

Effat University Repository

The Impact of Financial Literacy, Social Capital, and Financial Technology on Financial Inclusion in Saudi Arabia

| | |
|---------------|---|
| Item Type | Capstone |
| Authors | Hamed, Rahaf |
| Publisher | Effat University |
| Download date | 2026-04-12 12:34:05 |
| Link to Item | https://repository.effatuniversity.edu.sa/handle/20.500.14131/2264 |



**Effat University
College of business
Department of Accounting & Finance**

The Impact of Financial Literacy, Social Capital, and Financial Technology on Financial Inclusion in Saudi Arabia

A Senior Project

Submitted in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Science in Accounting & Finance

**By:
Rahaf Hamed**

Student ID: S20106779

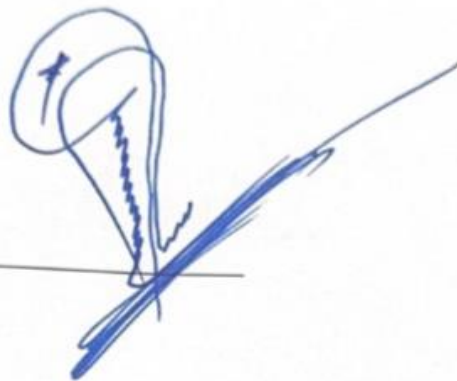
**Supervised by:
Dr. Muhammad Yar Khan**

**Spring Semester 2025
Jeddah, Saudi Arabia**

Certification of Approval

We hereby grant the approval of this dissertation report. The student has compiled the dissertation work as per the requirements of the University.

Supervisor's Name:
Signature: _____



Department Chair: Dr. Mohamed Maher
Signature: _____



Declaration of Authenticity

I, Rahaf Hamed , declare that all of the materials presented in this paper are my own work, or fully and specifically acknowledged wherever adapted from other sources. I understand that if at any time it is shown that I have significantly misrepresented material presented to Effat College of Business at Effat University, any degree or credits awarded to me on the basis of that material may be revoked.

Student's Signature:



24/4/2025

Department Chair Signature:



24/4/2025

College of Business Dean Signature:



24/4/2025



Acknowledgement

I would like to begin by expressing my heartfelt gratitude to Allah SWT for His endless blessings, guidance, and strength throughout this journey of 4 years, without Allah SWT none of this would have been possible.

I would like to thank myself, my brain, and my body for all those sleepless nights of studying hard and working on projects. I managed to make it through this journey of 4 years with outstanding grades and a heart filled with gratitude and love towards my studies and major.

I would like to thank my parents, my siblings, and my brother-in-law for always being there for me and supporting me through my journey. Words can never describe how beyond grateful I am to be blessed with such an amazing supportive family. Their unconditional love has been my greatest source of motivation.

I am extremely grateful to my advisor Dr. Muhammad Khan for his invaluable guidance and unwavering support. To Dr. Mohammad Mahees ,who has guided me throughout these 4 years and has been an amazing role model. To Dr. Edib Smolo who taught me how to become a marketer and left an amazing mark in my life that I will never forget. To all the marketing faculty at Effat University who provided me with insightful advice, support, and an encouraging academic environment.

I would deeply like to thank my colleagues and my friends who made this journey memorable and unforgettable. I am beyond grateful to be surrounded by such heartwarming loving supportive friends. Thank you for making my university experience special.

Lastly, I wish to express my gratitude who contributed, directly or indirectly, to this dissertation. Your kindness and support have left an indelible mark on my academic journey, and I will forever cherish it.

Table of Contents

| | |
|--|----|
| Abstract..... | 7 |
| 1 Introduction..... | 7 |
| 1.1 Research Objectives and Goals..... | 8 |
| 2. Literature Review | 9 |
| 2.1 Financial Literacy and its Benefit..... | 9 |
| 2.1.1 Social Capital's Contribution to Financial Inclusion | 9 |
| 2.1.2 Financial Inclusion in Saudi Arabia..... | 10 |
| 2.1.3 FinTech's Contribution to Financial Inclusions | 10 |
| 2.1.4 Financial Literacy Issues and the Need for Regulation..... | 10 |
| 2.2 Financial Literacy and Financial Inclusions | 10 |
| 2.3 Social Capital and Financial Inclusion..... | 12 |
| 2.3.1 Government Initiatives..... | 12 |
| 2.3.2 Saudi Vision 2030 and Financial Inclusion | 13 |
| 2.4 Financial Technology and Financial Inclusion | 15 |
| 2.5 Behavioral Finance Theory..... | 16 |
| 2.5.1 Technology Acceptance Model (TAM)..... | 17 |
| 2.5.2 Lack of Research on Saudi Arabian Students..... | 17 |
| 2.5.3 Insufficient Emphasis on the Role of Technology in Addressing Financial Exclusion..... | 18 |
| 3. METHODOLOGY | 19 |
| 3.1 Research Designed..... | 20 |
| 3.2 Target Population and Sampling | 20 |
| 3.3 Data Collection Instrument..... | 20 |
| 3.4 Instrument Validity and Reliability | 21 |
| 3.5 Data Collection Procedure | 21 |
| 4. Findings Analysis..... | 22 |

Effat University

RES400- Dissertation Research Project- Spring 2025

| | |
|-------------------------------------|----|
| 4.1 Introduction..... | 22 |
| 4.2 Demographics | 22 |
| 4.3 Social Capital..... | 25 |
| 4.4 Financial Technology Usage..... | 25 |
| 4.5 Financial Inclusion | 27 |
| 4.6 Financial Literacy... .. | 27 |
| 4.7 Summary of Findings..... | 29 |
| CH5 Conclusion..... | 30 |
| 5.1 Limitations | 30 |
| 5.2 Recommendation | 31 |
| References..... | 33 |
| Appendix..... | 35 |



Abstract

Abstract This study investigates the influence of financial literacy, social capital, and financial technology (FinTech) on financial inclusion in Saudi Arabia, particularly in the context of Vision 2030. As the Kingdom advances toward economic diversification, enhancing access to financial services has become a critical national priority. Using a quantitative research approach, survey data was collected from university students across key cities. The findings reveal that while financial technology and social capital have a significant positive impact on financial inclusion, the effect of financial literacy is comparatively weaker. The study highlights the role of FinTech innovations in overcoming traditional barriers to financial access, and the importance of trust-based social networks in facilitating financial engagement. These insights offer important implications for policymakers, educators, and financial institutions seeking to design targeted strategies that strengthen financial inclusion among Saudi youth. Building financial capability, expanding FinTech literacy, and leveraging social structures are recommended as pathways to a more inclusive financial ecosystem in Saudi Arabia.



1. Introduction

The Kingdom of Saudi Arabia's government must take financial inclusion seriously, especially when it comes to growing the range of financial services and products that can enhance the financial security of its people. Various financial institutions and authorities, including the Saudi Central Bank (SAMA), have launched programs to measure and enhance financial inclusion and literacy in line with the Kingdom's Vision 2030, which aims to encourage economic diversification and financial empowerment. In 2021, 74% of Saudi Arabian adults were financially included, whereas only 29% were financially literate, according to a report written by SAMA. This suggests a significant disconnect between the country's financial services accessibility and comprehension (SAMA, 2021).

Students in Saudi Arabia, particularly those in institutions of higher learning, have a critical role to play in the socio-economic development of the nation. As future leaders and change agents, they are meant to be models of good financial behaviour like saving, budgeting, and responsible investing. However, despite the level of education, some of the students still exhibit bad financial decisions, which make them vulnerable to financial risks. A growing number of students have been identified as victims of fraud, including online scams and fraudulent investment schemes, primarily due to limited financial awareness and critical appreciation of digital finance products (Okaz, 2023).

The Ministry of Education and SAMA have initiated programs focused on improving financial literacy among young people, which include awareness campaigns and collaborations with banks to integrate financial education into schools and universities. Nonetheless, the execution of these initiatives varies, and a significant number of students continue to depend on informal financial guidance from relatives and friends. This dependence underscores the importance of social capital in shaping financial habits. In close-knit and traditional communities like Saudi Arabia, financial decisions are more frequently swayed by family and tribal ties, which can either facilitate or hinder access to formal financial institutions.

In addition to promoting financial inclusion, the Saudi government has made substantial investments in the FinTech sector. Through initiatives like Fintech Saudi, which is a collaboration between SAMA and the Capital Market Authority (CMA), the nation has experienced significant growth in digital financial services. These services range from mobile wallets and e-commerce payment systems to crowdfunding platforms tailored to the

needs of a digitally savvy population. FinTech offerings are particularly attractive to university students due to their convenience, speed, and enhanced access. Nevertheless, the growth of digital finance has introduced new challenges. Among these is the rise of digital fraud, where students have fallen victim to fake online investment schemes, unauthorized payment methods, or identity theft through insecure mobile applications.

Although financial inclusion in Saudi Arabia has seen significant progress due to the growth of FinTech and support from regulatory bodies, a concerning gap still exists. Students may have better access to digital financial services, yet they often lack the necessary skills to use these systems securely. This situation, where financial inclusion precedes financial literacy, mirrors similar issues observed in other nations. It prompts important inquiries: how can a generation that is both highly educated and well-connected also be so vulnerable to financial exploitation? In what ways do societal structures and digital environments contribute to this vulnerability?

This study aims to study and explore the impact of financial literacy, social capital, and financial technology on financial inclusion in Saudi Arabia and particularly targets economics and finance students. By pinpointing key gaps and patterns of behaviour, the research seeks to provide tangible recommendations to policymakers, financial institutions, and schools to enhance the student segment's financial well-being and protection. Last but not least, progressing student financial inclusion in the Kingdom is not only a matter of access but one of education, trust, and digital security.

1.1 Research Objectives and Goals

Objectives

The primary objectives of this research are to delve into the link between financial literacy, social capital, and financial technology (FinTech) with regard to fostering financial inclusion within the Kingdom of Saudi Arabia. The study seeks to:

1. Assess the state of financial literacy among diverse demographic groups within Saudi Arabia, as well as its influence on personal financial conduct and inclusion.
2. Evaluate the role of social capital, including trust, networks, and social support, in facilitating or hindering access to financial services.
3. Debate how FinTech innovations are dismantling traditional barriers to financial access, especially for underserved and underbanked communities.
4. Debate the interplay between financial literacy, social capital, and FinTech in advancing financial inclusion.
5. Provide evidence-based recommendations to policymakers, financial institutions, and technology providers to design an inclusive financial policy in the Saudi context.



