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Unlocking Financial Inclusion: The Effect of Perceived Information Transparency, Financial Attitude and Financial Self-Efficacy

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The study investigates the connection between financial attitude, perceived information transparency, and financial inclusion. Financial self-efficacy will act as a mediator. The study tries to shed light on these connections so that policymakers, financial institutions, and other interested parties can devise better ways to promote financial inclusion and give everyone the tools they need to fully participate in the financial system. This study employed a quantitative research strategy. The primary tool for collecting data was a self-administered questionnaire sent to people in Faisalabad, Pakistan, using a snowball selection process. The relationships between people's perceptions of information openness, financial mood, confidence in their financial handling abilities, and financial inclusion were examined using structural equation modeling (SEM). The role of financial self-efficacy in these relationships was investigated through a mediation analysis. Financial attitude, perceived information transparency, financial self-efficacy, and financial inclusion are positively correlated. Good financial attitudes and perceived information transparency increased financial self-efficacy and financial inclusion. Also, financial self-efficacy influenced the relationship between perceived information transparency, financial attitude, and financial inclusion.

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1. Introduction

It is troubling to see that millions of individuals still need to be part of standard financial structures in today's globalized economy, where financial inclusion is a critical consideration in determining social and economic growth. Imagine that a shocking 1.4 billion people do not have access to simple financial services (Figure 1). A fundamental barrier to economic and social development in underdeveloped countries like Pakistan is that its citizens need help gaining access to official financial services, whether out of necessity or preference. As an intervention strategy, financial inclusion (FI) aims to reduce the type of market resistance that prevents markets from operating in favor of the poor and the underprivileged by increasing the number of people who have access to and use financial services and products like savings, insurance, credit, remittances, also guidelines. FI is the deliberate increase in the availability and use of financial services and goods, e.g., banking, remittances, insurance, and credit (Ozili, 2021).

Figure No 1: Adults with no account "Global Findex Database 2021

Inclusive economic growth has become a big deal for emergent countries because it concentrates on giving everyone the same economic opportunities, especially those with low incomes, and including them in economic growth. It allows people to borrow money and invest in financial products or services, increasing their chances of escaping poverty, advancing equality, and finding work. It protects the impoverished against economic shocks and enhances their well-being and welfare. It ensures that productive jobs will be available in the long run and tries to include people left out of the system (Erlando et al., 2020). People's unwillingness or incapacity to use formal financial services impedes the growth and prosperity of developing economies like Pakistan (Demirguc-Kunt et al., 2018). FI is a strategy that aims to eliminate market resistance that prevents markets from operating to the benefit of the poor and the disadvantaged by increasing access to and use of financial services and products such as

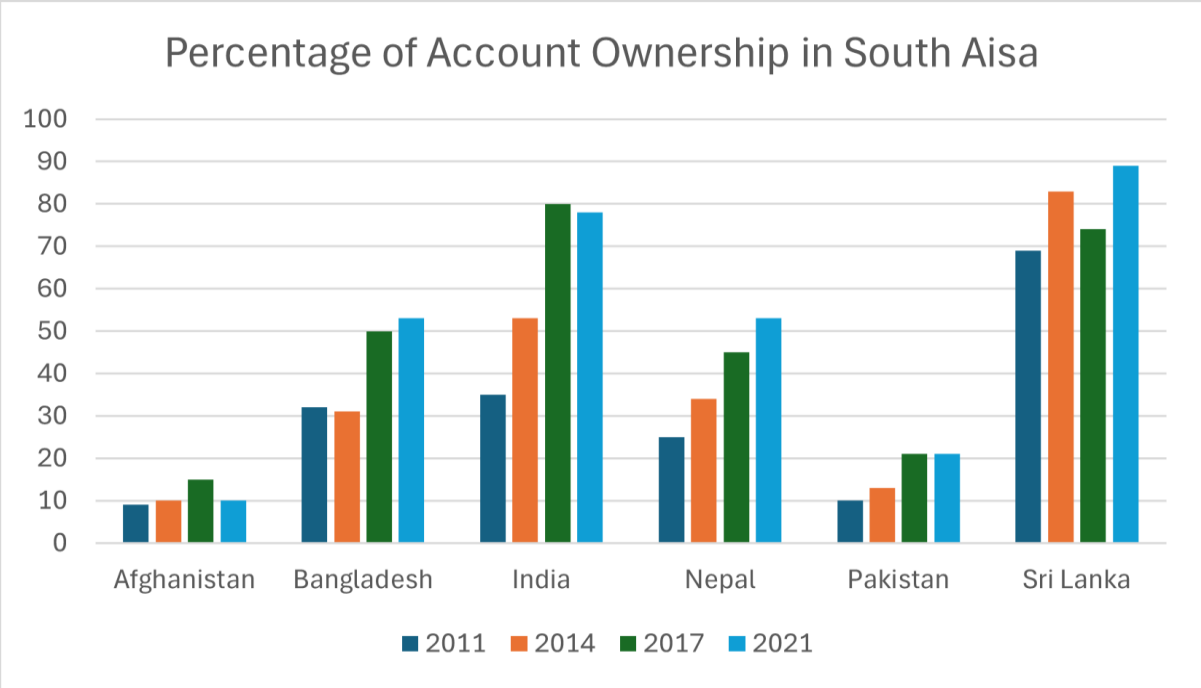
remittances, credit, savings, payments, and insurance among the large population (Ozili, 2021).

