MEDIATING ROLE OF GOVERNMENT SUPPORT FOR FINTECH ADOPTION: EMPIRICAL EVIDENCE FROM ISLAMIC BANKS OF KARACHI, PAKISTAN

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Abstract

The purpose of this study is to investigate the factors affecting fintech adoption and mediating role of government support. The collection of required data was processed directly from the respondents, it’s also a fundamental component of research methodology. Using a self-administered questionnaire from prior researches and a Google form, the initial data was collected. A structured questionnaire survey is used to gather information for an explanatory study design. Fintech Adoption Services in the Islamic Banking Industry of Karachi Sindh will provide the study’s data. The data indicate that there is a positive relationship between awareness, perceived trust, and perceived usefulness on adoption fintech. In addition, such that, the mediating role of government support between awareness and fintech adoption revealed a partial mediation effect. However, the mediating role of government support between perceived trust and fintech adoption revealed a full mediation effect. Lastly, the mediating role of government support between perceived usefulness and fintech adoption revealed a partial mediation effect. This study plays an important part in the influence that the adoption of fintech services has had on the banking industry in Karachi. This study will be helpful to organizations and employees in the banking industry who are looking to achieve a competitive advantage by increasing their use of fintech services.

Keywords: Awareness, Perceived trust, Perceived usefulness, Fintech adoption

INTRODUCTION:

Financial technology (Fintech) is an innovation that facilitates more efficient financial transactions (Leong & Sung, 2018). Fintech represents a larger user base that provides financial services as well as a global user base for instant money. Customers are influenced more by the perceived benefits of Fintech adoption than by the perceived potential risks of Fintech adoption (Chan et al., 2022). The based benefits of adopting fintech in accordance with the Sustainable Development Goals (SDGs) and the United Nations Development Programme (UNDP), including promoting zero poverty, reducing poverty, and ensuring food security. Additionally, it supports the transition to renewable energy and the protection of ecosystems within a circular economy. To increase efficiency, however, consumers must better comprehend Fintech products and services by recognizing the advantages and potential risks associated with Fintech adoption (Setiawan et al., 2021). In this regard, government support for
fintech is necessary for it to be integrated into the economy (Okfalisa et al., 2022). Governments and policymakers can assist FinTech firms strategically in promoting financial literacy and empowering individuals (Kandpa et al., 2023). The establishment of regulatory sandboxes and the improvement of incentives to encourage investment in fintech are its examples. Financial literacy includes topics such as arithmetic, compound interest, inflation, and risk spread. Understanding basic finance is necessary for managing money, influencing investment behavior, and taking advantage of new financial instruments (Hamid & Loke, 2021). The Vietnamese government is also involved in facilitating citizens’ access to technology and financial services (Nathan et al., 2022). Fintech is readily apparent as a crucial factor in strategic planning. To remain competitive in the market, banks are seeking AI-based solutions to automate expensive, laborious, and mundane tasks (Villar & Khan, 2021). Consequently, AI has emerged as a game-changing step in the digitization and transformation of modern business.

By investing nearly eleven billion US dollars in AI by 2020, the world’s economic quarter is the largest contributor to AI (Yang et al., 2022). The implementation of AI-powered equipment will enhance the effectiveness of daily operations and the consumer experience. They asserted that fundamental AI programs used by banks, such as chatbots, personalized services, or even self-carry AI machines, will be more eco-friendly than conventional human advisory services (Rahman et al., 2022). Numerous technological advancements are causing a disruptive structural shift in the economic services industry. The widespread acceptance of these innovations, known as economic technology (FinTech), generates challenging circumstances for conventional banks and financial institutions (Alam et al., 2021). An innovative and eco-friendly patron encourages clients to transfer from conventional pricing methods towards the FinTech. Fintech has become an essential component of the financial services industry as a result of ongoing innovation (Meng et al., 2021). Fintech services go beyond e-banking and the digitization of traditional economic services. Today, the economic offering enterprise mainly focuses on the consumer, developing and deploying innovative technology that serves the economic needs and desires of users. FinTech solutions have the potential to increase productivity, reduce risk, and promote inclusive growth (Singh et al., 2020).