2. Literature review

Financial literacy is the cornerstone of economic stability and personal financial health. In Saudi Arabia, the Saudi Central Bank (SAMA) has defined financial literacy as having financial knowledge and comprehension of financial concepts, products, institutions, and management aptitudes required by individuals to make efficient and effective financial decisions. These include important elements such as saving, budgeting, investing, and understanding the range of financial products offered by banks and non-bank financial institutions (SAMA, 2020).

In alignment with Saudi Arabia's Vision 2030, the government has been actively encouraging financial literacy as a major facilitator for increasing financial inclusion in Saudi Arabia. One of the flagship programs of Vision 2030 is the Financial Sector Development Program (FSDP), which places top priority on increasing financial literacy among the people. By teaching individuals to manage their finances effectively, the program is aimed at making the country financially powerful. SAMA, in cooperation with the Capital Market Authority (CMA), has launched a number of countrywide campaigns and awareness programs targeting schools, universities, and workplaces, with the hope of spreading a culture of financial responsibility (FSDP, 2018).

2.1 Formulation of the Hypothesis

a. Financial Literacy Effect on Financial Inclusion

Financial literacy plays an important role in enhancing financial inclusion in the Saudi context. According to the Saudi Central Bank (SAMA, 2022), Saudi nationals' financial literacy can be categorized into the following levels:

Well-literate: They demonstrate good understanding of financial services and products, their features, benefits, risks, and legal rights, and possess high competence in using them.

Adequately literate: Individuals possess modest knowledge and assurance regarding financial institutions and services.

Less literate: Individuals have minimal knowledge and engagement with institutions and financial services.

Financially illiterate: Individuals possess small amounts of knowledge, confidence, or ability to utilize financial institutions or products.

The OECD (2018) identifies Financial Knowledge, Financial Behavior, and Financial Attitudes as key indicators of financial literacy. The indicators play an important role in measuring the effect of financial literacy on Saudi financial inclusion.

Pulungan and Ndruru (2019) and Grohmann, Klühs, and Menkhoff (2018) research supports the positive and statistically significant relationship between financial literacy and financial inclusion.

H1: Financial Literacy positively affects Financial Inclusion in Saudi Arabia.

b. The Role of Social Capital in Financial Inclusion

Social capital in the Saudi Arabian context helps facilitate financial inclusion by means of society's networks, trust, and shared norms. In Saudi society, which is well-organized around family, tribe, and community organization groups, there are settings where social trust may influence financial behavior.

Social capital includes such things as:

Trust: Not only within financial institutions but also within informal community organizations.

Networks: Social contacts and relationships that facilitate easier access to financial services.

Norms and Common Values: Social norms that impact financial behavior and reliability.

Putnam (2000) and Narayan and Pritchett (1999) have made the point that higher social capital enhances financial inclusion through improved flow of information, trust development in financial services, and encouraging cooperative financial behavior. In Saudi Arabia, solidary community relationships have the potential to improve individuals' access to financial products through word of mouth, guarantees, and unofficial social networks.

H2: Social Capital positively affects Financial Inclusion in Saudi Arabia.

c. The Role of Financial Technology in Financial Inclusion

FinTech has revolutionized financial inclusion in Saudi Arabia with the rapid growth of FinTech in the country. Initiatives like Saudi Vision 2030 and those under the Financial Sector Development Program (FSDP) promote the adoption of digital banking, e-wallets (e.g., STC Pay, Apple Pay), crowdfunding platforms, and online payment systems.

FinTech has enhanced access to finance for previously unserved customers such as youth, women, and microbusinesses. Features are:

Mobile payment and digital wallets: Increasing urban and rural availability.

Digital lending and crowding platforms: Simple access to lending and investing facilities.

Blockchain and secure electronic transaction: Fostering trust and reducing operational cost.

Evidence by Zalan and Toufaily (2017) and Ozili (2018) supports the contention that FinTech innovations raise considerably the levels of financial inclusion since it assists in lowering some of the barriers in terms of physical distance, nondocumentation, and service price.

H3: Financial Technology has a positive impact on Financial Inclusion in Saudi Arabia.

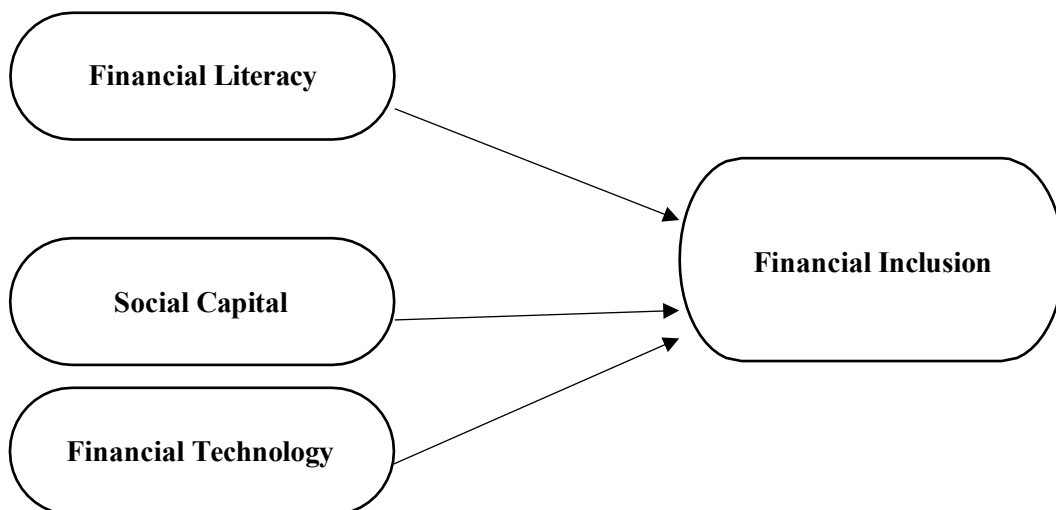


Figure 1: Research Hypothesis



The research design used in the present study is a quantitative study. Three hypotheses were tested using primary data obtained from students studying economics, finance, and business courses. Students are considered an important target group for driving financial inclusion among Saudi Arabians based on the level of financial literacy, social capital, and familiarity with the use of financial technology.

Primary data were gathered, processed, and analyzed to reach conclusions, as advised by Sugiyono (2018).

The study population consisted of 5th-semester students from the faculties of economics, finance, and business administration at top universities in Jeddah, Riyadh, and Dammam, i.e.:

- King Abdulaziz University (KAU)
- King Saud University (KSU)
- Prince Sultan University (PSU)
- Effat University
- Alfaisal University
- Imam Abdulrahman Bin Faisal University (IAU)
- Dar Al-Hekma University

Because the size of the targeted population of the students is projected to be under 1,000 individuals, a sample of 10% was computed by applying the sampling guidelines by Arikunto (2012) and this provided 100 participants who were randomly selected for the study.

Primary data was gathered through structured questionnaires that were directly administered to respondents. Analysis of the data was conducted by employing SPSS version 26 to test the research hypotheses.

| Variable | Indicator | Source |
|---------------------------|--|---|
| Financial Literacy (X1) | Financial Knowledge, Financial Behavior, Financial Attitudes | OECD (2018), SAMA Reports (2022) |
| Social Capital (X2) | Trust, Networks, Social Engagement | Adapted from Bongomin et al. (2016), localized to Saudi society |
| Financial Technology (X3) | Usage of Mobile Banking, Digital Payments, FinTech Services | Fintech Saudi (2023), SAMA Reports |
| Financial Inclusion (Y) | Access to Financial Services, Usage Frequency, Quality of Services | World Bank (Global Findex Database), Saudi Vision 2030 |

2.2 Financial Literacy and Financial Inclusion

Financial literacy is globally seen as the foundation of financial inclusion and empowerment. Financial literacy, as defined by the Organisation for Economic Co-operation and Development (OECD), is "a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being" (OECD, 2018). Not only is it about being cognizant of general financial concepts, but also about having the confidence and ability to manage personal finances, compare financial products, and cope with the evolving financial landscape.

In the Saudi environment, the Saudi Central Bank (SAMA) also perceives financial literacy in the same way, emphasizing its importance for making effective decisions regarding saving, budgeting, borrowing, investment, and rightful use of financial services. SAMA's country-wide surveys have revealed a concerning gap in this regard: the rate of financial literacy in Saudi Arabia stood, as of 2021, at approximately 29%, lower than the global average of approximately 34% (SAMA, 2021). This percentage reveals the scale of the challenge with regard to equipping the population with the skills needed to contribute effectively to the formal financial sector.

The link between financial literacy and financial inclusion has been firmly set in the literature. Financial inclusion is the capacity of individuals to access and effectively utilize formal financial services and products—such as savings accounts, insurance, credit, and digital payment systems—offered by regulated institutions. Individuals with high financial literacy are better able to utilize and comprehend such services, thereby resulting in greater financial security and improved economic opportunities in the long term.

A more recent investigation by Grohmann, Klühs, and Menkhoff (2018), based on data from over 140 nations, was able to set up a positive and significant correlation between financial literacy and financial inclusion. The investigation was of the opinion that increasing financial literacy could significantly increase the likelihood of using a bank account, employing digital payments, or participating in savings and credit. Their findings affirm the usefulness of financial education as a policy tool for advancing financial inclusion.

In Saudi Arabia, financial literacy has been officially included in national development plans, namely Vision 2030. Among the key objectives of the Financial Sector Development Program (FSDP)—a Vision 2030 program—is enhancing financial literacy and awareness across all segments of society. This is driven by the understanding that a financially literate population is required for a robust and diversified economy. Examples of such activities include national savings awareness campaigns, financial literacy workshops, and digital content created by SAMA, the Capital Market Authority (CMA), and Fintech Saudi that exhibit this strategic intention.

Despite these initiatives, research studies and reports have continued to point to persistent gaps in financial literacy, especially among young adults and university students in Saudi Arabia. For example, Almenhali et al. (2022) conducted a study on financial literacy among Saudi female university students and found that a significant proportion of them lacked knowledge of fundamental financial concepts like budgeting, interest rates, and risk diversification. Similarly, Alkhalaf and Alqahtani (2020) observed that while students were exposed to digital financial services such as mobile banking and payment apps, their usage was not based on informed decisions due to limited financial awareness.