Financial exclusion (FE) is still a problem in Pakistan, even though formal markets have grown significantly. This is partly because of intelligent and bold changes to the regulatory system that let technology change. Also, the solidity and growth of the traditional financial system may be due to the intense competition from informal institutions that want to offer financial services to low-income people (Noreen et al., 2022). FE is still common in rural areas where few bank branches, ATMs, or bank agents offer official financial goods and services. In the same way, 70% of Pakistan's population, including 60% of those who live in rural areas, have limited or else access to official financial services because most entry points and services are in cities (SBP, 2019). According to the Global Findex Database 2021 (Table 1 & Figure 2), there has been a global account ownership rate of 76 percent, while developing countries have maintained a rate of 71 percent.

Table No 1: Account Ownership in Various South Asian Countries (%) "Global Findex Database 2021"

	Afghanistan	Bangladesh	India	Nepal	Pakistan	Sri Lanka
2011	9	32	35	25	10	69
2014	10	31	53	34	13	83
2017	15	50	80	45	21	74
2021	10	53	78	53	21	89

Figure No 2: Account ownership in various South Asian Countries (%) "Global Findex Database 2021."



According to Euromoney, it is thought that between 161 and 182 million people in Pakistan do not have bank accounts (Frost, 2023). About 100 million people in the country do not have a bank account, making it the third-largest adult population in the world that does not

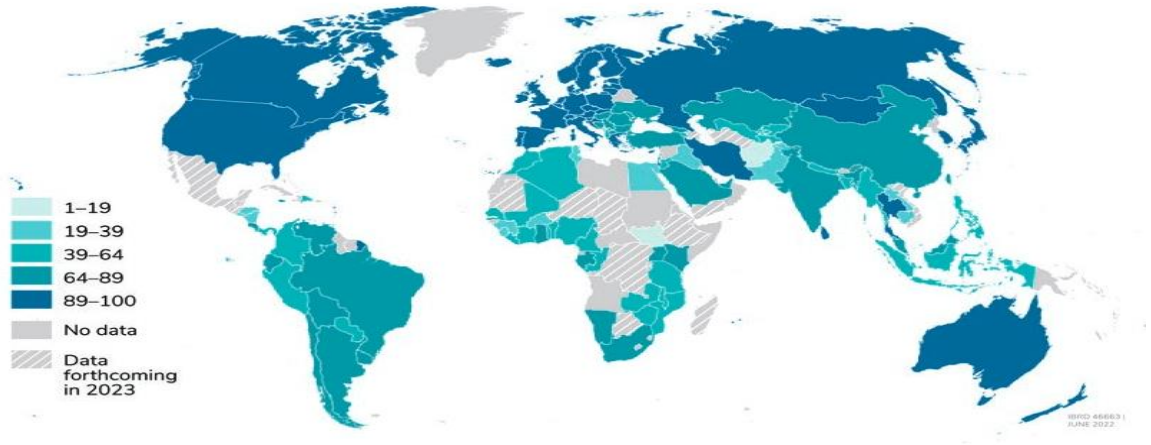
have a bank account (Siddiqui, 2023). The unbanked population is predominantly concentrated in emerging nations, with around 50% residing in eight specific countries: Pakistan, Mexico, China, Bangladesh, Indonesia, India, Nigeria, and Afghanistan. Account ownership varies significantly throughout different economies. The unbanked adults have cited numerous causes, both voluntary and involuntary, for their exclusion from banks on a global scale, including South Asia, East Asia, and Pakistan (Demirgüç-Kunt et al., 2022).

Table 2 & Figure 3 shows the problems that stop people from getting financial inclusion, separating those problems into those that people choose to have and those that they do not, in Pakistan, South Asia, East Asia, and worldwide. Regarding forced barriers, distance is a big one in South Asia, where 36% of respondents found it challenging. This is compared to 24% in Pakistan, 33% in East Asia, and 20% worldwide. Also, the price of financial services is very high in Pakistan. 33% of people there think it is too expensive, compared to 15% in South Asia, 7% in East Asia, and 36% worldwide. Documentation needs are also a big problem in Pakistan (22%), higher than in South Asia (10%), East Asia (6%), and the world (13%). South Asia (27%) has more trust and confidence problems than Pakistan (16%), East Asia (16%), and the rest of the world (6%).

Table No 2: Worldwide Financial Inclusion Barriers "Global Findex Database 2021"

Barriers	Pakistan (%)	South Asia (%)	East Asia (%)	World (%)
Voluntary Reasons				
Inadequate funds	55	20	15	65
The family already has an account	15	13	9	25
Religious Reasons	8	4	2	9
Involuntary Reasons				
Too Far away	24	36	33	20
Too Expensive	33	15	7	36
Documentation requirements	22	10	6	13
Confidence & Trust	16	27	16	6

Figure No 3: Account ownership rates across the world "Global Findex Database 2021"



In Pakistan, 55% of respondents said that not having enough money was a big problem regarding volunteering. This is more than in South Asia (20%), East Asia (15%), or the rest of the world (65%). In Pakistan, 15% of respondents said their family already had an account. This is compared to 13% in South Asia, 9% in East Asia, and 25% worldwide. Also, 8% of respondents in Pakistan say they did it for religious reasons. This is more than in South Asia (4%), East Asia (2%), and the world (9%). These results show how complicated the problems with FI are. To eliminate these problems effectively, we need targeted strategies that consider the dynamics and preferences of each area.

Approximately 76% of the world's population has an account with a bank or other regulated financial institution that allows deposits and includes mobile money service providers. Huge differences become obvious when account ownership is examined based on geographical or economic characteristics. Compared to high-income countries like Canada, Germany, and the UK, 100% of people have an account. However, only 21% of people in Pakistan have a bank account. (Demirgüç-Kunt et al., 2022).

