and high cost are the main hurdles to having the financial accounts (See Figure 1).

![Figure 1: Barriers to Financial Inclusion in Pakistan (Global Findex Statistics 2017)](image)

### Financial Inclusion in Pakistan

The most dominant cause of remaining unbanked in Pakistan's economy is its gender biases. It is an astonishing and alarming fact that in Pakistan only 7% of females have an account or a financial account, which is far below among the nearby south Asian economies like India (77%), Sri Lanka (73%) and among the developing economies (59%) and even below Bangladesh i.e., have 36% of females account ownership.
Also, adult population size within an economy matters a lot for variation in financial inclusion across economies. Pakistan has a low financial inclusion as its adult population size (age 15+ years) is 120.5 million as compared to 887.9 million in India (Demirguc-Kunt, Klapper, Singer, & Oudheusden, 2015; World Bank, 2015). Another major reason is that people do not have enough money to have financial accounts. It may be true as Pakistan’s gross national income per capita is relatively low (i.e., $ 1530) among the South Asian economies (Sri Lanka; $ 3170’s; India, $ 2130 and Bangla Desh, $1940). The individuals having less financial education and lack of confidence also demonstrate a lack of confidence in financial institutions. In Pakistan, nearly 26 percent of adults are literate about financial concepts and services as compared to 35 percent of adults in Sri Lanka, 24 percent of adults in India, and 19 percent of adults in Bangladesh (Klapper, Lusardi, & Van Oudheusden, 2015). Nenova (2009) observed that within Pakistan, approximately 53.8 percent of the individuals consider low income and heavy documentation as the main hurdle to unbanked, while 50.7 percent of people think that the personal reasons are the reasons of remain unbanked. On average, about 42% of Pakistani adults are voluntarily unbanked due to a lack of awareness, understanding, income and religious reasons (Nenova, Niang, & Ahmad, 2009). The other most common barriers from the supply side are legal and bank regulations, weak financial infrastructure, weak and unhealthy competitive environment, gender biases inadequate financial products that best suit the customers’ needs.

The Global Findex database shows that financial account ownership is increased over years, as 69 percent of the world population has opened up financial accounts in the year 2017, from 62 percent in 2014 and 51 percent in 2011. And this is all made possible because of the governments and institutional targeted efforts to engage the people in the financial system. In Pakistan, the State Bank of Pakistan (SBP) also has implemented many reforms such as granting licenses to new private banks, upgrading the governance and regulations of the banking system, developing incentives for the promotion of the microfinance segment and allowing autonomy to insurance firms to promote financial inclusion in Pakistan. Besides, in the year 2008 SBP authorities coordinated with other countries such as the UK and develop the Department for International Development (DFID) program and Financial Inclusion Program (FIP) to promote microfinance, remittances, and Islamic banking, agriculture finance and insurance in every region of Pakistan. In addition, Pakistan’s government also started government personal payment programs such as social cash transfers, government salaries and government pensions to provide financial products to a large number of people by financial providers. The two largest social cash transmission schemes, for example; Benazir Income Support Program (BISP) and Citizen Damage Compensation Program (CDCP) are also implemented that focus on women, low-income and marginalized people. Although, these programs have promoted financial inclusion by increasing people’s short term and long term incomes and supporting the living conditions as well as education of their children to some extent. However, financial exclusion is still dominant in Pakistan which is about 56-53% (Demirguc-Kunt, Klapper, Oudheusden, & Singer, 2015).

Among the demand side factors, an individual’s ability to acquire and use financial products has now become the most important barrier to financial inclusion in low middle economies, because a large number of people do not have enough capability to effectively understand and utilize financial products to have smooth consumption patterns over their lifetime, manage financial risks, and make optimal choices for financial products (Miller, Godfrey, Levesque, & Stark, 2009).
Additionally, the financial sector of a developing economy such as Pakistan is becoming complex day by day due to the entrance of new suppliers, development of new financial products and services, foreign direct investment (FDI) and involvement of new customers in the market (Cohen & Nelson, 2011), therefore the individual's abilities such as financial knowledge, financial self-efficacy became important to actively participate, evaluate and use the financial products that best suit their needs (Bank, 2013; Lusardi, 2008). Accordingly, financial self-efficacy (FSE) means the confidence level that an individual has in his ability to undertake financial management, deal with the financial situation, and access and use financial products or services (Amatucci & Crawley, 2011; Ghosh & Vinod, 2017). Given this scenario, It is important to study the extent to which an individual’s financial capabilities such as literacy and self-efficacy enhance financial inclusion in economies.

2. Literature Review

2.1. Financial Inclusion

Financial inclusion is described as a phenomenon of people's active participation in the formal financial system. Financial inclusion in the real term is possible only through the active utilization of formal accounts by a large number of individuals in the economy (Sarma & Pais, 2011). A majority of the studies have explained financial inclusion in the form of having a bank account in a financial institution or taking a bank loan from a financial institution. Instead, financial inclusion in its actual form should be measured from the consumer side in a way that measures the account user’s actual ease of access to the financial institution, active utilization of various types of products (saving, credit, insurance, and remittances) and satisfaction level with the use of financial products and services to bring real inclusive growth in an economy such as discussed in Mindra et al., (2017) and a number of other studies (Beck, Demirgüç-Kunt and Peria, 2008; Br et al., 2009; Kendall et al., 2010; Sarma, 2012). The present study has addressed and used the following three dimensions i.e. access, usage and quality to measure financial inclusion.

**Dimension 1: Access** measures the physical range of financial services and the ability of an individual to reach and utilize financial services at a formal financial institution.

**Dimension 2: Usage** measures the ability of an individual to utilize financial services objectively. It captures the facts related to the monotony, frequency, and duration of usage of financial products over time.

**Dimension 3: Quality** measures the relevancy of financial products to an individual’s daily financial needs. This element contains the customer’s experience, approach and views about the financial products which are accessible and used by them (Mialou & Amidzic, 2017; Mindra et al., 2017; Sarma, 2012). In this way, we have formulated a financial inclusion measure that has the following attributes. First, it assesses and monitors the extent of financial inclusion based on access, usage and satisfaction derived from the financial inclusion. Besides, it permits the analysis of the causal relationship between financial inclusion and other factors such as an individual’s income, employment, literacy, confidence level, skills and empowerment, etc. Furthermore, it helps the policymakers to track progress and measure the results of policy alterations (Hannig & Jansen, 2011; Serrao et al., 2012).