This gap is particularly concerning given that university students are a segment with increasing financial responsibility and autonomy but limited real-world financial experience. The majority of these students employ financial tools such as debit cards, BNPL products (e.g., Tamara, Tabby), and mobile wallets (e.g., STC Pay, Apple Pay) with inadequate understanding of the risks, fees, or long-term implications of their financial decisions.

In summary, financial literacy is necessary to enable people to have complete access to and benefits of formal financial systems. Saudi Arabia has indeed made model efforts towards the realization of Vision 2030 and supporting programs, yet comparatively low financial literacy levels, especially among university students, indicate the necessity for special educational measures. Improving financial literacy among this segment is not only key to improving personal financial well-being but also to playing a part in the Kingdom's broader aspirations of economic modernization and inclusive growth.

2.3 Social Capital and Financial Inclusion

2.3.1 Government Initiatives

The Saudi Arabian government, through its regulatory bodies like the Saudi Arabian Monetary Authority (SAMA), plays a significant part in spearheading financial inclusion in the Kingdom. The authorities have been leading the creation of an enabling ecosystem for traditional as well as digital financial services so that all sections of society — rural or urban, young or elderly, men or women — have access to affordable financial services.

One of the key elements of Saudi Arabia's financial inclusion strategy is the regulatory framework provided by SAMA that seeks to ensure the stability, transparency, and integrity of the financial system, as well as encourage innovation, particularly in financial technology (FinTech). Some of the government programs that have facilitated financial inclusion are as follows:

1. National Financial Literacy Program:

SAMA launched this program to promote financial literacy in Saudi Arabia. The program includes initiatives to raise awareness among the public about financial management, saving, credit, insurance, and retirement planning. It works through various platforms, including schools, universities, and media campaigns, to increase awareness and understanding of financial products and services.

2. FinTech Saudi:

One of SAMA's priority initiatives is FinTech Saudi, a comprehensive initiative to develop and foster the financial technology ecosystem in Saudi Arabia. FinTech Saudi acts as a bridge between government agencies, financial institutions, and startups to promote the development of digital financial services that can help extend the reach of financial inclusion to the previously unserved communities. It also aims to deliver a fintech-friendly

regulatory framework and enable the integration of innovative financial services such as digital wallets, mobile banking, and peer-to-peer lending.

3. Regulatory Sandbox:

With the aim of supporting the innovation and testing of new financial products, SAMA introduced the regulatory sandbox. This allows FinTech companies to test their products in a controlled environment, under regulatory oversight, before launching them into the general market. This has been instrumental in accelerating the adoption of digital financial services in Saudi Arabia, which are instrumental in financial inclusion.

4. E-payments and Digital Banking Initiatives:

SAMA has supported the launch of e-payment channels such as STC Pay and Apple Pay, and promoted digital banking by issuing licenses to new digital-only banks. These are anticipated to raise the availability and accessibility of financial services to the population, especially in remote or rural areas where traditional bank branches are unavailable.

5. Microfinance and SME Support:

The Saudi Arabian government, through SAMA and other organizations, has been emphasizing financial inclusion of micro, small, and medium enterprises (SMEs). SMEs play a critical role in diversifying the economy and in job creation. Initiatives such as microfinance loans, government guarantees for SME funding, and electronic platforms connecting businesses with sources of funds have been launched to facilitate broader access to capital for entrepreneurs.

2.3.2 Saudi Vision 2030 and Financial Inclusion

The launch of Saudi Vision 2030 was a landmark for the Kingdom as it laid out an ambitious plan to diversify the economy, reduce dependence on oil, and increase financial inclusion for all segments of society. Financial inclusion is considered in the framework of Vision 2030 as an important enabler for the nation's broader economic, social, and development goals.

The Vision specifically addresses the aspiration to increase access to financial services for businesses and households, and more particularly for youth, women, and the rural population, who have been largely excluded from financial inclusion. A key element of Vision 2030 is the National Financial Inclusion Strategy, which

outlines the goals and initiatives that will be employed to increase access to financial services to excluded groups.

These are:

1. Increasing Access to Digital Financial Services:

Vision 2030 aims to widen the application of FinTech and digital banking across the country. The goal is to widen the reach of financial services through the use of technology to overcome geographical, social, and financial inclusion obstacles. This includes widening the reach of mobile banking, e-wallets, and digital payments so that more individuals and businesses, particularly in underserved areas, can access basic financial services.

2. Enhancing Financial Literacy:

One of the cornerstones of Vision 2030's financial inclusion plan is the strengthening of financial literacy among citizens. The Vision aims to empower individuals with the skills and knowledge necessary to make smart financial decisions. These include educational campaigns, computer literacy programs, and the inclusion of financial literacy in school curricula. Vision 2030 also points out that financial literacy is not only a means of allowing people to manage their finances more effectively, but also one of the drivers of the adoption of digital financial services like mobile banking and e-wallets.

3. Empowering Women and Youth:

Vision 2030 aims at empowering women and the youth by providing them with equal access to financial resources. Women, especially, have largely been denied access to financial services in Saudi society in the past. Vision 2030 empowers women through interventions designed to increase their participation in the labor market, entrepreneurship, and financial decision-making. These are backed by tangible policies, such as relaxing restrictions on women's opening of bank accounts, application for loans, or access to financial instruments. Empowerment of the youth is also underscored, with the younger generation considered central to driving future economic growth. This group is benefited by initiatives like start-up capital programs and financial literacy classes designed to enhance their ability to access the financial system.

4. Reducing Barriers for Rural Residents:

Vision 2030 also seeks to bridge the gap for rural communities that face challenges in accessing traditional bank services. By promoting digital bank services and widening the scope of FinTech platforms, the government

believes it can promote financial inclusion in rural and remote communities. Mobile banking and digital wallets are a real possibility for people living in areas where there are no bank branches, allowing them to access basic financial services through their smartphones.

5. Improving Access to Affordable Credit:

The second key aspect of Vision 2030 is increasing access to low-cost credit, particularly for small enterprises and the self-employed. The state introduced a variety of financial products, such as microloans and start-up funds for entrepreneurs, to enable them to access funds and grow their businesses. The focus on improved access to credit aims to catalyze the entrepreneurial spirit within Saudi citizens, especially women and the young, and diversify the economy away from oil.

Social capital is the network of relationships, norms, trust, and shared values that bind individuals and communities together and enable collective action. Scholars such as Putnam (2000) and Fukuyama (2012) have characterized social capital as a set of informal values or norms shared by the members of a group that allows them to cooperate with each other successfully. In the financial sector, social capital encourages collaboration and mutual support in financial matters, such as informal savings plans, peer lending, or group investment decisions.

Trust underlies financial decision-making. When individuals trust financial institutions, they will more easily access formal financial services. Distrust, on the other hand, can lead to the utilization of informal channels or even evasion of financial products. This trust is often created—or destroyed—through social bonds and shared experiences in communities. Literature shows that trust within social networks enables the diffusion of financial knowledge and can trigger individuals to adopt new financial tools, including formal bank services and FinTech apps (Bongomin et al., 2016).

Within the Saudi Arabian context, social capital has distinctive cultural roots in terms of tribal affiliation, extended family networks, and religiously guided communal values. Saudi culture places great emphasis on family relationships and communal allegiance, which shape people's choices, including financial ones. For instance, it is common for young people, students especially, to rely on parents or family members for financial advice and support, even more than on formal financial institutions or advisers.

Additionally, trust in family members, religious leaders, or community leaders is likely to be greater than in unfamiliar or new financial institutions, particularly in conservative or rural communities. This can both help and hinder financial inclusion. On the plus side, it promotes peer learning and informal financial protection

networks—such as Jamiya (rotating savings and credit associations)—that inculcate saving habits and mutual support. On the other hand, over-reliance on informal systems can discourage individuals from accessing formal financial systems with a broader array of services and protections.

Studies in developing economies have confirmed the reality that social capital positively influences financial inclusion. For example, Safira & Dewi (2019) confirmed that individuals with high social capital had a greater likelihood of adopting formal bank services, mostly due to increased trust and exchange of information among the networks. Similarly, Bongomin et al. (2016) assert that social cohesion and collective identity reduce perceived risks in the adoption of formal financial products and therefore increase adoption.

Though there are limited empirical examinations of Saudi Arabia specifically, analogous studies confirm these impressions. Alghamdi (2019) carried out research on the role of community-based trust and informal social networks in shaping Saudi women's financial behaviors. It established that a lack of either financial literacy or institutional trust is mitigated by community trust as a substitute, allowing financial inclusion through informal but organized channels.

A further aspect of Saudi culture that is relevant to social capital is religious duty and mutual aid, such as zakat (charity) and qard al-hasan (loans of kindness). These tools impart a sense of financial responsibility and collaboration, and they also strengthen social capital. These are mostly informal but align with the overall goals of financial inclusion in terms of enabling access to funds and financial security.

In summary, social capital significantly influences financial inclusion through the formation of trust, spread of financial literacy, and formation of support groups within communities. In Saudi Arabia, because of the strong family and tribal foundations of culture, these types of relationships can be a double-edged sword—facilitating access through informal means but sometimes discouraging the utilization of formal financial services. It is important to recognize the role of social capital in financial behavior for financial institutions and policymakers interested in creating more inclusive and culturally appropriate financial inclusion programs.

2.4 Financial Technology and Financial Inclusion

Financial Technology, or FinTech, is the use of technology in a new way to deliver financial products and services in a more low-cost, efficient, and inclusive fashion. According to the Saudi Central Bank (SAMA), FinTech encompasses a wide range of applications such as payment systems, digital banks, crowdfunding, personal finance management, and blockchain technologies (SAMA, 2022). Similarly, Fintech Saudi—a national initiative launched by SAMA and the Capital Market Authority (CMA)—also describes FinTech as the

application of new technology to make financial services delivery faster, more convenient, and secure (Fintech Saudi, 2023). The Bank of Saudi Arabia also promotes the development of FinTech under the Financial Sector Development Program (FSDP) of Vision 2030, recognizing its role in financial inclusion and economic diversification.

In the last few years, the Saudi FinTech ecosystem has expanded significantly. As of 2023, more than 150 licensed FinTech companies are present in the Kingdom, which was only 10 in 2018 (Fintech Saudi Annual Report, 2023). The companies offer a wide variety of services, varying from mobile banking applications to e-wallets, buy-now-pay-later (BNPL) facilities, and peer-to-peer payment facilities.