Table No 3: ***Comparison of Unbanked Adults in South Asian Countries "Global Findex Database 2021"***

	Number of unbanked Adults			**Percentage**		
YEARS	**2014**	**2017**	**2021**	**2014**	**2017**	**2021**
India	423,563,8008	192,099,520	431,471,891	47 %	20 %	22 %
Pakistan	105,471,464	103,057,496	113,770,970	87 %	79 %	79 %
Sri Lanka	2,670,387	4,213,449	1,794,743	17%	26%	11 %
Nepal	11,651,473	10,076,998	9,541,026	66 %	55 %	46 %
Afghanistan	15,577,469	16,781,520	20,461,146	90 %	85 %	90 %
Bangladesh	73,431,208	56,224,140	56,928,864	69 %	50 %	47 %

Table 3 shows the percentage of adults in several South Asian nations without conventional banking services in 2014, 2017, and 2021. India's unbanked fell from 423.56 million in 2014 to 192.1 million in 2017. It rose slightly to 431.47 million in 2021. The percentage of unbanked people dropped from 47% in 2014 to 20% in 2017, then rose to 22% in 2021. In Pakistan, 87% of people had no bank account in 2014. This dropped to 79% in 2017 and 2021. Despite the percentage improvement, the number of unbanked people has steadily increased, reaching 113.77 million in 2021. Sri Lanka's non-banking population changed. The population without banking services rose from 2.67 million in 2014 to 4.21 million in 2017, then fell to 1.79 million in 2021. The percentage of people without bank accounts rose from 17% in 2014 to 26% in 2017, then fell to 11% in 2021.

Nepal has 9.54 million unbanked people in 2021, down 18.1% from 11.65 million in 2014. In 2021, 46% of people did not have a bank account, down 20% from 66% in 2014. Afghans without bank accounts fell from 90% in 2014 to 85% in 2017 and 47% in 2021. However, individuals without bank accounts rose from 15.58 million in 2014 to 20.46 million in 2021. In Bangladesh, the number of unbanked persons dropped from 73.43 million in 2014 to 56.22 million in 2017 but climbed to 56.93 million in 2021. Similarly, the number of unbanked people declined from 69% in 2014 to 50% in 2017 but increased to 90% in 2021. South Asians without bank accounts declined from 632.70 million in 2014 to 382.53 million in 2017. It rose slightly to 431.47 million in 2021. These trends reveal how FI has changed in the area over time. The percentage of South Asian adults without bank accounts and government financial services shows fascinating patterns and extremely alarming scenarios. General stagnation in South Asia: It is concerning that the region's unbanked population did not decrease between 2017 and 2021. South Asian governments may need to work harder to tackle structural issues that impede FI's success. These troubling patterns and situations can help policymakers, researchers, and financial institutions develop specific plans to enable more people in the area to access financial services. This also shows how important it is for policies on FI to be constantly reviewed and changed to deal with new problems.

This study shows how information transparency, financial attitude, self-efficacy, and financial inclusion are related in Faisalabad, Pakistan, adding to previous research. The results demonstrate the importance of open, honest financial environments and positive money attitudes for financial inclusion programs. Finding financial self-efficacy as a crucial mediator indicates how important it is to enhance people's money confidence and skills to create financial equality. The study provides valuable information that can help us establish policies and find ways to provide financial services to everyone.

1.1 Research Questions

The paper investigates what makes Pakistani society more financially inclusive. The study examines how PIT and FAT affect financial service access and how FSE affects these relationships.

RQ 1: Does the individual's perceived information transparency and financial attitude affect their financial self-efficacy and level of financial inclusion?

RQ 2: Is there a connection between perceived information transparency, financial attitude, and financial inclusion, direct and rather mediated by financial self-efficacy?

2. Literature Review

The notion of FI, encompassing the availability and consumption of official financial services, has garnered considerable attention in recent years in scholarly and policy debates. To achieve economic growth and reduce poverty, countries need to better understand the factors that affect people's engagement in the financial system. This literature review aims to make FI easier to understand by looking at essential study results, conceptual models, and real-world data.

2.1 Financial Inclusion

The concept of "financial inclusion," or the availability and utilization of formal financial services, is gaining favor among academics and legislators. Understanding the elements that influence FI is crucial for nations seeking to eradicate poverty and enhance economic progress. Financial institution funding has quickly become a primary priority when discussing boosting national economies. Many feel this is necessary to decrease poverty, boost the economy, and unite the population. Since it is considered that all people, regardless of socioeconomic level or background, should have equal access to and usage of formal financial institutions, "financial institution" (FI) refers to a wide variety of services and commodities (Demirguc-Kunt et al., 2018). Since 2005, scholars and politicians have worked on this topic extensively. Ensuring all citizens have access to essential banking services can boost economic growth and financial independence (Lal, 2018). This is one way a nation may adopt this policy. It may help individuals and organizations save for the future, invest in education, seize opportunities, and avoid risks (Demirguc-Kunt et al., 2018). According to Ikram (2015), financial services are more accessible and helpful without compromising security, usability, or cost.

According to various organizations, "FI" might mean many things. Everyone having access to and using the formal financial system is known as FI in a broad sense. People who fall within income brackets and social strata that are considered less privileged are included in this description (Mia, 2016). "Financial inclusion" refers to people using and benefiting from the nation's official financial system. FI becomes practical until a sizable portion of the population uses official accounts (Sarma & Pais, 2011). Most research has examined how having a bank account or a loan can be considered a part of being financially included. As (Mindra et al., 2017) say, real FI should be measured from the account holder's point of view. This is because the account holder is the best person to judge whether they are part of the financial system. This can be done by measuring the account holder's actual access to the financial institution (FIs), their use of distinct kinds of products (savings, credit, insurance, and remittances), and their level of satisfaction with using financial services and products. For this definition, the term "FI" refers to the condition of a person when they have complete access to the services offered by an FI in a manner that is timely, comfortable, informative, and affordable while also maintaining complete respect for their dignity (Dahiya & Kumar, 2020).