2.2. Financial Literacy and Financial Inclusion

Financial literacy is one of the important capabilities of the individuals that relate to the knowledge, and information about the financial products and financial institutions, which they
utilize in financial decision making like interest rate, inflation, savings, borrowings, risk and return, etc. Literature found that financial literacy is an important good aspect of an individual’s behavior towards the formal financial market. It helps to alleviate the personal barriers to financial inclusion such as lack of trust, documentation and regulations (Akudugu, 2013). Similarly, Cole, Sampson, & Zia (2011) tested the leading theories of low demand for financial accounts and found that there is a strong link between financial literacy and account ownership behavior. Xu & Zia (2012) found that formal financial outreach is limited and only a few percentages of people have access to sophisticated financial products e.g. savings, borrowings, insurance, etc. because of inadequate information on financial products in low income economies and recommend that there is a need of financial literacy to increase the accessibility and to the take-up of formal financial services. It further elaborates that individuals informed financial decisions increase risk sharing, decrease economic instability, improve intermediation, and enhance an inclusive financial system (Cole et al., 2011). Bongomin et al. (2016) conducted research in rural Uganda and examined that poor individual need a certain level of knowledge and understanding about financial products and services to have financial accounts (bank accounts, savings, credit and payment products). Kostov & Annim (2015) examined the Mzansi (basic) account system in South Africa and found that the individuals need basic knowledge to be inspired to seek access to this type of account. Nowadays the world is facing recession, high fuel and food costs, bankruptcy, credit contraction and a harsh drop in savings. These stressors affect the people, families and societies to have a cautious attitude and individuals must know about personal finance and develop money management skills to make sound and safe financial decisions in a frightening environment (McCormick, 2009). Similarly, Barbic et al. (2016) studied the retirement planning behavior in Croatia, and found that only a few adults invest their money in retirement planning and individuals usually do not use a complex system of retirement planning due to a lack of financial knowledge and skills. While informed financial decision making is beneficial for an individual’s quality of life and welfare (Atkinson, Messy, & Huston, 2010). Similarly, the individuals who are facing credit problems are more likely to have less education, be unemployed, unskilled, have little financial reserves and are not fully aware of the financial aspects of credits, so they experience adverse life events. Though individuals need financial knowledge that will boost their confidence to do effective decisions (Tokunaga, 1993).

Research conducted on teenagers shows that teenagers frequently face tension regarding their decision abilities while they are struggling to become independent from their parents. Families and schools provide them with formal as well as informal learning environments where they learn skills and develop confidence and understanding of the traits of accepted behavior. Thus, it is essential to build financial knowledge into them to take action and make changes in their financial behavior (Danes & Haberman, 2007).

All these studies entail that financial literacy is an important aspect in the decision making process of improving saving rates and creditworthiness of debtors, consequently leading to have more access and use of financial products (Skagerlund, Lind, Strömbäck, Tinghög, & Västfjäll, 2018). Further, it is revealed that individuals who are investing and participating in the financial market are more likely to learn and acquire financial knowledge, as they have their funds at stake, and to avoid they eager to improve their knowledge.

Recently, Yuesti, Rustiarini, & Suryandari (2020) proved that financial attitude, behavior and literacy are important elements in boosting the economic wellbeing of the financial users in the global pandemic covid-19 situation as well. As it facilitates the financial user’s decision making
to be proactive than reactive and helps them to fulfill their financial goals. So, financial literacy is the principal need of individuals to carefully adapt the formal financial products and enhance the financial inclusion in the economy (Sukumaran, 2015).

2.3. Financial Self-Efficacy’s Mediation Effect on Financial Literacy and Financial Inclusion

Self-efficacy refers to a person’s sense of personal agency, the conviction that a person accomplishes a specified task and handles multiple challenges in his life. It is related to a person's self-confidence, motivation, and optimism (Bandura, 2006). Further, it relates to the social cognitive theory that explains the individual’s intellectual thinking in managing their inspiration and behavior towards finance (Sandler, 2000). Accordingly, an individual’s self-efficacy perception describes the individual’s life objectives, choices and determination to achieve these objectives, positive or negative thoughts and also measures the courage to face the challenges. Also, an individual’s recognition of self-efficacy entails how to perform, feel, think, manage and counsel oneself (Bandura, 1991, 2005). Further, it is noted that individuals’ self-efficacy drove them to obtain a certain outcome (Bandura, 1978, 2005).

Engelberg (2007) investigated that the young adults managed their economic aspects of life via their economic capabilities as well as psychological emotions. Economic capabilities include money management skills and knowledge that help adults to understand the effective management of money. Psychological emotions such as a sense of self-efficacy and self-control regarding financial activities are also important for personal welfare in uncertain economies (Engelberg, 2007). Entrepreneurs have to make risky decisions, have control over their work and have high expectations for success. In students, these entrepreneurship abilities develop through formal entrepreneurship education and working experience with successful entrepreneurs. These activities create a sense of self-efficacy in their entrepreneurship skills and turn encourage them to perform efficiently their entrepreneurial tasks (Zhao, Hills, Seibert, & Hills, 2005). Further, individuals with useful knowledge and information believe in their capabilities and this belief as well as their sense of efficacy may further boost their performance. Similarly, self-efficacy also plays a role in the thinking process to achieve the desired actions mostly driven by their willpower apart from the skills individuals endowed (Hejazi, Shahraray, Farsinejad, & Asgary, 2008).

Lapp (2010) developed a Cognitive-Behavioral-Emotional model (EARN) of financial life to determine how it works and consequently used to measure an individual’s advancement toward prosperity. He found that financial problems and stress related to debt may be reduced and savings, financial happiness and the financial welfare of low income individuals may be enhanced with the help of informed financial behavior. For this purpose, financial knowledge along with financial self-efficacy needs to be analyzed (William Lapp, 2010).

Robb et al. (2012) conducted research in the United States of America and found that individuals need financial advice regarding personal financial decisions. This advice helps them to understand the benefits and costs associated with good financial decisions regarding borrowing, saving and investment. And they may protect themselves from adverse effects of bad financial decisions (Robb, Babiarz and Woodyard, 2012). Scheresberg (2013) investigated that American adults who have capability are more likely to save for emergencies and plan for their retirement. Then, they are less likely to use high-cost borrowing. It implies that knowledge about personal finance and confidence in its financial ability is essential to opt the financial services such as
saving, borrowing and retirement (de Bassa Scheresberg, 2013). It is further argued that financial literacy through social media like newspapers and the internet may also encourage individuals to be involved in risky financial decision-making processes (time deposits, bonds, mutual funds, and stocks). These decisions are essential in confidence building today and in the future and affect their personal lives and welfare afterward (Shih & Ke, 2014).

Sound financial judgments are also influenced by individuals’ confidence level in their financial abilities. Usually, women are less likely to be involved in the riskiest decision, because the low level of financial self-efficacy discourages them to invest in highly risky personal decisions such as investment in stocks (Montford & Goldsmith, 2016). On the contrary, women with a high level of financial self-efficacy have the probability of improving their finance. These women have more personal investment, mortgage and saving accounts and have less debt or loans.