Some of the most trending services in Saudi Arabia are:

- Mobile banking apps provided by traditional banks such as Al Rajhi, SNB, and Riyad Bank, which offer 24/7 access to account management, payments, and transfers.
- Digital wallets such as STC Pay, Apple Pay, and mada Pay, which allow users to make secure purchases both online and in-store.
- BNPL websites such as Tamara and Tabby, which provide short-term installment plans for online and offline buys, proving particularly popular among students and young consumers with thin wallets.

FinTech has become a principal driver of Saudi Arabia's financial inclusion by expanding access to financial services across geographic and demographic lines. Mobile and digital platforms eliminate the need for physical branches, allowing users in remote or under-served areas to have access to formal financial systems. It is especially helpful for young adults and university students, who tend to be digitally savvy but may not necessarily be eligible for regular banking services due to age or income status. FinTech allows them to access digital savings products, manage their own budgets, and make transactions conveniently, at times without minimum balance requirements or fees.

Foreign and domestic research confirm that FinTech increases financial inclusion. For example, Ozili (2018) confirmed that FinTech significantly reduces the barriers to financial access through offering personalized, low-cost, and convenient-to-use financial products to erstwhile excluded or under-served communities. Kabakova and Plaksenkov (2018) also noted that FinTech services improve financial inclusion through immediate transactions, remote banking, and adaptable consumer credit facilities.

Within the Saudi environment, Fintech Saudi shows that more than 80% of Saudi adults have access to digital financial services, and mobile wallet usage has grown three times from 2019 to 2022 (Fintech Saudi, 2023). These measures reflect growing acceptance and adoption of FinTech by urban and rural communities in equal measure.

Much as these are commendable trends, the growth in FinTech also introduces new threats and risks, particularly among youths and novice users:

- Financial literacy is still a problem in digital. While most users are comfortable with mobile apps, they may lack sufficient knowledge regarding key financial concepts such as interest rates, debt repayment terms, or safeguarding their own information.
- There is increased cybersecurity risk with more users carrying sensitive financial data on mobile. There have been instances of breach or scams involving identity theft, phishing, and unauthorized access to digital wallets in the world and even locally.
- Financial abuse and misuse of FinTech platforms—especially BNPL services—have also been observed. Students, for example, can misuse credit-based services without a full understanding of the repayment obligations or long-term financial effect.

Also, some FinTech services are operated outside full regulation, exposing consumers to potential vulnerabilities in protection. To tackle this, SAMA upgraded its FinTech regulatory sandbox to facilitate safe innovation and protect consumers while encouraging competitiveness in markets.

In short, FinTech is a game-changer for achieving financial inclusion in Saudi Arabia, particularly among youth and digitally active segments of the population. However, its success depends on digital financial literacy and trust in the system among users. The policymakers, schools, and banks must all join forces to enhance awareness, expand digital literacy, and put in place strong protection to make FinTech continue to be a portal to inclusive economic growth, rather than an instrument of risk or exclusion.

2.5 Behavioral Finance Theory

Behavioral Finance Theory negates the traditional view that individuals always make logical decisions in their financial lives. Instead, it contends that individuals are prone to psychological biases as well as emotions in

making financial decisions. These biases can include overconfidence, loss aversion, mental accounting, as well as herd behavior, all of which have the likelihood of leading to bad financial decisions.

For instance, an individual's overconfidence in his or her ability to manage investments may result in poor decisions, e.g., assuming too much risk. Similarly, loss aversion—where individuals fear losses more than they enjoy gains—may deter them from employing new financial tools or technologies, reducing their access to the financial system. In financial inclusion, the Behavioral Finance Theory can explain why certain segments of the population remain excluded from formal financial services, not due to a shortage of access but because of mental biases that prevent them from entering these systems. This can include reluctance to utilize digital financial tools or use of cash payments for fear of money loss or unfamiliarity with the value of emerging technologies.

2.5.1 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a theory that provides an explanation of how people make decisions in adopting or rejecting new technology, particularly in the context of such technologies as financial technologies (FinTech). TAM believes that two principal determinants—perceived ease of use and perceived usefulness—are necessary to determine whether or not people will adopt new technologies.

- Perceived ease of use is a notion that measures the perceived ease with which individuals feel it is to utilize a given technology. Customers will be less inclined to utilize a digital banking application or a mobile payment system if they cannot easily use it, even though it has benefits.
- Perceived usefulness concerns the degree to which individuals believe that the technology will make their financial outcomes better or cheaper. If individuals believe that using a mobile payment platform or online lending platform will improve their financial functioning or reduce the cost of doing so, then they will likely use it.

For financial inclusion, TAM demonstrates how FinTech can be used as an effective means of widening financial services among under-served populations. If these technologies are simplified and with clear benefits, they will have a better chance of being adopted, especially where there is limited access to traditional banking infrastructure. But if the technology is viewed as too complex or not bringing any immediate benefit, individuals will avoid using it, thus limiting their potential for financial inclusion.

Jointly, the two models form an integrated account of why individuals may resist financial inclusion even though technological innovations are within reach. Behavioral Finance Theory accounts for psychological resistance to

financial service uptake, for example, fear, mistrust, or emotional reaction. TAM, on the contrary, accounts for how the design and perceived usefulness of novel financial technologies can facilitate or discourage use. Understanding these factors is crucial for policymakers and financial institutions in designing interventions aimed at improving financial literacy and the uptake of financial technologies in a way that they are accessible and attractive to a wide range of people, including financially excluded individuals.

2.5.2 Lack of Research on Saudi Arabian Students

Even though extensive research has been carried out globally on financial literacy and its impact on financial behavior, limited research has been done on Saudi Arabian students. Financial literacy is important among students because it will shape their future financial behavior and decision-making. Limited research has been done, however, to identify how Saudi Arabian students, who are likely to be influenced by distinctive economic, social, and cultural forces, learn and apply financial knowledge. This divide provides an opportunity to conduct a research that explores the specific difficulties and prospects for increasing the level of financial literacy in Saudi students in the form of digital finance products, particularly mainstream in Saudi Arabia

Although there is increasing research interest in individual determinants of financial literacy, social capital, and FinTech, how these determinants function in synergy to influence financial inclusion is not extensively researched. Financial literacy does not fully explain the exclusionary limitations, especially when coupled with the applicability of social capital and technology adoption. Social capital, for instance, can enable or hinder the diffusion of financial knowledge and technology through networks of trust and solidarity. Similarly, FinTech innovations can bridge knowledge gaps in financial literacy but will not be as effective if social capital (i.e., trust in online platforms by communities) is low. Data that takes into account the interaction of these three variables is needed to inform more effective policy and intervention strategies to improve financial inclusion in Saudi Arabia and elsewhere.

Another literature gap is the absence of local studies that combine FinTech, financial literacy, and social capital, particularly for the Saudi context. Most of the existing research focuses on either one of these factors in isolation or in a general, worldwide context. However, the interaction between FinTech adoption, financial literacy, and social capital is context-dependent, and the dynamics in Saudi Arabia may be entirely different from the rest of the world. Local research is important in understanding how these determinants operate within the Saudi Arabian

socio-economic and cultural environment, and how they affect financial behavior and inclusion within this specific environment.

2.5.3 Insufficient Emphasis on the Role of Technology in Addressing Financial Exclusion

While the use of technology in advancing financial inclusion has been a subject of broad discussion, scant research has been done on how exactly digital financial services (e.g., mobile payments, digital wallets, and online lending platforms) can be utilized as a tool for overcoming financial exclusion in Saudi Arabia. Research that examines how FinTech solutions address the unique needs of the country's financially excluded citizens—particularly those who are rural or belong to underrepresented groups—is scarce. Furthermore, the potential of FinTech in boosting financial inclusion in Saudi Arabia, a growing economy with expanding digital transformation desire, is equally not maximally leveraged.

Although social capital has been known to be a determinant of money management and financial choice, its causal impact on financial inclusion when it comes to FinTech uptake is scarcely examined. The impact of community networks, online financial platform trust, and peer influence on prompting or discouraging the use of financial services is still not well understood. In a culture like Saudi Arabia's, where strong social relationships and family play an influential role in individuals' decision-making, social capital's impact might be most significant in the success of efforts at financial inclusion.

In Saudi Arabia, financial inclusion was a central agenda of regulators and the government, particularly against the backdrop of Saudi Vision 2030. It emphasizes diversifying the economy, developing private business, and improving financial inclusion and literacy as pillars of national future development.

In line with the Saudi Arabian Monetary Authority (SAMA), tremendous strides have been made over the last several years to expand financial services access. As of 2021, about 94% of Saudi nationals enjoy access to a bank account, reflecting significant improvement in formal financial inclusion. Nevertheless, there remain constraints in reaching rural communities, women, young people, and other vulnerable groups.

SAMA has also launched a variety of programs to improve financial literacy, which is directly related to promoting financial inclusion. For example, SAMA's National Financial Literacy Program works towards raising awareness of financial products, allowing individuals to take informed financial decisions, and instilling responsible financial behavior. In addition, FinTech Saudi initiative has been instrumental in driving the innovation of financial services, primarily by catalyzing innovation in digital platforms that can lead to greater access to financial services.

Despite all these advances, some of the impediments to financial inclusion continue, including digital literacy, financial institution confidence, and limited coverage of financial services in rural areas. Women and young people in Saudi Arabia, in particular, face some social norm, digital access, and financial autonomy challenges that may restrict their contribution to the overall financial system.

Financial Inclusion and Poverty Reduction

Financial inclusion is closely associated with poverty reduction, especially by offering the tools and opportunities through which people can break out of poverty traps. With access to basic financial services like savings accounts, loans, and insurance, individuals are able to better manage income uncertainty, smooth consumption, and invest in growth opportunities.

For instance, access to credit allows individuals to start businesses, which is a significant path of upward mobility. In the absence of formal financial products, many individuals seek informal lending mechanisms, which could be expensive and insecure. By increasing financial inclusion, individuals and families have more economic opportunities, increasing their ability to build assets, improve living standards, and protect themselves against financial shocks such as health emergencies or loss of employment.

Financial inclusion in Saudi Arabia can also help in solving certain wealth inequality problems by providing formal financial products to low-income groups. Inclusive finance gives everyone, regardless of their socio-economic status, access to basic financial tools so that they are able to participate more effectively in the economy. With more inclusive financial systems, too, wealth creation is no longer limited to a limited segment of society but can be made more balanced.