FI comprises various components to ensure that individuals and businesses can access financial services and products. These components collectively promote economic growth, reduce poverty, and enhance social cohesion. People and society are affected in many ways by their involvement in the financial system. Formal financial services stimulate entrepreneurship and make investing easier (Dahiya & Kumar, 2020). As (Florant et al., 2020), FI impacts the

economy, helps bring people together, and reduces unfairness by providing financially disadvantaged groups with the same opportunities as other groups. FI makes it easier for people to save, trade, and protect themselves against sudden changes in their finances, which makes a big difference in reducing poverty (Lal, 2018).

In conclusion, FI is broad and changing, and it means more than just giving people access to banking services. To be more specific, it includes a lot of different services and traits that are all very important for promoting social unity, ending poverty, and growing the economy. The business world is constantly changing because of new technologies. So, lawmakers and professionals must change the rules to take advantage of chances and deal with problems. It is paramount to fully understand the factors that affect FI and the following effects to make policies that promote economic growth that help everyone.

2.2 Perceived Information Transparency

A significant factor in determining financial inclusion is how open people think financial systems are about sharing information. In this case, "transparency" means that information about financial goods, services, and terms is easy to find and understand (Claessens & Klapper, 2005). Beck et al. (2009) found that people are more likely to use formal financial services when they think the information, they get from financial companies is clear, understandable, and trustworthy. "Information-based view" (Dalton et al., 2019) backs up the idea. The statement asserts a clear correlation between increased access to information and increased access to financial resources.

Researchers from various disciplines have presented several alternative ways to define "transparency." Human resource management (Berkelaar, 2017); leadership studies (Walumbwa et al., 2007)); CSR (Quaak et al., 2007)); information systems (Granados & Gupta, 2013) and workplace ethics (Kaptein, 2008) are just a few of the fields that commonly examine the concept of transparency. However, despite their differences, several of these definitions share commonalities, including the following: Disclosure of information is required for such openness and transparency. The degree to which information flows freely within and between organizations and their clients is expressed using the term "transparency," which was developed to describe this phenomenon (Liu et al., 2015). In addition, according to (Schnackenberg et al., 2020), PIT is defined as information that possesses all three qualities: correctness, clarity, and disclosure. Information of a high standard willingly and deliberately distributed is essential to transparency. According to (Losada-Otálora & Alkire, 2019), transparency is a perception. This definition is based on prior research (Schnackenberg & Tomlinson, 2016), and it describes information transparency as the "perceived quality of information that FIs share intentionally with their customer." As stated, revealing information is the foundation upon which information transparency of FIs is built. Not sharing customer data makes it hard to assess transparency. Second, withholding or concealing information affects transparency (Losada-Otálora & Alkire, 2019).

People find it increasingly difficult to manage their finances as the intricacy of the financial system continues to grow. It is essential to have the knowledge, skills, and self-assurance to successfully handle personal money and rebound from financial setbacks (Muir et

al., 2017). On the other hand, having knowledge and a grasp of the intricate workings of the global financial system is likely to improve an individual's capacity to manage their finances (financial self-efficacy) successfully. The financial institution's capacity to provide transparent information also improves individuals' abilities to participate in the financial system (FI), which is essential.

Making information clear is essential to trying to include everyone in the financial system. Effective communication encourages financial inclusion by giving people more power, building trust, and lowering hurdles to entry. Information transparency is essential for building financial systems that work for many people, like those who need essential banking services, financial goods, and technology that works for everyone. This study came up with the following link:

H1: Financial self-efficacy is positively associated with perceived information transparency.

H2: A favorable relationship between perceived information transparency and financial inclusion.

2.3 Financial Attitude

People's financial attitudes, which include how they think, feel, and act regarding money, greatly impact their ability to get financial help. How someone feels and acts with money can greatly affect how often they use formal financial services, how easy it is to get into banks, and how involved they are with the official financial system. This part discusses the link between how people think about money and how financially included they are. The text talks about how financial goods and services are used and how they affect creating an economy that works for everyone. How someone feels about the expected behavior or outcome depends on how they see it and whether they support or disagree with the behavior or outcome (Rai et al., 2019). Attitude experts and thinkers (Ibrahim & Alqaydi, 2013) thought that an attitude is shown by cognitive or evaluative factors that send information based on the expected outcome. This indicates that people consider the reasons for their actions and their likely consequences before acting according to that reasoning within a specific context (Adiputra & Patricia, 2020). The idea of planned behavior, it can deduce that an individual's engagement in behavior will affect that person's access to and usage of financial services and, by extension, their FI. An essential premise of the concept of attitude, according to (Ajzen, 2015), is that attitudes influence, shape, direct, and predict actual behavior. The reason was that one's attitudes have a significant role in determining one's actions. Therefore, it is expected that people who use financial services will systematically evaluate the importance of doing so to improve their wellbeing and then act accordingly. Because of this, people are more likely to take part in and carry out the actions that, upon evaluation, are conducive to attaining the results they have set out to achieve (Arifin, 2018).

An individual's attitude towards money might significantly impact their proficiency in utilizing formal financial systems. Making banking services more accessible requires a good FAT, which involves having faith, confidence, and accepting responsibility for money difficulties (Sarpong, E., & Boakye, 2017). When people have a positive outlook on money, they are more likely to form and maintain relationships with financial institutions that will

assist them in accomplishing their financial objectives and enhancing their general wellbeing. Similar trends are seen in the prudent use of savings accounts, loans, and insurance. Demirguc-Kunt et al. (2018) found that optimistic people are likelier to use these resources to satisfy their financial needs.