According to Setiawan et al., (2021), the scope of the author’s work was limited to Indonesia. Therefore, suggested researching this topic in various other nations. In order to address this issue, the researcher have chosen Karachi, Sindh, Pakistan. The author of (Singh et al., 2020) suggested that future authors conduct research on the various factors of fintech adoption. To fill this void, we’ve identified four factors of fintech adoption: awareness, perceived trust, perceived usefulness, and government support. According to (Nathan et al., 2018), COVID-19 prevented the author from using a larger sample size. Consequently, the researcher proposed increasing the sample size. To address this deficiency, the fellow researcher increased the sample size to 200 respondents. According to (Ali et al., 2021), the author has taken the aggregate outcome of their research into account. Therefore, he recommended that future authors conduct research on Islamic Bank Users. To fill this void, we have established the Islamic Bank Users Industry in Karachi, Sindh.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

TECHNOLOGY ACCEPTANCE MODEL

Information systems research often used the technologies Acceptance Model (TAM) to describe how consumers adopt new technologies (Zaineldeen et al., 2020). Researchers have extended Fred Davis’ 1989 model. According to the TAM, people embrace and employ technology based on its perceived utility and ease of use (Hamid et al., 2020). Perceived utility is how much someone thinks a technology will help them (Iriani & Andjarwati 2020). A technology’s perceived ease of use is a person’s opinion (Filieri et al., 2021). According to the TAM, these two characteristics directly affect a user’s attitude about a technology, which affects their own behavioral intention to utilize it. Finally, user behavior
affects technology utilization. Computers, cellphones, e-commerce sites, and social media platforms have all been explained by the TAM (Zhou et al., 2021). Social influence, perceived danger, and trust may also affect technology adoption. The TAM helps designers and developers understand technology acceptance and its usage, which may help them construct more user-friendly and effective solutions.

INDUSTRIAL POLICY

Industrial policy supports important industries to boost the economy. Industrial policy encouraged private investment and innovation via targeted subsidies, tax incentives, infrastructure improvements, and other government assistance (Bradley et al., 2021). Industrial policy holds that government involvement can fix market faults and inefficiencies that hamper economic growth and development. Government funding may cover gaps in private sector research and development or other vital areas for economic growth (Ning et al., 2022). Industrial policy fostered important industries like renewable energy, information technology, and biotechnology, which had boosted economic development and social welfare. The government could boost technology, employment growth, and economic competitiveness by supporting these areas (Pradhan et al., 2020). Industrial policy theory supported government assistance for economic growth (Kihombo et al., 2021). By correcting market flaws, increasing private investment, and promoting important sectors had focused on government interventions and might boost economic growth and development (Elavarasan et al., 2022; Sheth, &Parvatiyiar, 2021).

HYPOTHESIS DEVELOPMENT

AWARENESS OF FINTECH AND FINTECH ADOPTION

Rahman et al. (2021) examined, how perceived ease of use, knowledge, and risk affect Malaysian banking technology uptake. The 139 Malaysian bank clients were surveyed online using SMART PLS. Malaysia's banking industry adopted fintech due to perceived ease of use, awareness, and risk taking. Singh et al. (2020) examined Indian banking users' Fintech Adoption, covering Awareness, Technical, and Behavioral aspects. Indian banking user questionnaires and SMART PLS SEM obtained the data. Awareness, Technical, and Behavioral Attributes positively and substantially impacted Indian banking users' Fintech Adoption. Perceived Usefulness, Risk, Awareness, and Cost impact Malaysian Fintech Adoption (Jin et al., 2018). 120 Malaysian clients were surveyed and SMART PLS performed SEM. Perceived Usefulness, Risk, Awareness, and Cost positively and substantially had impacted Malaysian Fintech Adoption. Awareness, Technical, and Behavioral Attributes affected Japanese banking customers' Fintech Adoption (Yoshino et al., 2020). Indian banking user questionnaires and SMART PLS SEM obtained the data. Awareness, Technical Attributes, and Behavioral Attributes positively and substantially affected Fintech Adoption among Japanese banking customers. Ghazali &Yasuoka (2018) examined how knowledge and perception analysis had affected fintech adoption in Japanese banking consumers. SEM using SPSS and AMOS was used to survey 190 Japanese banking customers. Awareness and perception analysis boosted Japanese bankers' fintech uptake. Millennials and Z Generation Users of Hungary and Palestine adopt fintech based on perceived usefulness, risk, awareness, and cost (Daqar et al., 2020). The 120 Hungarian and Palestinian Millennials and Z Generation users were surveyed using SEM and SMART PLS. Perceived Usefulness, Risk, Awareness, and Cost positively and substantially affected Fintech Adoption Millennials and Z Generation Users of Hungary and Palestine. From the above discussion, we have proposed the following alternative hypotheses.