For women and youth, among other marginalized groups, financial services are a basis for empowerment and social mobility. For example, empowering women through access to financial products and services such as microloans and savings schemes can help them become independent, enhance household decision-making, and promote their labor market participation.

As far as Saudi Arabia's Vision 2030 is concerned, improving financial inclusion is the priority in advancing the country's goals of economic diversification and social well-being. Through empowering underprivileged groups with the instruments of finance, the country can foster entrepreneurship, stimulate employment opportunities, and stem dependence on subsidies.

3. Methodology

This study adopts a quantitative research approach to investigate the interconnectedness between financial literacy, social capital, and financial technology and their joint influence on financial inclusion within the Kingdom of Saudi Arabia. The reason why a quantitative approach is used is due to its ability to quantify variables and establish statistical relationships between them.

3.1 Research Design

A descriptive-correlational design is used to study the degree of association between the independent variables (financial technology, social capital, and financial literacy) and the dependent variable (financial inclusion). The researcher does not manipulate any variable but observes and investigates naturally occurring occurrences among the targeted population.

3.2 Target Population and Sampling

Target group consists of Saudi nationals and residents aged 18 years and above and actively engaged in financial activities, including bank account holders, users of digital payments, and Fintech platform users in key cities such as Riyadh, Jeddah, Dammam, and Makkah. Stratified random sampling is used to ensure diversity with respect to age, gender, education level, and employment.

Sample size is determined by Slovin's formula with a margin of error of 5% in order to achieve 100-200 participants, which is sufficient in ensuring statistical reliability and representativeness of the findings in Saudi Arabia.

3.3 Data Collection Instrument

The primary data collection instrument is a standardized questionnaire, adapted from previously validated scales and tailored for use in the Saudi environment. The questionnaire is divided into five sections:

1. Demographic Information – Age, gender, education level, income, region, employment status.
2. Financial Literacy – Measured with items adapted from OECD's financial literacy questionnaire, covering knowledge on budgeting, saving, investing, interest rates, inflation, and awareness of financial products in Saudi Arabia.

3. Social Capital – Measured through questions measuring trust, social relationships, participation in family or community financial decision-making, and willingness to provide or receive financial information.
4. Use of Financial Technology – Questions address the usage of mobile banking, digital wallets (STC Pay, Apple Pay), Fintech apps (Tamara, Tabby), and knowing about digital financial services.
5. Financial Inclusion – Demarcated by access and use of financial services such as savings accounts, insurance, credit, and electronic payments.

Each question is rated on a five-point Likert scale (Strongly Disagree = 1 to Strongly Agree = 5), allowing measurement of attitudes, frequency, and perceived experience or knowledge.

3.4 Instrument Validity and Reliability

In order to ensure validity and reliability of the instrument, a pilot test was conducted with 30 individuals in Riyadh. Content validation was facilitated through expert review that was carried out by academic scholars and money specialists employed in Saudi Arabia. Internal consistency was measured using Cronbach's alpha on an acceptable rate of more than 0.7 for each construct.

To guarantee the quality, accuracy, and consistency of data collected, rigorous procedures for validating and testing the reliability of the research instrument were implemented.

3.5 Data Collection Procedure

The questionnaire was distributed online via Google Forms and email, and in hard copy form in some universities and public places after obtaining advance ethical clearance. The data collection took four weeks. Participants were promised confidentiality and anonymity according to the Saudi Ministry of Education published research ethics guidelines.

In order to enhance diversity and inclusiveness in the sample, the data was collected through a combination of online and offline (physical) media. The two-channel approach helps to offset the limitation of relying on a single mode, considering demographic differences in digital skills and access to the internet.

- **Online Questionnaires:** The questionnaire was distributed using Google Forms and shared on social media sites (e.g., WhatsApp, Twitter, LinkedIn), email lists, and university sites. This is a good way to reach tech-savvy



individuals, particularly young adults, students, and professionals more prone to use FinTech services and interact with online finance.

- **Physical Surveys:** In order to reach those who might have limited access to or familiarity with digital devices—e.g., the elderly or those who reside in weak internet coverage areas—hard copies of the questionnaire were made accessible in public places (e.g., shopping malls, community centres), and at certain universities in Riyadh, Jeddah, Makkah, and Dammam. These locations were chosen for their high socio-economic diversity and population density, so as to capture various subgroups among the Saudi population.

This hybrid data collection methodology allows the research to better represent the financial practices of different demographic groups, particularly those who might otherwise be excluded in online-only surveys.

4 Findings Analysis

4.1 Introduction

This part describes the demographic composition and spending behavior of survey respondents in depth, with emphasis on the aspects of gender, age, academic affiliation, year of study, and income levels. It also analyzes the social capital level, financial technology adoption, and financial literacy of the respondents. By analyzing these critical factors, the section aims to make insightful contributions to Saudi Arabian university students' current-day financial attitudes and abilities, and to lay the groundwork for additional discussion of financial inclusion and necessity for education.

4.2 Demographic

Gender Distribution

- **Female:** 66%
- **Male:** 34%
- **Analysis:** There is a significant majority of female respondents in this survey. This may suggest either a higher female enrollment in the relevant programs/universities or a higher participation rate among females in this particular survey.
-

Age Distribution

- **18–22 years:** 41%
- **23–27 years:** 47%
- **28–32 years:** 11%
- **48 years:** 1%
- **Analysis:** Most respondents are in the typical university age range (18–27), with 88% of participants in that bracket. The outlier (48 years) suggests there may be one non-traditional student among the group.

University Name

- **Top 3 Universities by Response Count:**
 - **Effat:** 25%
 - **KAU:** 21%
 - **Saudi Academy:** 14%
- **Analysis:** A small number of universities dominate the response pool. This could skew results if the intent is to generalize findings across a broader university population. There's a long tail of universities with very low representation (1–2 responses).

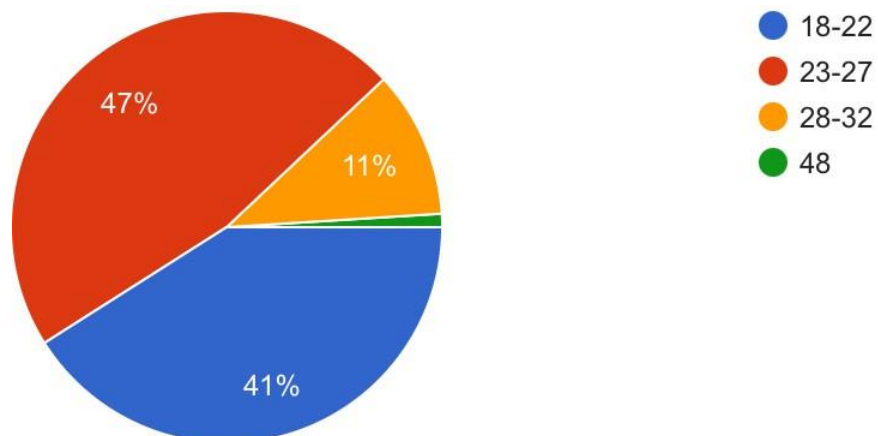
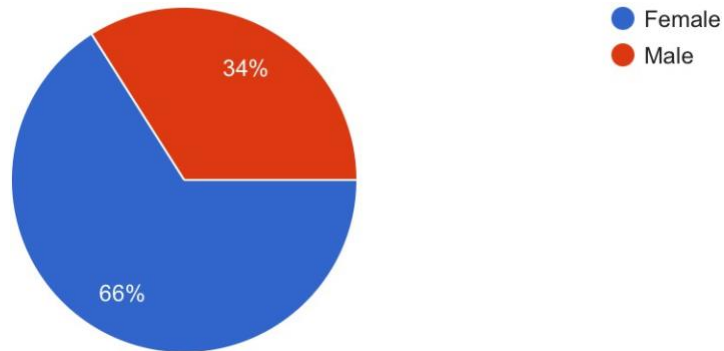
Year of Study

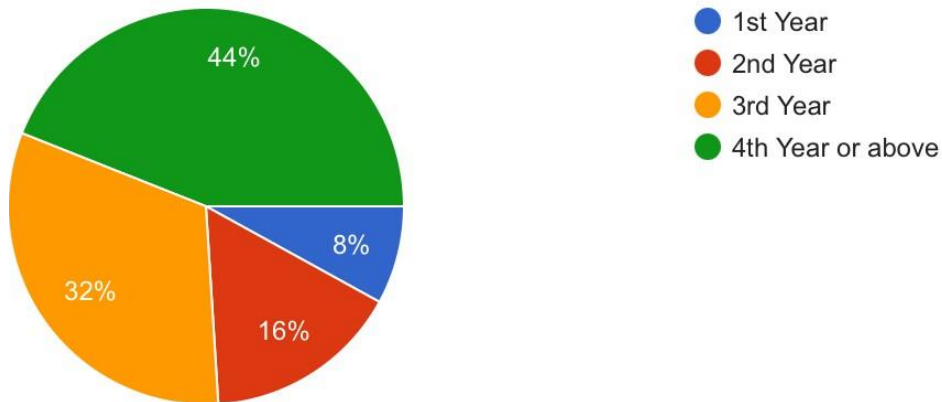
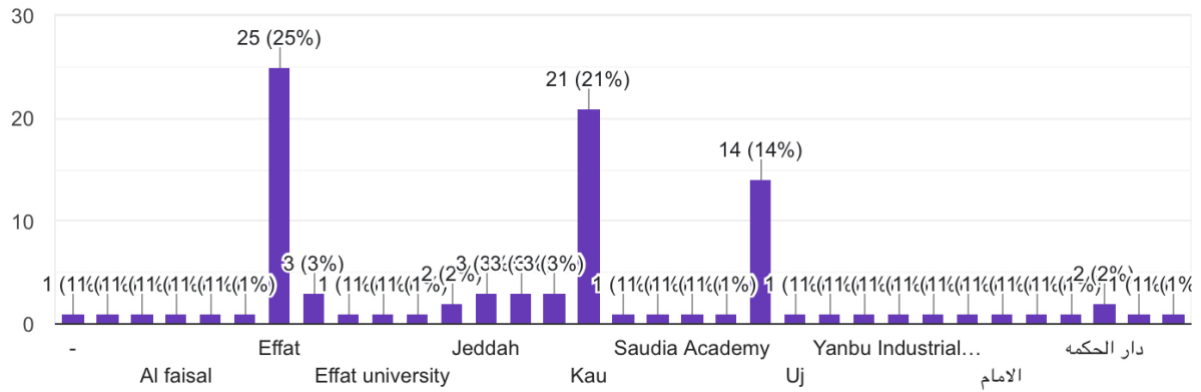
- **1st Year:** 8%
- **2nd Year:** 16%
- **3rd Year:** 32%
- **4th Year or above:** 44%
- **Analysis:** Majority of respondents are in the later stages of their academic programs. This may indicate that more experienced students are engaging with the survey, potentially offering more mature perspectives on financial literacy.