According to Hilgert et al. (2003), a person's money perspective affects their probability to invest, which increases their wealth and ensures long-term financial stability. Finally, an individual's money involvement is strongly connected with their money attitude. With a positive mindset, people are more likely to use financial goods, have easier access to banking services, and the economy grows overall. Efforts should be made to eliminate behavioral obstacles, educate individuals on healthy money practices, and establish trust to make financial institutions more welcome. As a result, the research proposes a hypothesis that:

H3: Financial attitude has a substantial beneficial link with financial self-efficacy.

H4: Financial attitude is associated with Financial Inclusion in a good way.

2.4 Financial Self-Efficacy (FSE)

The capacity of an individual to organize and initiate action steps toward achieving a specific objective is called self-efficacy. It depends on how much confidence a person has in completing specific activities. It is an actual skill that each individual possesses (Zimmerman & Cleary, 2006). When an individual has a peak level of self-efficacy, they have greater confidence in their ability to perform the activity successfully (Lown, 2011). Self-efficacy is a person's subjective appraisal of their potential to manage, influence, and control various facets of life. This definition applies to self-efficacy in a generic sense (Mindra et al., 2017). Individuals with a strong sense of self-efficacy engage in the specific activity of self-confidence, set high ambitions, are more optimistic, evaluate tasks positively, and consider less adverse psychological impacts in their decision-making (such as anxiety, sadness, and stress) (Asebedo et al., 2019).

Financial self-efficacy is the extent to which a person has faith in their abilities to acquire the knowledge necessary to make sound financial choices (Lone & Bhat, 2022; Netemeyer et al., 2018). A person's likelihood of success is directly correlated with their confidence level in their financial abilities (Brüggen et al., 2017). FSE refers to an individual's level of confidence in their competence to get and utilize various financial products and services, make challenging financial choices, and navigate complex financial circumstances (Ghosh & Vinod, 2017). Self-efficacy refers to an individual's confidence in initiating and engaging in actions to achieve a desired outcome. One's belief influences one's capacity to carry out particular responsibilities, and it is a fundamental skill that every individual possesses (Urdan & Pajares, 2006). Confidence in one's abilities and conviction that one can succeed in each endeavor are other definitions of self-efficacy. One's ability to successfully deal with life's obstacles is also correlated with their level of self-assurance, optimism, and motivation(Bandura, 2006). Someone who believes in their ability to complete a task successfully has strong self-efficacy (Lown, 2011).

2.5 Financial self-efficacy and its role as a mediator between PIT, FAT & FI

It is important to remember that FSE is a critical factor in how information transparency, FAT, and financial inclusion affect each other. People who think financial

knowledge is explicit feel more confident in their ability to handle their money, supported by Bandura's self-efficacy theory (1997) (Bandura, 1997). Clear information reduces uncertainty, boosts confidence, and gives people the tools to understand and effectively interact with the financial world (Smith, 2018). Research by (Lusardi & Mitchell, 2014; Rai et al., 2019) found that people's perceptions of their financial management skills are enhanced when they have a positive attitude about money. Positiveness about money is associated with the belief that one can manage one's finances wisely, effectively use one's resources, and achieve one's financial goals. It is necessary to have self-efficacy to enable individuals and people to take control of their financial situation and to encourage financial sovereignty. This supports the goal of making finance more accessible to everybody. Self-efficacy may be influenced by actions, experiences, and surroundings, according to (Stajkovic & Luthans, 1998). Thus, self-efficacy is varied. Self-efficacy has been shown to mediate and moderate attitudes and actions in other areas, but not here. Based on current evidence, the research predicts:

H5: Financial self-efficacy substantially influences financial inclusion.

H6: The positive relationship between perceived information transparency and FI is mediated by FSE

H7: Financial attitude positively correlates with FI, mediated by FSE

3. Methodology

3.1 Location & Participations:

The study is undertaken in Faisalabad, Pakistan, to examine FI, FSE, FAT, and PIT correlations. Faisalabad is a good case study for financial inclusion since it is vital to Pakistan's economy. Data was collected from 320 Faisalabad inhabitants by having them fill out a standardized questionnaire. The method ensured that participants gave helpful comments, allowing them to reveal their finance al mindset and behavior.

3.2 Sampling Method

Snowball sampling is used to gather firsthand information from Faisalabad residents. In snowball sampling, initial participants, called "seeds," are picked and evaluated individually. Asking these people to find new research participants is the next stage. This approach creates a "snowball" effect as players contribute. A structured questionnaire was the primary data-gathering tool. PIT, FI, FSE, and FAT remarks were carefully and mindfully incorporated into the questionnaire. A methodical approach was used to gather investigative data. This framework ensured that the data met research goals.

3.3 Trustworthiness of the Tool:

Data collection instrument confidence is crucial to providing a trustworthy study. Cronbach's alpha assesses the questionnaire's internal consistency and integrity. The fact that all component coefficients were more significant than 0.70 indicates strong reliability. The findings support the study's results by showing that the questionnaire can accurately measure the main components.

3.4 Data Collection Process:

Credible sources is used to create survey questions due to the relevance of study validity and reliability. This method assures that questions have been thoroughly tested in similar situations, strengthening the study, and allowing for more meaningful outcome comparisons.