Similarly, Rowley, Lown, & Pie, (2012) found that women are more prone to difficulties in their life than men, and to prepare themselves for lifetime difficulties, they are more concerned about their financial future. The underlying factors are women’s desire to become independent, and their life transition events such as marriage, divorce, the sudden death of a spouse, family, migration and loss or gain of job. These factors engage them towards informed financial decisions that are important to improve their future financial health (Rowley, Lown, & Piercy, 2012). So, financial self-efficacy above or beyond financial literacy empowers women to make sound personal finance choices (Farrell, Fry, & Risse, 2016). Individuals’ cognition and behavior to involve them in specific activities are also influenced by their confidence in their abilities. For example, management capabilities motivate them to have optimistic behavior. The literature agrees that financial literacy and self-efficacy are essential to well manage life events such as housing, education, illness, marriage, or retirement planning and thus become important predictors for increasing financial inclusion within the country (Ghaffar & Sharif, 2016; Mindra & Moya, 2017; Mindra et al., 2017).

The present study attempts to measure financial inclusion in terms of consumers’ real experiences to access the financial institutions, usage and quality i.e. satisfaction derived from using the financial products. The study further relates financial inclusion to an individual’s financial literacy and financial self-efficacy level and intends to examine the relationship among them in Pakistan. The study contributes to the literature in a number of ways: (i) It is the first one of its kind that measures the respondent's financial inclusion based on their access, usage, and satisfaction level derived from using the financial products; (ii) Further, it examines the relationship between financial literacy and financial inclusion; (iii) It examines the individual financial self-efficacy level and its impact on individual’s financial inclusion; (iv) It also examines the mediating impact of financial self-efficacy on the financial literacy and financial inclusion relationship;

The present study was undertaken in the Sahiwal division that covers Sahiwal, Okara and Pakpattan Districts. Although these districts are well known and equally important in terms of geographic and economic significance, however, are not included in the sample selection in SBP Access to Finance Survey (2008) and SBP Financial Inclusion Survey (2015). So empirical findings of these unrepresented areas help us to measure the financial inclusion that was missed in national surveys and contribute to policy formulation level.
A number of studies have suggested that individual characteristics and socio-economic factors such as income, education age, gender, marital, location, education and occupation position may also be the factors that explain the financial inclusion using the World Bank Global Findex Database (Atinc, Simmering, & Kroll, 2011; Demirguc-kunt, A., and Klapper et al., 2012). Nandru (2016) investigated that socio-economic factors that affect financial inclusion in India and found that income, education age, gender and occupation position explain the individual's financial inclusion informal financial system (Nandru, Anand, Rentala, & Byram, 2016). Zulfiqar et al (2016) confirm that gender, education, income and age are important determinants of financial inclusion in Pakistan (Zulfiqar, Kalsoom; Chaudhary, Muhammad Aslam; Aslam, 2016). Therefore, the study includes a number of control variables as well in the analysis.

2.4. Research Hypotheses

The present study proceeds on the following hypotheses:

- \( H_1 \): Financial literacy has a positive impact on financial inclusion measured based on access, usage, and quality components;
- \( H_2 \): Financial literacy has a positive impact on an individual’s financial self-efficacy level;
- \( H_3 \): There is a significant positive impact on financial self-efficacy level in determining the measured financial inclusion;
- \( H_4 \): Financial self-efficacy mediates the relationship between financial literacy and measured financial inclusion.
3. Data, Model and Method

3.1. Study Design and Data
The study undertakes Sen’s capability approach (Sen, 2007) and intends to examine the financial capabilities (financial literacy and financial self-efficacy) impact on financial inclusion in Pakistan. This study has adopted a cross-sectional research design, as it is suitable to study the underlying variables at a specific point in time (Sedgwick, 2014). Study used the purposive sampling technique (Palys, 2008) and selected a sample of 307 respondents. The study used the self-administered questionnaire to collect the data responses on four dimensions i.e. socio-demographic characteristics, financial inclusion, financial literacy and financial self-efficacy level of individuals. The study collects the responses of adult individuals (age 20+ years) having a financial account in a financial institution belonging to different regions of Sahiwal, Okara and Pakpattan districts.

3.2. Measurement
The study measured the financial inclusion in terms of access, usage and quality terms such as by Mindra & Moya (2017) and responses were collected on five points Likert scale ranging from “strongly disagree” to “strongly agree”. Socio-demographics and financial inclusion related questions were adopted from studies (Mindra & Moya, 2017; World Bank, 2015).

Financial literacy is measured with the help of an instrument developed by both Gallup Pakistan (2015) and Mindra & Moya (2017), and responses are recorded on five points Likert scale ranging from “strongly disagree” to “strongly agree”. Similarly, the financial self-efficacy scale is adopted from Ghosh & Vinod (2017), Mindra & Moya (2017) and Nguyen, Hoa T.; Edleson, Jeffrey L.; Hollister, C. David; Solheim (2012). The responses are collected on five points Likert scale ranging from “Not at all true” to “Exactly true”.

3.3. Model Specification
The study used the structural equation modeling (SEM) technique to examine the causal relationship between multiple variables simultaneously. SEM model is based on two steps; confirmatory factor analysis (CFA) and estimation of the structural model. The confirmatory factor analysis is used to develop a measurement model for the depiction of the proposed model among 307 account users. In the measurement model, all items are loaded on their respective construct and thereafter, the model is executed parsimoniously. If the factor loading scores of items are greater than 0.5, they are kept in the model, (Ahmad, Zulkurnain, & Khairushalimi, 2016; Schreiber et al., 2006). In addition, a structural model has been used to analyze the causal relationship between the studied variables. Financial inclusion is a dependent variable, while financial literacy (FIL) is used as a predictor and the financial self-efficacy (FSE) variable is used as a mediator in the analysis. The maximum likelihood method with bootstrapping technique is used with 2000 re-samples of 307 observations. This method is applied to test the mediation effect of financial self-efficacy on financial literacy and financial inclusion relationship.
4. Results and discussion

4.1. Sample Information

Table gives a summary of details of the socio-demographic characteristics of the selected 307 respondents. The selected sample displays a good dispersal of data set across gender as it consists of 205 males and 102 females. Among them, 172 are married and 135 respondents are unmarried. 175 respondents are belonging to the urban area while 132 belong to rural areas. Respondents have the representation from different age groups as well, as 150 respondents fall in the 20-30 years age group; 117 respondents lie in the 31-40 years age group; 29 respondents lie in the 41-50 years age group, and only 11 respondents fall in 51 and above years’ age group.