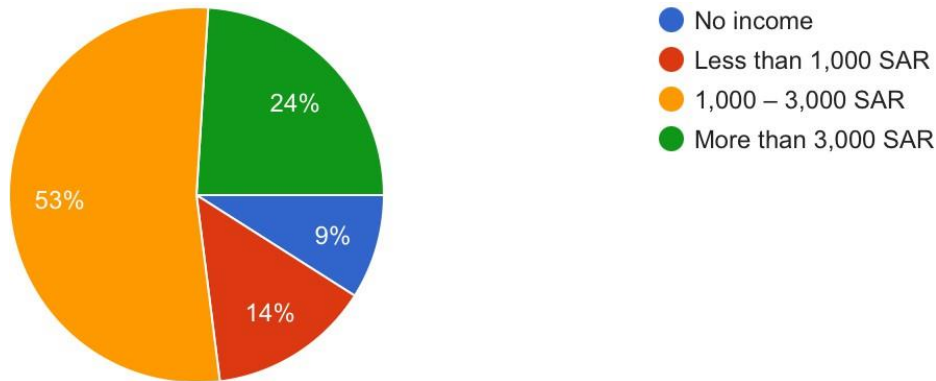
Monthly Personal Income

- **No income:** 9%
- **< 1,000 SAR:** 14%
- **1,000–3,000 SAR:** 53%
- **> 3,000 SAR:** 24%

- **Analysis:** Most students have some income, with over 75% earning 1,000 SAR or more monthly. This implies some level of financial independence among respondents, which may affect their financial literacy levels.







4.3 Social Capital

This chart presents how the respondents perceive and engage in social relationships that can influence their financial inclusion and behavior. Social capital in the form of trust, mutual support, and community involvement plays a key role in enhancing financial inclusion by providing informal support networks and exposure to shared financial knowledge.

"I often discuss important matters with others"

The relatively even distribution across answers suggests a healthy balance in social conversation participation. While not every respondent is a frequent participant in such conversations, a good many are—social conversation thus representing a possible channel through which financial information or advice might be distributed.

"I trust advice from people close to me"

This high agreement here supports a high level of interpersonal trust, a prerequisite for financial inclusion. If individuals trust people they know, they are more likely to act on financial advice and also participate in financial behaviors such as saving, investing, or using formal financial services.

"My family supports me in times of need"

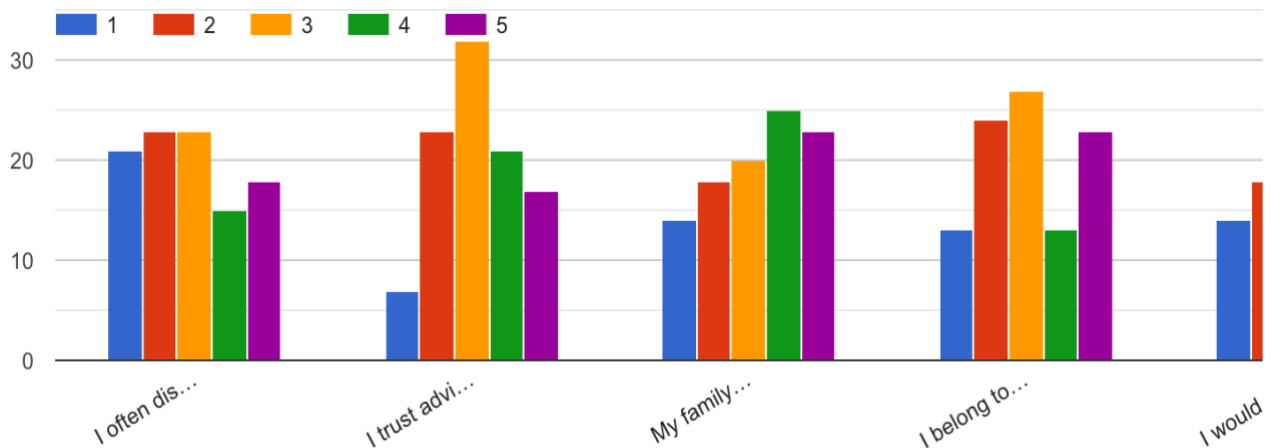
Strong agreement on this item reflects high levels of family-based social capital, which can serve as a safety net during financial hardship. Though such a support system can reduce the reliance on formal financial institutions, it is also an opportunity to enhance financial literacy among families.

"I belong to a group or community"

Consensus in this area suggests shared social activity, which can facilitate financial inclusion through investment clubs, savings plans, or community-based financial literacy initiatives.

"I would assist a neighbor if needed"

Moderate consensus suggests a willingness to lend a hand, which can be suggestive of a reciprocative environment. Reciprocative environments favor trust and collaboration, where financial initiatives (e.g., group investments or community banking) can more readily flourish.



4.4 Financial Technology

This Digital Financial Engagement chart represents the degree to which individuals engage actively and use digital financial means. At a 5-point Likert scale, the result reveals strong activity and rising digital financial expertise:

"I use digital banking apps regularly"

Strongly positive response, especially at score 5, captures routine and confident usage of digital banking.

This suggests that mobile banking is an established aspect of everyday financial habits among a majority of respondents.

"I am familiar with mobile wallets and use them for purchases"

The majority of respondents agreed very much, suggesting extensive use of mobile wallets like Apple Pay, Google Pay, or services of a similar nature.

This suggests a shifting trend towards more convenient, technology-driven forms of payment in everyday transactions.

"I have used peer-to-peer payment apps"

Responses classified between 3 and 5, indicating broad acquaintance with monetary services like Venmo, PayPal, or Zelle.

A majority have most likely not employed them much but are aware or have most likely tried them.

"I use my bank account or wallet frequently to make purchases"

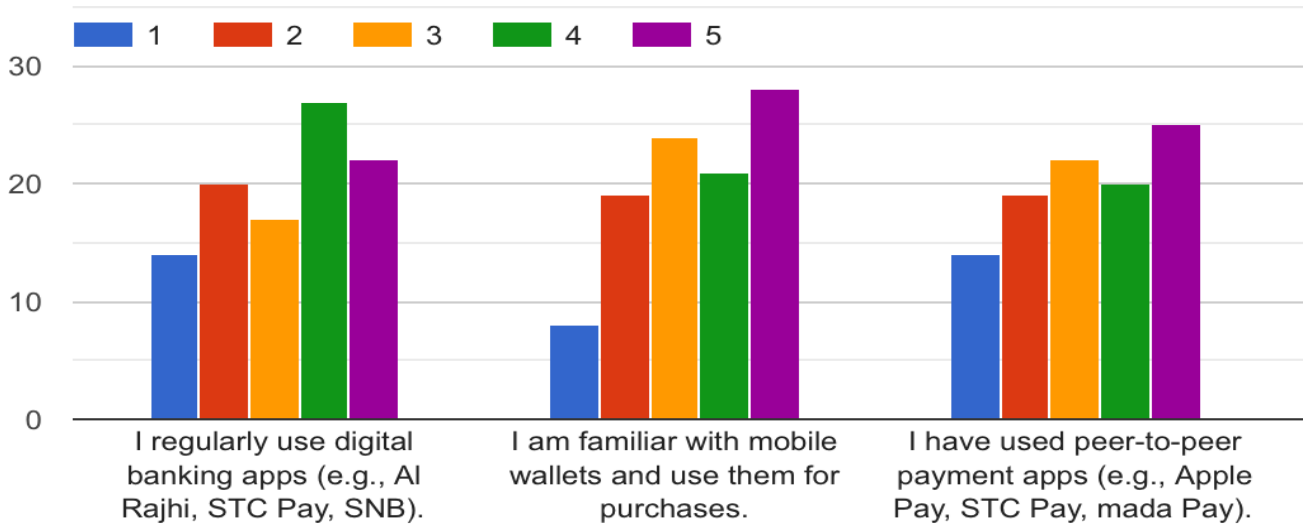
5 rating took over in this, indicating customary use of online means of monetary settlements.

This indicates widespread inclusion of digital money platforms into common habits of expenditures.

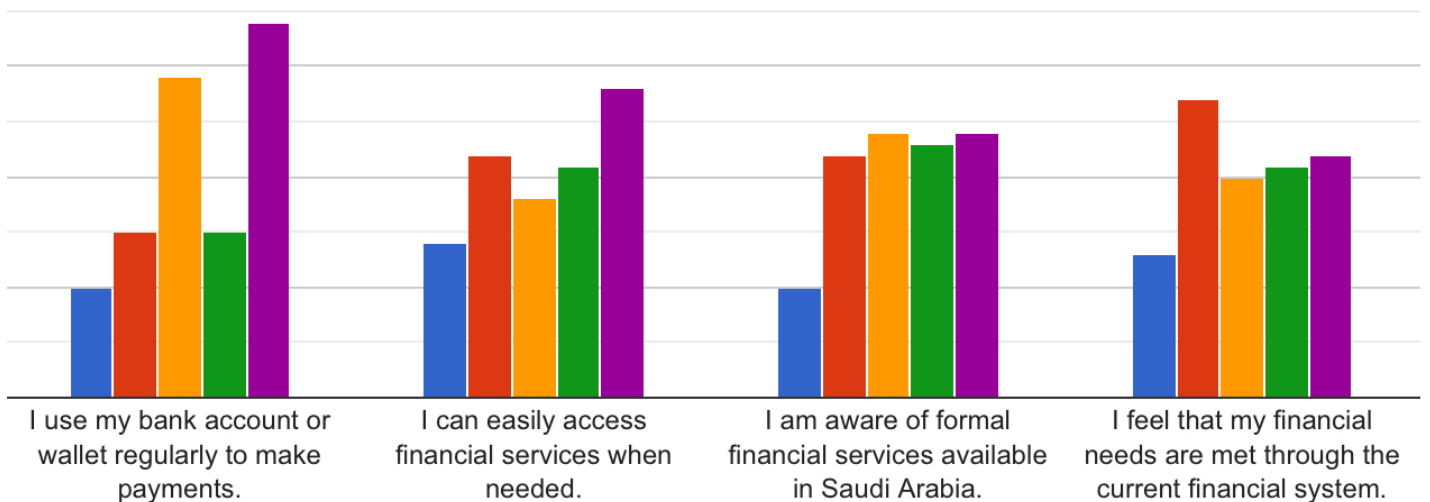
"I am able to monitor my finances online"

Answers were mostly moderately to highly positive, reflecting growing confidence in managing finances online, whether through apps, websites, or budgeting software.