H1: Awareness is positively related to Fintech adoption.
Nawayseh (2020) examined how Perceived Trust, Benefits, Risk, and Social Influence affect Jordanian fintech adoption during COVID-19 epidemic. SEM SMART PLS was used to evaluate data from 500 Jordanian potential Fintech Service clients. Trust, Benefits, Risk, and Social Influence favorably and dramatically impacted Jordanian fintech adoption during COVID-19 pandemic. Perceived Trust, Effectiveness, Risk, and Social Influence impacted Indonesian fintech adoption (Meyliana, 2019). SEM SMART PLS examined questionnaire data from 748 Indonesian potential Fintech Service clients. Trust, Usefulness, Risk, and Social Influence favorably and substantially impacted Indonesian fintech adoption. Trust, Convenience, Risk, and Benefits influence Pakistani Islamic Banking Users’ fintech adoption (Ali et al., 2021). SEM SMART PLS was used to evaluate data from 250 eminent and potential Pakistani Fintech Service utilizers of Islamic Banking. Trust, Convenience, Risk, and Benefits favorably and substantially impacted Islamic Banking Users of Pakistan’s fintech adoption. Perceived Trust, Ease of Use, Awareness, and Risk affect Malaysia’s banking industry’s Fintech Adoption (Rahman et al., 2021). Malaysian bank clients numbered 139 were surveyed online using SMART PLS. Malaysia’s banking industry’s Fintech Adoption is positively impacted by Trust, Ease of Use, Awareness, and Risk. Perceived Trust, Security, Risk, and Promotion impact of Jakarta’s fintech adoption was observed at large level (Nangin et al., 2020). From the above discussion, we have proposed the following alternative hypothesis.

**H2: Perceived trust is positively related to Fintech adoption.**

**PERCEIVED USEFULNESS AND FINTECH ADOPTION**

Jakarta’s fintech adoption depended on perceived trust, usefulness, risk, and financial literacy (Setiawan et al., 2021). SEM SMART PLS analyzed 485 Jakarta’s potential Fintech Service users’ though a survey. Perceived Trust, Usefulness, Risk, and Financial Literacy positively and substantially impacted Jakarta consumers’ fintech adoption. Singh et al. (2020) examined how perceived utility, awareness, technical features, and behavioral variables affect fintech adoption among Indian banking customers. Indian banking user questionnaires and SMART PLS SEM obtained the data. Perceived Usefulness, Awareness, Technological Attributes, and Behavioral Attributes positively and substantially influenced Indian banking users’ Fintech Adoption. (Le, 2021) examined, how Perceived Usefulness, Government Support, Financial Literacy, Ease of Use, and Brand Image affected fintech adoption among Vietnamese Banking Users during COVID-19 epidemic. SEM with SPSS was used to survey 190 Vietnamese bank customers. Perceived Usefulness, Government Support, Financial Literacy, Ease of Use, and Brand Image positively and substantially affected fintech adoption among Vietnam Banking Users during COVID-19. Al-Okaily et al. (2021) evaluated how perceived trust, usefulness, risk, pleasure, and E-WOM influenced Jordanian fintech adoption utilizers. SEM SMART PLS examined questionnaire data from 304 Jordanian potential Fintech Service clients. Perceived Trust, Usefulness, Risk, Enjoyment, and E-WOM positively and substantially impacted Jordanian fintech adoption. Expectation, Performance, Confirmation, Usefulness, and Satisfaction impacted Korean fintech adoption users (Lim et al., 2018). SEM SMART PLS studied 150 Korean potential Fintech Service users’ questionnaire data. Expectation, Performance, Confirmation, Usefulness, and Satisfaction positively and substantially impacted Korean fintech adoption users. Perceived Trust, Effectiveness, Risk, and Social Influence impacted Indonesian fintech adoption utilizers (Meyliana et al., 2019). SEM SMART PLS examined questionnaire data had been taken from 748 Indonesian potential Fintech Service clients. Usefulness, Trust, Risk, and Social Influence positively and substantially influenced Indonesian fintech adoption clients. From the above discussion, we have proposed the following alternative hypothesis.