Similarly, the selected sample consists of uneducated (18), educated (88) and highly educated (201) respondents. Besides, the selected sample also represents all occupational groups as 183 respondents are formally employed; 64 of them are informally employed; 28 respondents are unemployed and 32 respondents are students. The income classification of the sample suggests that 48 percent of respondents who have the financial accounts have a monthly income of less than 30,000, about 33.2 percent have an income between 31000-60,000 and 18.6 percent of respondents earn the monthly income above 61,000.

| Socio-demographic Group | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| Gender                  |           |                |
| Male                    | 205       | 66.8           |
| Female                  | 102       | 33.2           |
| Marital Status          |           |                |
| Married                 | 172       | 56             |
| Unmarried               | 135       | 44             |
| Residence               |           |                |
| Rural                   | 132       | 43             |
| Urban                   | 175       | 57             |
| Age                     |           |                |
| 20-30                   | 150       | 48.9           |
| 31-40                   | 117       | 38.1           |
| 41-50                   | 29        | 9.4            |
| 51-above                | 11        | 3.6            |
| Education               |           |                |
| Uneducated              | 18        | 5.9            |
| Educated                | 88        | 28.7           |
| Highly Educated         | 201       | 65.5           |
| Occupation              |           |                |
| Formal employed         | 183       | 59.6           |
Nimra Noor, Irem Batool, Hafeez Ur Rehman

| Informal employed | 64 | 20.8 |
|-------------------|----|------|
| Unemployed        | 28 | 9.1  |
| Student           | 32 | 10.4 |

Income

| Income          | 0-30000 | 148 | 48.2 |
|-----------------|---------|-----|------|
| 31000-60000     | 102     | 33.2|
| 61000-above     | 57      | 18.6|

Table states that the average mean scores of financial inclusion, financial literacy and financial self-efficacy are scored above 4. It implies that respondents are on average financially literate, self-officiate and financially included in terms of financial institution's access, usage and satisfaction from using the financial products. Further, Table 4.2 result shows that the mean scores of all the constructs are greater than 3 and also statistically significant.

**Table 0: Estimated results for descriptive statistics and one sample t-test**

| Variables               | N  | Mean  | Std. Dev | Std. Error Mean | t –test value | df  | Sig.(2 tailed) |
|-------------------------|----|-------|----------|-----------------|---------------|-----|----------------|
| Financial Inclusion     | 307| 4.053 | .639     | .0365           | 110.988       | 306 | .000          |
| Financial Literacy      | 307| 4.445 | .546     | .0312           | 142.520       | 306 | .000          |
| Financial Self Efficacy | 307| 4.213 | .690     | .0393           | 106.970       | 306 | .000          |

The normality of the variables is tested by skewness and kurtosis. The values of skewness and kurtosis of financial inclusion (access, usage and quality), financial literacy and financial self-efficacy lie within the range; (i.e. +1 and -1 for skewness) and (+2 and -2 for kurtosis), it shows that data patterns for each variable have a normal distribution.

**Table 5: Data Normality Analysis**

|                      | Financial Inclusion | Financial Literacy | Financial Self Efficacy | Self |
|----------------------|---------------------|--------------------|-------------------------|------|
| Skewness             | -.641               | -.917              | -.902                   |      |
| Std. Error           | .139                | .139               | .139                    |      |
| Kurtosis             | .373                | .901               | .263                    |      |
| Std. Error           | .277                | .277               | .277                    |      |

**Reliability Analysis**
Table results show Cronbach Alpha and composite reliability values of latent financial inclusion, financial literacy and financial self-efficacy. All these variables have values and composite reliability indicator values greater than 0.7, which implies that these measures are significant and reliable.

| Sr. No | Variables                  | Number of Items | Cronbach’s Alpha | Composite Reliability |
|--------|----------------------------|-----------------|------------------|-----------------------|
| 1      | Financial Inclusion        | 11              | .831             | .927                  |
| 2      | Financial Literacy         | 8               | .854             | .858                  |
| 3      | Financial Self-Efficacy    | 8               | .864             | .860                  |

**Validity and Correlation**

Table reports the convergent validity and discriminant validity measures of the constructs. Convergent validity is determined by average variance extracted (AVE) by using CFA. The average variance extracted measures the amount of variance that a latent variable capture from its indicators relative to the amount due to measurement error. Conventional wisdom states that the average variance extracted scores of each latent variable should be greater than 0.50, it implies that the indicator is perfectly correlated to their parent construct and it explains the sufficient amount of variance towards their latent construct (J. Hair, Black, Babin, & Anderson, 2010). Similarly, the AVE of the latent construct is greater than the value of 0.5, which implies that the composite reliability is adequate (as shown in Table &Table )and it is concluded that measures are highly converged (Fornell & Larcker, 1981).

Discriminant validity is determined by comparing the value of the square root of AVE to the correlation values between constructs (Ahmad et al., 2016). Table 4.5 results indicate that the square roots of the AVE values for the entire construct are greater than correlation values so, the results confirm the discriminant validity of the latent (Fornell & Larcker, 1981). There is a significant positive association between financial literacy and financial inclusion as it is measured in the form of access, usage & quality (r = .529, N= 307, p<.01). A significant positive correlation exists between financial self-efficacy and financial inclusion (r = .531, N= 307, p<.01).

| Sr. No | Variables                  | (FIN) | (FIL) | (FSE) | AVE   | √AVE  |
|--------|----------------------------|-------|-------|-------|-------|-------|
| 1      | Financial Inclusion (FIN)  | 1     | .529***| .531***| .545  | .738  |
| 2      | Financial Literacy (FIL)   | 1     | .580***| .433  | .658  |
| 3      | Financial Self efficacy (FSE)| 1 | .436  | .661  |

*** Correlation is significant at the 0.01 level (2-tailed).
Confirmatory Factor Analysis

Factor analysis is a statistical tool used to develop, improve and evaluate tests, scales and measures. There are two important forms of factor analysis: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) (Williams, Brown, & Onsman, 2012). Exploratory Factor Analysis is employed to explore the dimension of the core variables to develop a theory for the proposed model because in such cases variables do not support any prior theory. While in confirmatory Factor Analysis proposed hypotheses are confirmed with the help of past theories. Thus, CFA helps in hypothesis testing (Schreiber et al., 2006). The present study has adapted the scale from prior studies and relying on confirmatory factor analysis to confirm the factor structure of the latent variable. For this measurement model with the objective to conduct confirmatory factor analysis has been developed and presented in figure.

![Figure 2: Measurement Model](image)

**Items of construct**

The items presented in table were selected for computing constructs; financial inclusion in the form of access, usage and quality terms, financial literacy and financial self-efficacy. These items were selected after doing two types of test; reliability and validity.
| Construct                          | Code | Items                                                                 |
|-----------------------------------|------|----------------------------------------------------------------------|
| Financial Inclusion (access, usage and quality) | ac1  | Easily accessible road to the nearest bank                           |
|                                   |      | ac2 The nearest bank is less than 5km from my home                  |
|                                   |      | ac3 Takes less than 20 minutes to reach the nearest bank             |
|                                   |      | ac4 The fare to reach the bank is appropriate for me                |
|                                   |      | ac5 Takes less than 25 minutes to easily reach to ATM               |
|                                   | us1  | ac1 Aware of formal products and services                           |
|                                   |      | us2 Used account to save for future expenses                        |
|                                   |      | us3 Used account to withdraw money                                   |
|                                   |      | us4 Used account to receive/send remittances                        |
|                                   | qua1 | qua1 Received information regarding my transactions                 |
|                                   |      | qua2 Satisfied with financial products or services of the bank      |
| Financial Literacy                | FL1  | Do you have information about savings                               |
|                                   | FL2  | Do you have information about loans                                 |
|                                   | FL3  | Do you have information about remittances                           |
|                                   | FL4  | Do you have information about your current account                  |
|                                   | FL5  | Do you have information about savings/PLS account                   |
|                                   | FL6  | Do you have information about ATM                                   |
|                                   | FL7  | Do you know how to open a bank account?                             |
|                                   | FL8  | Do you know how to withdraw or deposit money in an                   |
| Financial Self Efficacy           | FSE1 | Are you confident about managing your finances                       |
|                                   |      | FSE2 Are you able to spend less than your income each month         |
|                                   |      | FSE3 Are you able to develop a spending plan to see where you need to make changes |
|                                   |      | FSE4 Are you able to set financial goals for your future wellbeing? |
|                                   |      | FSE5 Are you able to develop a plan to achieve your financial goals. |
|                                   |      | FSE6 Have you enough resources to use financial services to manage your financial goals |
|                                   |      | FSE7 Are you able to confidently deposit money in the bank to plan for future |
|                                   |      | FSE8 Are you able to choose the appropriate financial product according to your needs |
Regression weights for the measurement model