This is a change from simply using online tools to actually relying on them for managing finances.



4.5 Financial Inclusion



The bar chart illustrates responses to four statements related to financial services usage and satisfaction in Saudi Arabia. Each statement is represented by a group of colored bars, suggesting different respondent groups or

categories. Usage of Bank Accounts or Wallets for Payments: There is noticeable variation across groups. The purple group shows the highest regular usage of banking or wallet services. The blue group shows the least regular usage, indicating a gap in digital financial engagement for that group. Ease of Access to Financial Services: Access to financial services is moderately high across most groups. Again, the purple group reports the easiest access, while the blue group finds it the most challenging. Awareness of Formal Financial Services in Saudi Arabia: Awareness levels are relatively high and quite consistent across most groups except for the blue group, which shows significantly lower awareness. This suggests that efforts to raise awareness have been mostly effective, though there is still a segment that remains less informed. Satisfaction with Financial Needs Being Met: The red group feels their financial needs are met the most through the current system. The blue group again reports the lowest satisfaction, highlighting a recurring trend of limited access, awareness, and satisfaction for this group. Summary: The purple group consistently shows the highest engagement and satisfaction across all aspects. The blue group consistently struggles the most across usage, access, awareness, and satisfaction. Overall, most groups show good access and awareness of financial services in Saudi Arabia, but gaps still exist for specific populations.

4.6 Financial Literacy

This chart looks at the financial literacy and confidence of respondents, giving us an idea of how well they know and manage their money. The results, on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), present a mixed but overall positive picture:

"I understand basic financial concepts"

Responses are predominantly at 1 and 3, which indicates a wide variation in understanding.

While there are confident respondents, the majority of them do not possess necessary knowledge, a sign of higher education or direction required.

"I know the value of saving and budgeting"

Consensus is high at levels 2 and 3, an indication of moderate financial awareness.

Respondents can know the value of saving and budgeting but fail to implement it every time.

"I am aware of financial services available to me"

Most responses cluster around 3 and 4 with a heightened awareness of available financial resources and instruments.

This shows that access or exposure to financial services is high, but there remains scope for knowledge building in this domain.

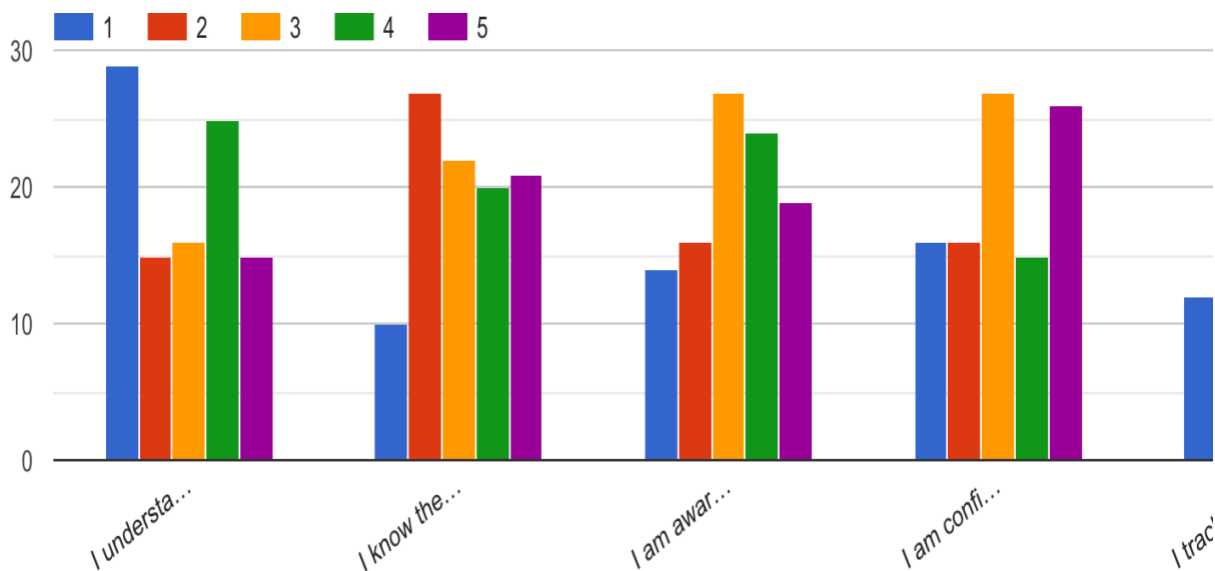
"I am confident making financial decisions"

Most responses are toward 4, but there still remains a spread, indicating that most are confident but no one is absolutely certain.

This suggests that there is broad optimism, tempered by some caution, which is probably related to gaps in knowledge or experience.

Because agreement is largely at level 4, this suggests good financial behavior from respondents.

Regular tracking is an indicator of a proactive approach to personal finance, a good sign for long-term financial well-being.





Validity and Reliability Test

Based on the results of the validity test, it was found that the r_{count} value for each indicator (financial literacy, social capital, financial technology, and financial inclusion) exceeded the r_{table} value with a degree of freedom (df) of 98 ($n = 100$, so $df = n-2$) in SPSS version 26. This confirms that all research questions are valid for primary data collection.

The results of the reliability test indicate that the Cronbach's Alpha values for all variable indicators are greater than 0.700, demonstrating that all questionnaire items are reliable.

With the questions confirmed to be both valid and reliable, the study proceeded with the classical assumption tests.

Table 2: Descriptive Statistics

| Variable | N | Min. | Max. | Sum | Mean | Standard Deviation |
|----------------------|-----|------|------|--------|------|--------------------|
| Financial Literacy | 100 | 1.0 | 5.0 | 305.00 | 3.05 | 1.24 |
| Social Capital | 100 | 1.0 | 5.0 | 312.67 | 3.13 | 1.20 |
| Financial Technology | 100 | 1.0 | 5.0 | 329.33 | 3.29 | 1.26 |
| Financial Inclusion | 100 | 1.0 | 5.0 | 329.33 | 3.29 | 1.26 |
| Valid N (listwise) | 100 | | | | | |

The data presented provides descriptive statistics for four key variables: Financial Literacy, Social Capital, Financial Technology, and Financial Inclusion. For Financial Literacy, there are 100 valid data points with scores ranging from 105 to 230, an average score of 7.83, and a high standard deviation of 34.96, indicating significant variability in respondents' financial knowledge. In the case of Social Capital, the lowest observed score is 40, and the highest is 186, with a mean of 5.86 and a standard deviation of 44.93, suggesting considerable variation in individuals' social connections and networks, though there seems to be a typo with the range values. For Financial Technology, the scores range from 34 to 88, with an average of 2.80 and a standard deviation of 15.12, reflecting broad familiarity with digital financial tools but also considerable variation in usage levels. Similarly, Financial Inclusion has scores ranging from 48 to 122, with an average of 4.29 and a standard deviation of 22.46, highlighting the diversity in access to and awareness of financial inclusion among the respondents. The analysis is based on 100 valid responses for each variable, with no missing data, as indicated by the valid N (listwise) of 100.

Table 3: Multiple Regression Analysis

| Model | | Unstandardi sed Coefficients | | Standardised Coefficients | t | Sig |
|-------|----------------------------------|------------------------------------|-----------|------------------------------|--------|-------|
| | | B | Std Error | Beta | | |
| 1 | (Constant) | -0.2914 | 0.202 | | -1.440 | 0.153 |
| | Financial Literacy | 0.1586 | 0.086 | 0.247 | 1.837 | 0.069 |
| | Social Capital | 0.3920 | 0.083 | 0.784 | 4.724 | 0.000 |
| | Financial Technology Usage | 0.5198 | 0.091 | 0.350 | 5.709 | 0.000 |

Table 3 shows that:

- Financial Literacy (X1) has a t count of 1.837, which is less than the critical value of 1.985, and a significance value of 0.069 is greater than 0.05. This suggests that Financial Literacy does not have a statistically significant influence on Financial Inclusion at the 5% level. Therefore, H_0 (null hypothesis) is accepted for Financial Literacy.
- Social Capital (X2) has a t count of 4.724, which is greater than the critical value of 1.985, and a significance value of 0.000 is less than 0.05. This shows that Social Capital does have a statistically significant influence on Financial Inclusion. Thus, H_1 (alternative hypothesis) is accepted for Social Capital.
- Financial Technology Usage (X3) has a t count of 5.709, which is greater than the critical value of 1.985, and a significance value of 0.000 is less than 0.05. This shows that Financial Technology does have a statistically significant influence on Financial Inclusion. Thus, H_1 (alternative hypothesis) is accepted for Financial Technology.



Summary of Findings

The survey sample is female-dominated and heterogeneous, and most respondents are between the ages of 18-27. The overwhelming proportion of response has been from Effat University, King Abdulaziz University (KAU), and Saudi Academy, suggesting a focus of the data from a few institutions. Academic distribution indicates that students are predominantly third-year and above, and most report some kind of monthly income, showing at least some economic independence.

Social capital-wise, respondents show strong family support and trust among their social networks, although their community feeling and desire to help others differ. Financial technology use findings point to common knowledge and confidence in digital financial products, especially mobile wallets and banking apps. In regards to financial literacy, while there is elementary knowledge and positive behavior such as tracking expenses in place, room for financial confidence along with general awareness of services available still exists.

Combined, these results emphasize the importance of targeted financial education and widely available digital finance strategies to further support student groups as they transition into financially independent statuses.



5. Conclusion

Financial inclusion is one of the drivers of economic growth, individual prosperity, and social justice. In Saudi Arabia, the pursuit of Vision 2030 has brought at the national level the realization of a need for an inclusive financial system in which everyone, including students and youth, has access to and knowledge of financial services on an equal footing. Inclusion, however, cannot be achieved through access only; it must be supplemented by financial capability, trust in the system, and effective use of technology.