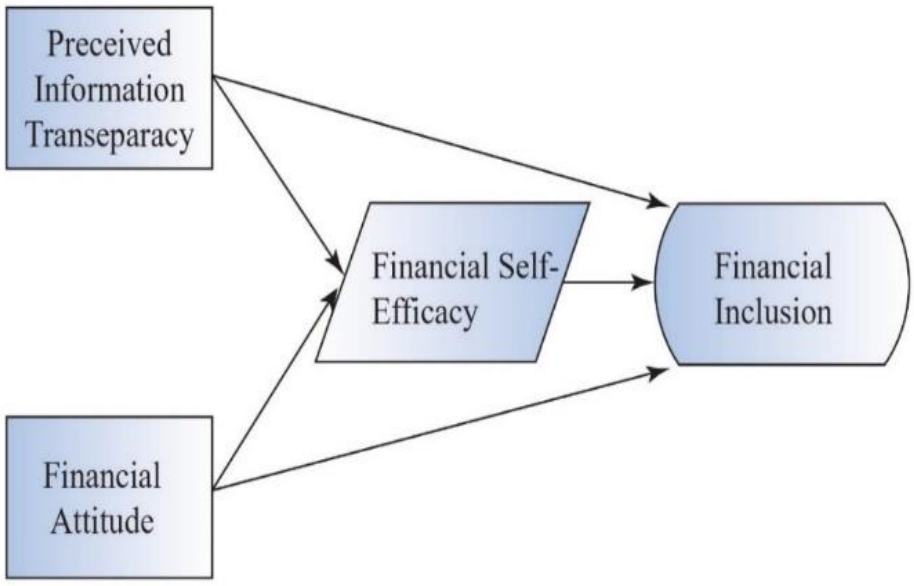
3.5 Measure and Questionnaire

We used a questionnaire consisting of four constructs and 20 items. The scale created by (Liu et al., 2015) was used to measure information transparency, and the items from (Mindra & Moya, 2017) were used to measure a person's financial attitude. For FSE, we used the measure that (Lown, 2011; Zia-ur-Rehman et al., 2021) produced, and for FI, we used the items that (Mindra et al., 2017; Mohapatra, 2014) proposed. The responses are evaluated using a five-point Likert scale from "strongly disagree" to "strongly agree." The scale has an ordinal character. We evaluated hypotheses with Smart PLS 4.1.0.0 and SPSS software.

4. Result and Discussion

In this work, SmartPLS 4.0.9.9 was used to implement SEM. A two-stage strategy, measurement model assessment and structural model assessment, have been employed.

Figure No 4: Theoretical Framework



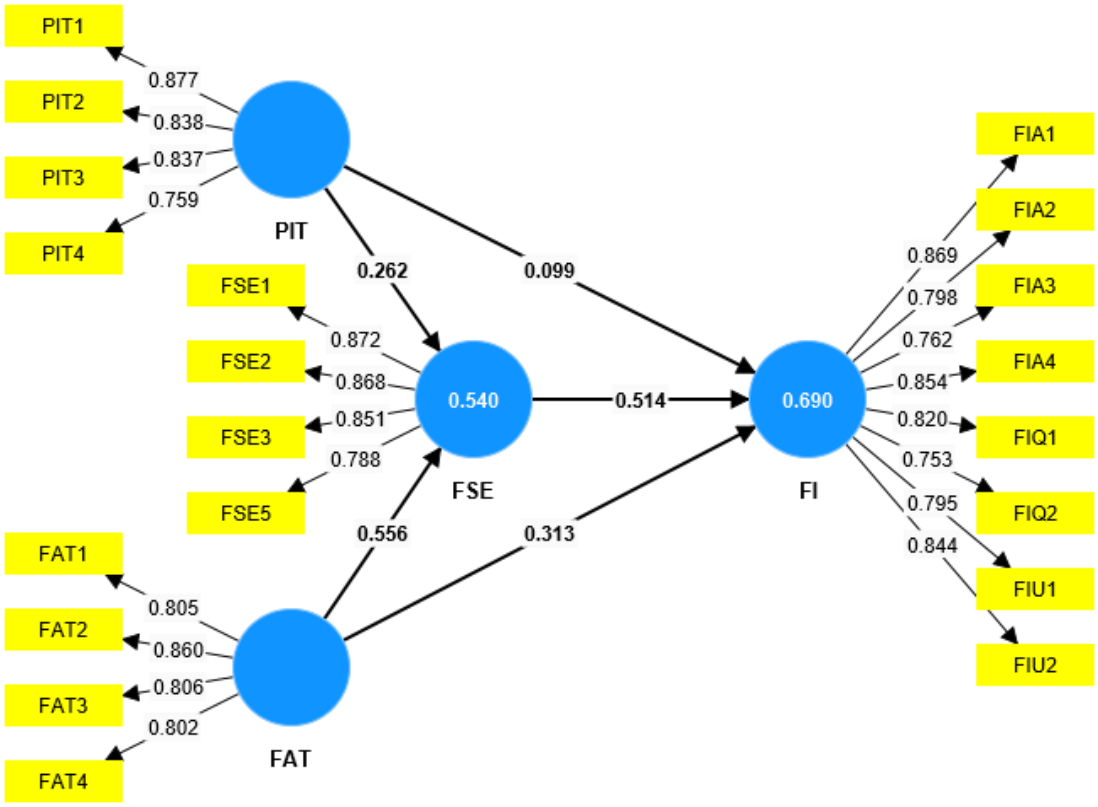
4.2 Assessment of measurement model

The proposed conceptual framework was tested for reliability and validity when analyzing the measurement model. Its validity is determined through factor loading and composite reliability.