Regression weights for the measurements have been described in Table 8. The regression analysis has been done for all of the models. Empirical findings of all the dimensions (access, usage and quality) have a positive, direct and significant impact on financial inclusion with the estimated values 0.701, 1, 0.866, 0.967, 0.764, 1, 0.553, 0.971, 1.103, 0.933, and 1 respectively. These dimensions have t-values 6.211, 8.874, 8.725, 8.481, 9.734, 14.906, 18.129, and 15.386 which all are greater than 1.96 and p-value is less than 0.01 for all the dimensions of financial inclusion. Factor loading of all the elements has a score greater than 0.5.

Another construct in the model is financial literacy with the eight elements named FL1, FL2, FL3, FL4, FL5, and FL6. FL7 and FL8. All the elements have a direct positive, significant impact on financial literacy with the estimated values of 0.981, 1.164, 1.406, 1.132, 1.221, 1.121, 1.031 and 1 respectively. All the elements have t-values as reported as 10.4, 10.4, 8.9, 8.8, 9.04, 10.3, and 13.6 and their p values are less than 0.01. Also, each element has a factor loading value greater than 0.5.

Another variable of the model is financial self-efficacy with eight elements named FSE1, and FSE2. FSE3. FSE4. FSE5. FSE6, FSE7 and FSE8. All these elements have a direct positive and significant impact on financial literacy with estimated values of 0.721, 1.023, 1.128, 0.919, 1.023, 1.146, 0.863 and 1 respectively and their t-values are 8.777, 9.842, 10.349, 10.57, 10.084, 10.623 and 9.213, which all are greater than 1.96 and p values are less than 0.01. It implies the financial self-efficacy elements significance.

| Table 8: Regression weights for measurements | Estimate | S.E. | Estimate | C.R. | P value |
|---------------------------------------------|---------|------|---------|------|---------|
| acc5 <--- ac                               | 1       | 0.828|         |      |         |
| acc4 <--- ac                               | 0.933   | 0.061| 0.78    | 15.38| ***     |
| acc3 <--- ac                               | 1.103   | 0.061| 0.885   | 18.12| ***     |
| acc2 <--- ac                               | 0.971   | 0.065| 0.762   | 14.90| ***     |
| acc1 <--- ac                               | 0.553   | 0.057| 0.542   | 9.734| ***     |
| use4 <--- use                              | 1       | 0.601|         |      |         |
| use3 <--- use                              | 0.764   | 0.09 | 0.629   | 8.481| ***     |
| use2 <--- use                              | 0.967   | 0.111| 0.655   | 8.725| ***     |
| use1 <--- use                              | 0.866   | 0.098| 0.672   | 8.874| ***     |
| qua2 <--- qu                               | 1       | 0.98 |         |      |         |
| qua1 <--- qu                               | 0.701   | 0.113| 0.668   | 6.211| ***     |
| FL8 <--- fil                               | 1       | 0.641|         |      |         |
| FL7 <--- fil                               | 1.031   | 0.076| 0.609   | 13.60| ***     |
| FL6 <--- fil                               | 1.121   | 0.109| 0.716   | 10.25| ***     |
Model Fit Indices for Measurement Model

Table 4.8 reports the model fitness statistics values. The CMIN/df value is estimated to be 2.585 which is less than 5.00, satisfactory for this model. The value of Root-Mean Square Error of Approximation (RMESA) is estimated to be 0.072, lies in the desired range. Another measure is Comparative Fit Index (CFI), which is estimated to be 0.877, the Informed Fit Index (IFI) value is 0.878 value and the Normed fit index (NFI) value is estimated to be .816. All these values lie within the desired range as described in Table 4.8. It implies that our measurement model is appropriate and next we estimate the Structural Equation Modeling (SEM) values (Shah & Goldstein, 2006).

Table 9: Model fit summary of the measurement model

| Sr No. | Fit Indices | Estimated value | Standard Range |
|--------|-------------|-----------------|----------------|
| 1      | CMIN/DF     | 2.585           | 0.02 - 4.80    |
| 2      | RMESA       | .072            | 0.00 - 0.13    |
| 3      | CFI         | .877            | 0.88 - 1.00    |
| 4      | IFI         | .878            | 0.88 - 0.98    |
| 5      | NFI         | .816            | 0.72 - 0.99    |

Source: Author’s Survey Calculations

Structural Equation Model
As the Measurement Models had been accepted in CFA, the hypothesized theoretical model was examined through Structure Equation Modeling (SEM). Since this type of model can be tested using “Path Regression Analysis based on Structural Equation Modelling Technique”, therefore AMOS is the appropriate software for that. The effect of the independent variable (Financial Literacy) on the dependent variable (Financial Inclusion) as well as the mediator (Financial Self Efficacy) have been studied with the help of the structure model develop in AMOS, and it is given in Figure

![Structure Model SEM Model Fitness Statistics](image)

**Figure 3: Structure Model SEM Model Fitness Statistics**

The fitness of the structure model has been studied with the help of various statistical measures. Model fitness is a most essential part of the SEM analysis. Table clearly shows that each measure is satisfied because their measure values are within the standard ranges. Thus, we can say that our structure model, presented in Figure, is adequate. Let us discuss these measures individually. The value of Root Mean Square Error of Approximation (RMSEA) is 0.078 which is less than 0.10, so it is satisfactory. CMIN/DF has an estimated value of 2.885 which is <5.00 so it is good for this model. The next measure is GFI (Goodness of fit Index) having an estimated value is 0.859 which is in the range of .75 to .99. Similarly, other measures i.e., IFI (Informed fit Index), CFI (Comparative Fit Index), NFI (Normed Fit Index), have values that are under the recommended standard ranges as described in (Bentler, 2007; Hu & Bentler, 1999; Shah & Goldstein, 2006).
Table 10: Model Fit Indices Summary of Structure model.