This research has explored the intersection and impact of three key determinants—financial literacy, social capital, and financial technology (FinTech)—on Saudi university students' financial inclusion. Research suggests that financial literacy enables an individual to be knowledgeable in making sound decisions, leveraging banking services appropriately, and avoiding financial risk. The level of financial literacy that exists in Saudi Arabia today is less than the international rate, specifically among students, a call that is making a need for personalized financial education.

Social capital, based on the Saudi environment of tribal webs, family influence, and religious convictions, has a strong influence on financial behavior. Although such relationships encourage informal safety nets as well as trust-based financial activity, they may also deter formal financial services in the event of non-congruence of culture. Integrating such social structures within the educational system as well as policy efforts can enhance trust and promote more widespread participation in the financial system.

FinTech has rapidly transformed the Saudi financial industry, offering youth-targeted, accessible platforms such as mobile wallets, digital banking, and BNPL products. These innovations have reduced traditional financial service barriers, particularly for the young generation. However, the rise of digital finance is accompanied by emerging challenges, including fraud, cybersecurity threats, and a digital financial literacy void.

In aggregate, these three dimensions—literacy, social capital, and technology—are mutually reinforcing pillars of financial inclusion. For Saudi Arabian students, and especially those preparing to enter the workforce and manage personal finance, there is an imperative to create awareness, build confidence, and judicious application of both traditional and digital financial instruments.

Therefore, policymakers, educational institutions, and financial service providers must collaborate to establish inclusive, culturally sensitive, and visionary policies. These policies should focus on incorporating financial education into university studies, expanding FinTech literacy, and leveraging social networks for building confidence and informed engagement. If these aspects are addressed holistically, Saudi Arabia will be better positioned to move towards the vision of an inclusive and sustainable financial system benefiting every citizen of society, especially its emergent youth constituency.

5.1 Limitations

While this study provides valuable insights into the relationship between financial literacy, social capital, financial technology, and financial inclusion among university students in Saudi Arabia, several limitations should be acknowledged:

1. **Sample Representation:**

The study primarily targeted university students from selected regions in Saudi Arabia, such as Riyadh, Jeddah, and Dammam. As a result, the findings may not fully represent the diversity of all students across the Kingdom, especially those in rural or remote areas where access to financial services and technology may differ.

2. **Cross-Sectional Design:**

The research used a cross-sectional survey, collecting data at a single point in time. This design limits the ability to establish causality or assess how students' financial behaviors and attitudes evolve over time.

3. **Self-Reported Data:**

The data collected through self-administered questionnaires may be subject to response bias. Participants might have overestimated or underestimated their financial literacy or FinTech usage due to social desirability or lack of self-awareness.

4. **Limited Scope of Variables:**

While the study focused on three key variables—financial literacy, social capital, and FinTech—other influential factors such as cultural attitudes, economic status, and gender-specific barriers were not explored in depth and could impact financial inclusion outcomes.

5. **Digital Accessibility:**

Since the survey was distributed online, it may have unintentionally excluded students with limited

internet access or those who are less digitally literate, which may have skewed the data toward more tech-savvy participants.

6. **Lack of Longitudinal Data:**

The absence of longitudinal data prevents the study from analyzing long-term effects or trends, especially in relation to the evolving FinTech landscape and financial education initiatives in Saudi Arabia.

Despite these limitations, the study offers a strong foundation for future research and provides actionable insights for policymakers, educators, and financial service providers aiming to enhance financial inclusion among youth in the Kingdom.

5.2 Recommendations

Though the current study presents valuable insights on the relationship between financial literacy, social capital, financial technology, and financial inclusion among Saudi Arabian university students, there are a few limitations to be highlighted:

1. **Sample Representation:**

The study started by targeting Saudi students of the universities who were selected from the prominent cities of the Kingdom, i.e., Riyadh, Jeddah, and Dammam. Results therefore may not capture the diversity of the students within the Kingdom as a whole, especially the rural and inaccessible areas where access to finance facilities and ICT would be divergent.

2. **Cross-Sectional Design**

The research utilized a cross-sectional survey, which captures data at one point. This method has the drawback that causality or how students' financial behavior and attitudes evolve with time cannot be established or quantified.

3. **Self-Reported Data:**

Self-report questionnaires may produce data that is susceptible to response bias. Respondents may have overstated or underreported their application of FinTech or financial literacy due to social desirability or lack of knowledge about themselves.

4. Limited Scope of Variables:

While the research focused on three most significant variables—financial literacy, social capital, and FinTech—the other intervening variables influencing financial inclusion such as cultural attitudes, economic status, and gender barriers were not investigated in-depth and can be influencing the outcome of financial inclusion.

5. Digital Accessibility:

Since the survey was carried out online, it may have unintentionally excluded students with limited internet access or digital illiteracy and biased the data toward more technologically literate participants.

6. Insufficiency of Longitudinal Data:

The insufficiency of longitudinal data prevents consideration of long-run impacts or long-term trends, especially regarding shifting FinTech patterns and financial education schemes in Saudi Arabia.

Yet the study builds a good groundwork for future investigation and offers handy implications for policy-makers, trainers, and service providers of the finance industry keen to enhance youthful financial inclusion within the Kingdom.

References

- Al-Faisal Institute for Social Studies. (2017). *Social capital and its role in promoting financial security in Saudi Arabia*. Riyadh, Saudi Arabia.
- Alkhalaf, H., & Alqahtani, S. (2020). Financial literacy and the use of digital financial services: The case of university students in Saudi Arabia. *Journal of Financial Education*, 43(2), 137–150.
- Almenhali, A., Albar, A., & Alharbi, M. (2022). Financial literacy among Saudi female university students: A case study of budgeting and investment decisions. *Journal of Personal Finance*, 27(3), 210–224.
- Al-Shammari, M., & Al-Sheikh, A. (2021). Exploring digital banking adoption in Saudi Arabia: The role of financial literacy and trust. *Journal of Financial Services Marketing*, 26(3), 107–119. <https://doi.org/10.1057/s41264-021-00095-1>
- Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Small vs. young firms across the world: Contribution to employment, job creation, and growth. *World Bank Policy Research Working Paper No. 5631*. <https://doi.org/10.1596/1813-9450-5631>
- Cole, S., Sampson, T., & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *The Journal of Finance*, 66(6), 1933–1967. <https://doi.org/10.1111/j.1540-6261.2011.01696.x>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*. World Bank. <https://doi.org/10.1596/978-1-4648-1259-0>
- Fintech Saudi. (2021). *The state of financial technology in Saudi Arabia: Opportunities and challenges*. <https://www.fintechsaudi.com>
- FSDP (Financial Sector Development Program). (2018). *Vision 2030 and financial literacy in Saudi Arabia*. Riyadh, Saudi Arabia.
- Fukuyama, F. (2012). *The origins of political order: From prehuman times to the French Revolution*. Farrar, Straus and Giroux.
- OECD (Organisation for Economic Co-operation and Development). (2018). *Financial literacy and consumer protection: Overcoming barriers to financial literacy in Saudi Arabia*. OECD Publishing. <https://doi.org/10.1787/9789264308337-en>
- OECD. (2020). *OECD/INFE 2020 international survey of adult financial literacy*. <https://www.oecd.org/financial/education/oecd-infe-2020.htm>
- Ozili, P. K. (2018). FinTech, financial inclusion, and financial stability: A review. *Journal of Financial Services*, 22(1), 98–110.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.

SAMA (Saudi Arabian Monetary Authority). (2020). *Financial literacy and inclusion in Saudi Arabia: An overview*. SAMA Annual Report, 2020. <https://www.sama.gov.sa>

SAMA (Saudi Arabian Monetary Authority). (2021). *National financial literacy survey in Saudi Arabia*. <https://www.sama.gov.sa>

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

Saudi Capital Market Authority. (2022). *Digital financial services: Challenges and opportunities*. <https://www.cma.org.sa>

Statista. (2023). Digital payment transaction value in Saudi Arabia 2018–2027. <https://www.statista.com/statistics/1278730/saudi-arabia-digital-payments-transaction-value/>

World Bank. (2022). *Financial inclusion overview*. <https://www.worldbank.org/en/topic/financialinclusion/overview>

Appendix

Section 1: Demographic Information

1. Gender:

- Female
- Male

2. Age:

- 18–22
- 23–27
- 28–32
- Other: _____

3. University Name: _____

Field of Study:

- Business / Finance / Economics
- Information Technology / Computer Science
- Engineering
- Other: _____

4. Year of Study:

- 1st Year
- 2nd Year
- 3rd Year
- 4th Year or above

5. Monthly Personal Income (if any):

- No income

- Less than 1,000 SAR
- 1,000 – 3,000 SAR
- More than 3,000 SAR

Section 2: Financial Literacy

Please rate your agreement with the following statements on a scale from 1 to 5:

1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

| Statement | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| I understand how to create a monthly budget. | | | | | |
| I know the difference between saving and investing. | | | | | |
| I am aware of how interest rates affect loans and savings. | | | | | |
| I am confident in choosing suitable financial products (e.g., credit card, savings account). | | | | | |
| I track my spending regularly. | | | | | |
| I can explain what inflation is and how it affects purchasing power. | | | | | |
| I compare financial products before making a decision. | | | | | |
| I regularly use digital banking apps (e.g., Al Rajhi, STC Pay, SNB). | | | | | |

Section 3: Social Capital

Please rate your agreement with the following statements on a scale from 1 to 5:

| Statement | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I often discuss financial matters with family or friends. | | | | | |
| I trust advice about financial decisions from people in my social circle. | | | | | |
| My family encourages saving and responsible financial behavior. | | | | | |
| I belong to a group or community that supports financial growth (e.g., savings group, investment club). | | | | | |
| I would seek help from someone in my community if I had financial problems. | | | | | |
| I feel connected to a support network that helps me with life decisions, including financial ones. | | | | | |

Section 4: Financial Technology Usage

Please rate your agreement with the following statements on a scale from 1 to 5:

| Statement | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I regularly use digital banking apps (e.g., Al Rajhi, STC Pay, SNB). | | | | | |
| I am familiar with mobile wallets and use them for purchases. | | | | | |
| I have used peer-to-peer payment apps (e.g., Apple Pay, STC Pay, mada Pay). | | | | | |
| I use my bank account or wallet regularly to make payments. | | | | | |

Section 5 : Financial Inclusion

I can easily access financial services when needed.

I use my bank account or wallet regularly to make payments.

I am aware of formal financial services available in Saudi Arabia.

I feel that my financial needs are met through the current financial system.