Table 4 and Figure 5 demonstrate that both the overall construct and the individual items meet the validity and reliability requirements given by (Henseler et al., 2009). All items exhibited significantly increased loading, indicating the validity of each component. Convergent and discriminant validity were employed to assess the accuracy of the model (J. F. Hair et al., 2012).

Composite reliability (CR) and average variance extracted (AVE) were also calculated to examine the convergent validity of the construct (Subahi et al., 2020). As seen in Table 5, both AVE and CR are more than the requisite 0.5 and 0.7 for all structures. These results illustrate, therefore, the model's convergent validity and reliability.

Figure No 5: Factor Loading of the Construct



4.3 Discriminant Validity

Discriminant validity analysis was performed as a final step in the measurement model. Discriminant validity refers to a construct's ability to be examined in isolation from other variables. It was determined by comparing the correlation between all latent variables to the square root of AVE. It was, therefore, possible to calculate. Your AVE's discriminatory power depends on whether its square root is larger than the correlation between the constructs. Tables 5 and 6 show that all square root values for the constructs are over the threshold necessary to provide sufficient discriminant validity.

Table No 4: Reliability and Validity of the Construct

CONSTRUCT	Composite reliability	(AVE)	Cronbach's alpha
PIT	0.877	0.686	0.850
FAT	0.844	0.670	0.837
FSE	0.871	0.715	0.867
FI	0.929	0.661	0.926

Table No 5: Discriminant Validity {(HTMT) – Matrix}

	FAT	FI	FSE	PIT
FAT				

FI	0.807		
FSE	0.804	0.878	
PIT	0.642	0.610	0.649

Table No 6 : Discriminant validity {Fornell-Larcker criterion}

	FAT	FI	FSE	PIT
FAT	0.819			
FI	0.729	0.813		
FSE	0.702	0.790	0.846	
PIT	0.559	0.568	0.572	0.828

Structural model assessment

The importance of the path coefficient and the amount of variance explained in R^2 affect a structural model's predictive power and accuracy. To evaluate the efficacy of the R^2 bootstrapping method, 5000 bootstraps were applied to 100 sets of actual data. The R^2 values proposed by (Hair et al., 2012; Mohsin et al., 2020) are 0.25, 0.50, and 0.75, respectively. These values represent a low, moderate, and high level of accuracy in prediction, respectively. Table 7 reveals that the R^2. Values for FSE and FI, which represent the accuracy of prediction, are **0.540** and **0.690**, respectively. According to the value showing its level of predictive accuracy, FSE is an inaccurate predictor. In addition, the value of FI indicates that it is a strong accuracy predictor.

Table No 7:Value of R^2

Construct	R^2	Predictive Accuracy
FSE	0.540	Moderate
FI	0.690	Strong

Using the Q^2 test, we will now determine how well the endogenous factors can predict the experiment's outcome. The blindfolding procedure was utilized to arrive at an estimate for the value of Q^2. The value of Q2 is recommended to be bigger than 0, as this is the normal rule for its use. The Q^2 values of FSE and FI are shown to be **0.533** and **0.563**, respectively, in Table 8.

Table No 8 : Value of Q^2

Construct	Q^2	Predictive Relevance
FSE	0.533	Yes (Strong)
FI	0.563	Yes (Strong)

We analyze the f^2 parameter of the structural model to assess the magnitude of the observed effect. According to the criteria established by (J. Hair et al., 2017), an impact size of 0.35, 0.15, or 0.02 may be awarded to a construct to denote large, moderate, or tiny effects. The f^2 values and their corresponding impact sizes are displayed in Table 9.

Table No 9: Value of f^2

Relationship	f^2	Effect size
PIT ⟶ FSE	**0.102**	Small
PIT ⟶ FI	**0.020**	Small
FAT ⟶ FSE	**0.461**	Large
FAT ⟶ FI	**0.150**	Medium
FSE ⟶ FI	**0.393**	Large

Examining and explaining the data to test a hypothesis requires the utilization of path coefficients and indirect influence for mediation. The findings are analyzed to see whether they provide evidence in favor of our theory. The p-values of each of the path coefficients are included in the outcomes. We used the bootstrap algorithm to apply 5000 bootstraps to 320 cases; the typical result for the route coefficient falls between -1 and +1. Closer values of the path coefficient to +1 suggest a stronger positive correlation. In contrast, values closer to -1 indicate a stronger negative relationship. To investigate whether the correlation was significant, the standard error was calculated. According to the findings of our investigation, five out of the five possible variable-relationship pairings are statistically significant when the p-value is less than 0.1 (Figure 6).