| Sr. No | Fit Indices | Estimated Value | Standard Range |
|--------|-------------|-----------------|----------------|
| 1      | CMIN/DF     | 2.885           | 0.02 - 4.80    |
| 2      | RMSEA       | .078            | 0.00 - 0.13    |
| 3      | RMR         | .047            | 0.01 - 0.14    |
| 4      | GFI         | .859            | 0.75 - 0.99    |
| 5      | IFI         | .861            | 0.88 - 0.98    |
| 6      | NFI         | .802            | 0.72 - 0.99    |
| 7      | CFI         | .859            | 0.88 - 1.00    |

Source: Author’s Survey Calculations

Structural Equation Modeling Results

The estimated result of the structural model indicates that financial literacy has a significant positive impact on financial inclusion (as shown in Table ). The value of the regression coefficient shows that if there is a change of 1 unit in financial literacy, then there will be an increase of .541 unit change in financial inclusion. So, hypothesis \( H_1 \): Financial literacy is positively related to financial inclusion (access, usage, quality) among financial consumers of Pakistan is accepted at a significance level of 1%. This study finding is harmonized with previous research (Barbić et al., 2016; Mindra & Moya, 2017; Sarma & Pais, 2011) that showed a significant relationship between financial literacy and financial inclusion.

The estimated results further show that financial literacy has a significant positive influence on financial self-efficacy. So, hypothesis \( H_2 \): Financial Literacy is positively related to Financial Self-Efficacy among financial consumers of Pakistan is accepted because the p value is very small and less than 0.01. The estimates values show that if there is a 1 unit change in financial literacy, then there are .668 unit changes in financial self-efficacy.

The estimated results show that financial self-efficacy has a significant positive impact on financial inclusion as shown in Table . The estimated value indicates that a 1 unit change in financial self-efficacy brings .668 unit changes in financial inclusion. So, this hypothesis \( H_3 \): There is a significant positive relationship between Financial Self-Efficacy and Financial Inclusion (access, usage and quality) among financial consumers of Pakistan has been accepted at \( p < 0.01 \). This study finding is in line with previous research of that showed a significant positive relationship between financial self-efficacy and financial inclusion (Mindra et al., 2017).

Moreover, education has no significant impact on financial inclusion at 5 % level of significance.

Table 11: Regression Weights for Structure Model

| Label | Estimate | SE  | C.R. | P    | Label |
|-------|----------|-----|------|------|-------|
| FSE ← FIL | .668   | .096 | 7.527 | *** | \( H_5 \) accepted |
| FIN ← FSE | .397   | .084 | 3.979 | *** | \( H_7 \) accepted |
| FIN ← FIL | .541   | .099 | 4.982 | *** | \( H_5 \) accepted |
Note: *, ** and *** denote significance at 90%, 95% and 99%, respectively.

Source: Survey Results and Author’s calculations

The estimated results in table show a significant mediation effect of financial self-efficacy on the relationship between financial literacy and financial inclusion. The estimated results show that there is a significant mediation impact (0.265) of financial self-efficacy on the relationship between financial literacy and financial inclusion. While the direct effect is estimated to be 0.541, thus the total impact of financial literacy on financial self-efficacy is summed to be 0.806 in the selected sample.

Hence, prior researches also explain that financial literacy leads to the active involvement of financial users in the formal financial system which is further encouraged by the individual’s confidence regarding financial products and services uses (Danes & Haberman, 2007; Mindra & Moya, 2017; William Lapp, 2010).

**Table 12: Mediating effect of financial self-efficacy**

| Variables                      | Mediating Variable | Indirect effect | Direct effect | Total Effect | Results  |
|--------------------------------|--------------------|-----------------|---------------|--------------|----------|
| Financial Literacy and Financial Inclusion | Financial Self Efficacy | .265***         | .541***       | .806***      | H₈ accepted |

*, ** and *** denote significance at 90%, 95% and 99%, respectively

Source: Estimation Results

**5. Conclusion and Policy Implications**

**5.1. Conclusion**

The study undertakes the demand side perspective of financial inclusion and defines it based on an individual’s access, usage and satisfaction level derived using the financial products. Literature evidenced that individuals own some interconnected capabilities such as financial literacy, financial self-efficacy, attitude, and interpersonal and intrapersonal skills that facilitate them to drive towards some specific functions and tasks to be accomplished. The study measures the individual financial capabilities level and relates them to their financial inclusion level.

Estimated results show that financial literacy and financial self-efficacy have a positive significant impact on an individual’s financial inclusion. The study finds that financial literacy encourages individuals to use financial products. This practice is also clearly motivated by individuals’ confidence level, which they acquired over time using financial products of the formal organization. Our study results are consistent with the results of a study by Mindra, R., &
Moya, M. (2017) and Mindra, et.al., (2017). Our study results are consistent with the results of study by Mindra, R., & Moya, M. (2017) and Mindra, et.al., (2017).

Further, it is noted please that the present study has found that financial self-efficacy significantly mediates the relationship between financial literacy and financial inclusion, unlike the previous study (i.e. Noor, Batool and Arshad, 2020) that has found that there is no mediation impact of financial self-efficacy on the financial inclusion. The reason is that the present study measured the financial inclusion in the form of access, usage and satisfaction levels derived from financial account owners using the financial products, while the previous research on this subject has just utilized the account owner as a proxy for the financial inclusion. Survey data also revealed that most of the respondents just use their financial accounts to withdraw their salaries and to keep safe their money. They do no actually utilize the financial products so the financial inclusion based on account ownership as in the previous case is a vague measure of financial inclusion. Financial self-efficacy encourages the users to acquire, use and satisfy themselves using the financial product or services (saving, credit, payments).

5.2. Policy Implications

The study estimates the financial inclusion among financial users in the form of access, usage and quality. Research findings contribute to the SBP National Financial Inclusion Strategy (NFIS) program in collaboration with the Government of Pakistan. The study identifies those financial capabilities such as financial literacy and financial self-efficacy are the important determinants in determining the actual usage of financial products among the users. The study recommends that NFIS program should be grounded in both unbanked and banked populations to cultivate the true benefits of formal financial products, by strengthening the individuals’ confidence, literacy and usage of financial products.

References

Ahmad, S., Zulkurnain, N., & Khairushalimi, F. (2016). Assessing the Validity and Reliability of a Measurement Model in Structural Equation Modeling (SEM). *British Journal of Mathematics & Computer Science*. https://doi.org/10.9734/bjmcscs/2016/25183

Akudugu, M. (2013). The Determinants of Financial Inclusion in Western Africa: Insights from Ghana. *Research Journal of Finance and Accounting ISSN 2222-2847*.

Amatucci, F. M., & Crawley, D. C. (2011). Financial self-efficacy among women entrepreneurs. *International Journal of Gender and Entrepreneurship*, 3(1), 23–37. https://doi.org/10.1108/17566261111114962

Atinc, G., Simmering, M. J., & Kroll, M. J. (2011). Control variable use and reporting in macro and micro management research. *Organizational Research Methods, 15*(1), 57–74. https://doi.org/10.1177/1094428110397773

Atkinson, A., Messy, F., & Huston, S. J. (2010). Measuring Financial Literacy. *Journal of Consumer Affairs, 44*(2), 296–316. https://doi.org/10.1787/5k9csfs90fr4-en

Bandura, A. (1978). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 1*(2), 191–215. https://doi.org/10.1016/0146-6402(78)90002-4
Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*(2), 248–287. https://doi.org/10.1016/0749-5978(91)90022-1

Bandura, A. (2005). The Evolution of Social Cognitive Theory. *Great Minds in Management.*

Bandura, A. (2006). Guide for constructing self-efficacy scales. *Self-Efficacy Beliefs of Adolescents.* https://doi.org/10.1017/CBO9781107415324.004

Bank, W. (2013). *Global Financial Development Report 2014: Financial Inclusion.* The World Bank. https://doi.org/10.1596/9780821399859

Barbić, D., and Irena Palić, Bahovec, V., and, Palić, I., & Bahovec, V. (2016). Logistic regression analysis of financial literacy implications for retirement planning in Croatia. *Croatian Operational Research Review, 7*(2), 319–331. https://doi.org/10.17535/crorr.2016.0022

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. https://doi.org/10.1037//0022-3514.51.6.1173

Beck, T., Demirguc-Kunt, A., Honohan, P., Demirgüç-Kunt, A., & Honohan, P. (2009). Access to financial services: Measurement, impact, and policies. *World Bank Research Observer, 24*(1), 119–145. https://doi.org/10.1093/wbro/lkn008

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2004). *Finance, Inequality, and Poverty: Cross-Country Evidence.* National Bureau of Economic Research. Cambridge, MA: National Bureau of Economic Research. https://doi.org/10.3386/w10979

Beck, T., Demirgüç-Kunt, A., & Peria, M. S. M. (2008). Banking services for everyone? Barriers to bank access and use around the world. *The World Bank Economic Review, 22*(3), 397–430. https://doi.org/10.1093/wber/lhn020

Bentler, P. M. (2007). On tests and indices for evaluating structural models. *Personality and Individual Differences.* https://doi.org/10.1016/j.paid.2006.09.024

Cohen, M., & Nelson, C. (2011). *Financial Literacy: A Step for Clients towards Financial Inclusion. Global Microcredit Summit. Commissioned Workshop Paper.*

Cole, S., Sampson, T., & Zia, B. (2011). Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets? *Journal of Finance, 66*(6), 1933–1967. https://doi.org/10.1111/j.1540-6261.2011.01696.x

Danes, S. M., & Haberman, H. R. (2007). Teen financial knowledge, self-efficacy, and behavior: A gendered view. *Journal of Financial Counseling and Planning.*

de Bassa Scheresberg, C. (2013). Financial Literacy and Financial Behavior among Young Adults: Evidence and Implications. *Numeracy, 6*(2). https://doi.org/10.5038/1936-4660.6.2.5
Demirguc-Kunt, A., and Klapper, L., Demirguc-Kunt, A., & Klapper, L. (2012). “Measuring financial inclusion. The Global findex database.” Policy Research Working Paper. https://doi.org/10.1596/978-0-8213-9509-7

Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. Brookings Papers on Economic Activity, 2013(1), 279–340. https://doi.org/10.1353/eca.2013.0002

Demirguc-Kunt, A., Klapper, L., Oudheusden, P. Van, & Singer, D. (2015). Findex Notes: Financial Inclusion in South Asia. In The Global Findex Database 2014.

Demirguc-Kunt, A., Klapper, L., Singer, D., & Oudheusden, P. Van. (2015). The Global Findex Database 2014: Measuring Financial Inclusion around the World. The World Bank. https://doi.org/10.1596/1813-9450-7255

Engelberg, E. (2007). The perception of self-efficacy in coping with economic risks among young adults: an application of psychological theory and research. International Journal of Consumer Studies, 31(1). https://doi.org/10.1111/j.1470-6431.2005.00494.x

Farrell, L., Fry, T. R. L. L., & Risse, L. (2016). The significance of financial self-efficacy in explaining women’s personal finance behaviour. Journal of Economic Psychology, 54, 85–99. https://doi.org/10.1016/j.joep.2015.07.001

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research. https://doi.org/10.2307/3151312

Gallup Pakistan, H. D. F. (2015). Access to Finance Study Pakistan Questionaire.

Ghaffar, S., & Sharif, S. (2016). The level of Financial Literacy in Pakistan. Journal of Education & Social Sciences, 4(2), 132–143. https://doi.org/10.20547/jess0421604204

Ghosh, S., & Vinod, D. (2017). What Constrains Financial Inclusion for Women? Evidence from Indian Micro data. World Development, 92, 60–81. https://doi.org/10.1016/j.worlddev.2016.11.011

Hair, J., Black, W., Babin, B., & Anderson, R. (2010). Multivariate Data Analysis: A Global Perspective. In Multivariate Data Analysis: A Global Perspective.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). Multivariate Data Analysis (6th ed.). Analysis.

Hannig, A., & Jansen, S. (2011). Financial Inclusion and Financial Stability: Current Policy Issues. In {SSRN} Electronic Journal. Elsevier {BV}. https://doi.org/10.2139/ssrn.1729122
Hejazi, E., Shahraray, M., Farsinejad, M., & Asgary, A. (2008). Identity styles and academic achievement: mediating role of academic self-efficacy. Social Psychology of Education, 12(1), 123–135. https://doi.org/10.1007/s11218-008-9067-x

Helms, B. (2006). Access for All: Building Inclusive Financial Systems. [e-book] Washington: The World Bank. Available at: Consultative Group to Assist the Poor website http://www.cgap.org/sites/default/files/CGAP-Access-for-All-Jan-2006.pdf [Accessed 05 February 2014]. https://doi.org/10.1596/978-0-8213-6360-7

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling. https://doi.org/10.1080/10705519909540118

Kendall, J., Mylenko, N., Ponce, A., & Mylenko, N. (2010). Measuring Financial Access Around The World. Policy Research Working Paper. The World Bank. https://doi.org/10.1596/1813-9450-5253

Klapper, L., Lusardi, A., & Van Oudheusden, P. (2015). Insights From the Standard & Poor’S Ratings Services Global Financial Literacy Survey. Financial literacy around the world. https://doi.org/10.1017/S1474747211000448

Lusardi, A. (2008). Financial Literacy: An Essential Tool for Informed Consumer Choice? SSRN Electronic Journal. National Bureau of Economic Research. https://doi.org/10.3386/w14084

McCormick, M. H. (2009). The effectiveness of youth financial education: A review of the literature. Journal of Financial Counseling and Planning.