Figure No 6: Path Coefficient S. PLS 4

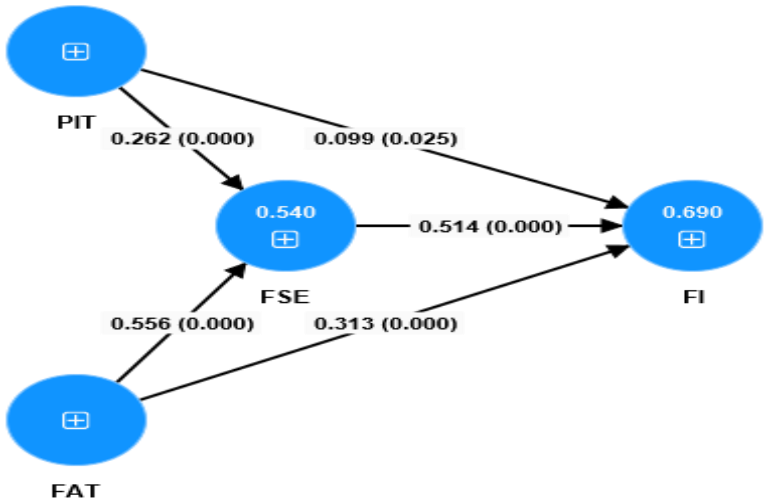


Table 10 summarizes the significant coefficients from a complete FI, PIT, FAT, and FSE study. Path coefficient and p-value are carefully examined before supporting a hypothesis. The first hypothesis (H1) linked PIT and FSE. The investigation supported the hypothesis with a 0.000 p-value and 0.262 path coefficient. The path coefficient of 0.099 and p-value of 0.025 support the second hypothesis (H2) that PIT and FI are correlated. This shows that financial information clarity promotes FI. (H3) examined if FAT and FSE were related. The path coefficient is 0.556, and the p-value is 0.000, showing a strong and statistically significant association, supporting the hypothesis. (H4) examined the relationship between FAT and FI. A path coefficient of

0.313 and a p-value of 0.000 support the hypothesis. This emphasizes the role of FAT in FI results. The fifth hypothesis (H5) examined the relationship between FI and FSE—the path coefficient of 0.514 and p-value of 0.000 support the hypothesis.

Table No 10:Summary of Path Coefficients

Hypothesis	Relationship	Path coefficient	p-value	Decision
H1	PIT ⟶ FSE	0.262	**0.000**	Supported
H2	PIT ⟶ FI	0.099	**0.025**	Supported
H3	FAT ⟶ FSE	0.556	**0.000**	Supported
H4	FAT ⟶ FI	0.313	**0.000**	Supported
H5	FSE ⟶ FI	0.514	**0.000**	Supported

The mediation impact of FSE between PIT and FI and the FAT and FI is tested using a bootstrap approach with 5000 samples to establish statistical significance. (J. Hair et al., 2017) all advocates utilizing variance accounted for (VAF), which is computed by the ratio of indirect impact to the total effect, to determine the magnitude of the mediation effect of FSE.

According to Table 11, **H6** suggested that FSE mediates the link between PIT and FI. The indirect effect of 0.136 and the total effect of 0.234 show a significant mediation effect, explaining 58% of the variance. This suggests that FSE partially mediates the association between PIT and FI. **H7** explored how FSE mediates the link between FAT and FI. The study reported an indirect impact of 0.287, a total effect of 0.599, and a VAF of 48%, indicating a robust partial mediation effect. This emphasizes the importance of one's belief in financial management competence in affecting FAT and FI results.

Table No 11: Summary of Mediation Effect.

Hypothesis	Relationship	Indirect Effect	Total effect	VAF	Mediation
H6	PIT ⟶ FSE ⟶ FI	0.136	0.234	58%	Partial Mediation
H7	FAT ⟶ FSE ⟶ FI	0.287	0.599	48%	Partial Mediation

4.4 Discussion

This study explores the intricate relationships between financial inclusion, financial self-efficacy, financial attitude, and perceived information transparency. According to Lusardi and Mitchell (2014) and Siau and Shen (2003), the findings support past studies on the importance of clear and accessible financial data. The result shows how transparency affects financial behavior and attitudes. According to Bandura's social cognitive theory, financial self-efficacy mediates the importance of confidence in financial management (Bandura, 1997). This is how the theory explains confidence and financial management. This study adds to the literature by providing empirical evidence of these linkages in financial inclusion. (Mindra, 2017; Zia-ur-Rehman, 2021). It provides meaningful data for policymakers and financial organizations aiming to increase financial market access and participation. To better understand these complex linkages and devise targeted actions to enhance financial inclusion.

5. Conclusion

The finding of the research is consistent with the social cognitive theory & TPB, as well as the theory of social learning. This hypothesis examines how PIT, FAT, and FSE improve

financial inclusion. According to the research, perceived information transparency influences financial decisions. Transparent and open financial product and service information is vital to building customer confidence and promoting financial market participation. Mediation research illuminates PIT, FAT, and FI's complex relationships. The substantial partial mediation effects show that FSE affects financial system inclusion. FSE's role as a mediator in money management is crucial to financial inclusion and allowing people to make lucrative financial decisions.

This research found that the availability of relevant information also impacts people's attitudes about their capacity to solve financial problems. Improved PIT may also contribute to a positive change in an individual's FI. The belief that people can take charge of their financial future also contributes to these alterations. People are more likely to feel confident handling their finances when they believe that financial institutions will supply or expose right and transparent information to them. Another way it helps people become more financially included is by increasing their confidence in their ability to meet their current and future financial commitments and aspirations. Based on these findings, it appears that most of Pakistan's population is surviving in conditions that are classified as extreme poverty. Most people in Pakistan are forced to contend with high unemployment rates, high inflation, low life expectancy, and sickness.

5.1 Policy Implications

The results of the study help policymakers boost the economy and expand banking access. Financial education should be a primary priority for policymakers. The government's investment in financial education and decision-making initiatives could lead to long-term financial inclusion. Making financial markets and organizations more transparent about their data is crucial. Suppose individuals can quickly grasp the goods and services offered by formal financial organizations. In that case, people are more likely to use them. Lawmakers should strengthen consumer protection legislation to shield individuals from dishonesty and ensure fair financial transactions. We must also support marginalized groups, including youth, women, and people with low incomes. These areas can benefit financially from targeted programs that simplify access to specialty financial goods and services. The only option to introduce official financial services to areas without them is to invest in financial infrastructure like digital payment systems and banking accessibility. Finally, coordinated collective action and partnerships between key stakeholders, including governments, banks, NGOs, and foreign development agencies, are best for making financial services more accessible. Policymakers must promote sustainable development goals and create a fair financial system with a comprehensive approach.

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