Mialou, A., & Amidzic, G. (2017). Assessing Countries’ Financial Inclusion Standing — A New Composite Index. Journal of Banking and Financial Economics, 2/2017(8), 105–126. https://doi.org/10.7172/2353-6845.jbfe.2017.2.5

Miller, M., Godfrey, N., Levesque, B., & Stark, E. (2009). The Case for Financial Literacy in Developing Countries: Promoting Access to Finance by Empowering Consumers. The International Bank for Reconstruction and Development/The World Bank.

Mindra, R., & Moya, M. (2017). Financial self-efficacy: A mediator in advancing financial inclusion. Equality, Diversity and Inclusion, 36(2), 128–149. https://doi.org/10.1108/EDI-05-2016-0040

Mindra, R., Moya, M., Zuze, L. T., & Kodongo, O. (2017). Financial self-efficacy: a determinant of financial inclusion. International Journal of Bank Marketing, 35(3), 338–353. https://doi.org/10.1108/IJBM-05-2016-0065

Montford, W., & Goldsmith, R. E. (2016). How gender and financial self-efficacy influence investment risk taking. International Journal of Consumer Studies, 40(1), 101–106. https://doi.org/10.1111/ijc.s.12219

Nandru, P., Anand, B., Rentala, S., & Byram, A. (2016). Determinants of financial inclusion:
Evidence from account ownership and use of banking services. *International Journal of Entrepreneurship and Development Studies (IJEDS).*

Nenova, T., Niang, C. T., & Ahmad, A. (2009). Access to Finance: Evidence from the Demand Side. In *Bringing finance to Pakistan’s poor: access to finance for small enterprises and the underserved.*

Nguyen, Hoa T.; Edleson, Jeffrey L.; Hollister, C. David; Solheim, C. (2012). Impacts of Online Financial Literacy Training on Battered Women. *Minnesota Center Against Violence and Abuse.*

Pallant, J. (2011). A step by step guide to data analysis using SPSS. *Alen & Unwin.*

Park, C.-Y., & Mercado, R. V. (2016). Does Financial Inclusion Reduce Poverty and Income Inequality in Developing Asia? In *Financial Inclusion in Asia* (pp. 61–92). Palgrave Macmillan [UK]. https://doi.org/10.1057/978-1-137-58337-6_3

Preacher, K J, Rucker, D. D., & Hayes, A. F. (2007). Taylor & Francis Online:: Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions - Multivariate Behavioral Research - Volume 42, Issue 1. *Multivariate Behavioral …*

Preacher, Kristopher J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. In *Behavior Research Methods.* https://doi.org/10.3758/BRM.40.3.879

Ranieri, R., & Ramos, R. A. (2013). Inclusive Growth: The Building up of a concept. *International Policy Centre for Inclusive Growth (IPC-IG).* https://doi.org/10.4324/9780203842393.ch6

Robb, C. A., Babiarz, P., & Woodyard ', A. (2012). The demand for financial professionals’ advice: The role of financial knowledge, satisfaction, and confidence. *FINANCIAL SERVICES REVIEW.*

Rowley, M. E., Lown, J. M., & Piercy, K. W. (2012). Motivating women to adopt positive financial behaviors. *Journal of Financial Counseling and Planning.*

Sandler, M. E. (2000). Career decision-making self-efficacy, perceived stress, and an integrated model of student persistence: A structural model of finances, attitudes, behavior, and career development. *Research in Higher Education.* https://doi.org/10.1023/A:1007032525530

Sarma, M. (2012). Index of financial inclusion – A measure of financial sector inclusiveness. *Berlin Working Papers on Money, Finance and Trade Development.*

Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development, 23*(5), 613–628. https://doi.org/10.1002/jid.1698

Schreiber, J. B., Stage, F. K., King, J., Nora, A., & Barlow, E. A. (2006). Reporting structural
equation modeling and confirmatory factor analysis results: A review. *Journal of Educational Research*. https://doi.org/10.3200/JOER.99.6.323-338

Sedgwick, P. (2014). Cross sectional studies: Advantages and disadvantages. *BMJ (Online)*, 348(mar26 2), g2276--g2276. https://doi.org/10.1136/bmj.g2276

Sen, A. (2007). Capability and Well-Being. In *The Quality of Life* (pp. 30–53). Oxford University Press. https://doi.org/10.1017/CBO9780511819025.019

Serrao, M. V., Sequeira, A. H., & Hans, B. V. (2012). Designing a Methodology to Investigate Accessibility and Impact of Financial Inclusion. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2025521

Shah, R., & Goldstein, S. M. (2006). Use of structural equation modeling in operations management research: Looking back and forward. *Journal of Operations Management*. https://doi.org/10.1016/j.jom.2005.05.001

Shih, T. Y., & Ke, S. C. (2014). Determinates of financial behavior: Insights into consumer money attitudes and financial literacy. *Service Business*. https://doi.org/10.1007/s11628-013-0194-x

Skagerlund, K., Lind, T., Strömbäck, C., Tinghög, G., & Västfjäll, D. (2018). Financial literacy and the role of numeracy—How individuals’ attitude and affinity with numbers influence financial literacy. *Journal of Behavioral and Experimental Economics*. https://doi.org/10.1016/j.socec.2018.03.004

Sukumaran, K. (2015). Financial Literacy -- Concept and Practice. *DAWN: Journal for Contemporary Research in Management*.

The Economic Impact Of Banking The Unbanked: Evidence From Mexico. (2009). *World Bank Policy Research Working Paper*. https://doi.org/10.1596/1813-9450-4981

Tokunaga, H. (1993). The use and abuse of consumer credit: Application of psychological theory and research. *Journal of Economic Psychology, 14*(2), 285–316. https://doi.org/10.1016/0167-4870(93)90004-5

William Lapp. (2010). *Behavioral Models for Prosperity: A Statistical Assessment of Savings and Behavioral Change*. https://doi.org/https://www.earn.org/wp-content/uploads/2015/03/5_-_Behavioral_Models_for_Prosperity-A_Statistical_Assessment_of_Savings_and_Behavioral_Change-1.pdf

Williams, B., Brown, T., & Onsman, A. (2012). Exploratory factor analysis: A five-step guide for novices. *Journal of Emergency Primary Health Care (JEPHC)*. https://doi.org/10.1080/09585190701763982

World Bank. (2015). *The Little Data Book on Financial Inclusion 2015. The Little Data Book on Financial Inclusion 2015*. The World Bank. https://doi.org/10.1596/978-1-4648-0552-3

Zhao, H., Hills, G. E., Seibert, S. E., & Hills, G. E. (2005). The Mediating Role of Self-Efficacy
in the Development of Entrepreneurial Intentions. *Journal of Applied Psychology, 90*(6), 1265–1272. https://doi.org/10.1037/0021-9010.90.6.1265

Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of Development Finance, 6*(1), 46–57. https://doi.org/10.1016/j.rdf.2016.05.001

Zulfiqar, Kalsoom; Chaudhary, Muhammad Aslam; Aslam, A. (2016). Financial Inclusion and its implications for inclusive growth in Pakistan. *Pakistan Economic and Social Review, 54*(02), 297–325.