**H3: Perceived usefulness is positively related to Fintech adoption.**
MEDIATING ROLE OF GOVERNMENT SUPPORT TOWARDS FINTECH AND FINTECH ADOPTION


From the above discussion, we have proposed the following alternative hypothesis.

H4: The government support mediates the relationship between awareness and fintech adoption.

H5: The government support mediates the relationship between perceived trust and fintech adoption.

H6: The government support mediates the relationship between perceived usefulness and fintech adoption.

METHODOLOGY

A study's research design, that serves as a framework for the complete process, from establishing the agenda to accumulating and analyzing data outlines the fundamental research design (Veal, 2017). In this investigation, an explanatory research design was utilized. A structured questionnaire survey is used to gather the required information for an explanatory study design. Fintech Adoption Services in the Islamic Banking Industry of Karachi, Sindh will provide the study's data. This study's data source is 'primary', or data collected directly from end users with the stated purpose of resolving the research issue (Hair et al., 2014). Participants will be Fintech Services Users of Islamic Banks in Karachi, Sindh, Pakistan; these respondents will be asked to complete a standardized questionnaire. The term “population” refers to a group of people who have been specifically selected, or any targeted community, to participate in research in order to obtain information or their opinion on variables and their factors (Kindig, 2007). Now, a portion of the population in Karachi, Pakistan uses Fintech Services provided by the Islamic banking system.

The term “sampling” refers to the procedure of selecting a statistically representative sample from a population (Lynn, 2016). It is a crucial tool used in research to reduce the number of individuals, showed their interest in the study. The ideal sample is one that accurately represents the target population and is large enough for research purposes. We collected data from Fintech Services Users of Banks in Karachi, Pakistan, using convenience sampling or non-probability sampling. The sample size of a study should be large enough to convey sufficient significance to researchers so that such researchers can have faith in and rely on the study's findings. However, it should not be so insignificant as to be unreliable. We have already applied the rule of thumb of 10 respondents per questionnaire item to ascertain the optimal sample size. According to the rule of thumb, there are 20 total inquiries and 10 respondents per questionnaire (Cobanoglu et al., 2022). Therefore, we would have required 200 respondents, if our questionnaire were to have included twenty items. But for the...
better results we have considered 270 cases in this study. The purpose of the questionnaire was to collect the primary data from the relevant sources for the investigation. In general, a “questionnaire” is a form-like instrument used to collect responses to self-administered inquiries. This questionnaire uses the 5-Likert Scale as its foundation. All items were taken from Nathan et al. (2022), Setiawan et al. (2021), and Rahman et al. (2021), all these studies conducted in the past and proved reliable.

RESULTS AND DISCUSSION

RELIABILITY ANALYSIS

The following Table 1 displays the consistency between all survey instrument’s elements. Cronbach’s Alpha is exhibited in the Reliability Analysis table, which is used to make decisive conclusions regarding the data’s reliability. Based on this, we can classify dependability as inadequate or exceptional. Cronbach’s Alpha is 0.786 for fintech adoption, 0.792 for Awareness, 0.751 for perceived trust, 0.835 for perceived usefulness and as well as 0.827 for government support. If Cronbach’s Alpha is greater than 0.70, the variable is deemed reliable for further data analysis, and it is referred to as reliable (Taber, 2018). Therefore, the designed instrument is considerable and is also dependable.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Cronbach’s Alpha</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fintech Adoption</td>
<td>0.786</td>
<td>4</td>
</tr>
<tr>
<td>Awareness</td>
<td>0.792</td>
<td>4</td>
</tr>
<tr>
<td>Perceived Trust</td>
<td>0.751</td>
<td>4</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>0.835</td>
<td>4</td>
</tr>
<tr>
<td>Government Support</td>
<td>0.827</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: This study

HYPOTHESIS TESTING

The purpose of this research is to investigate the relationship between independent factors including awareness, perceived trust, and perceived usefulness on dependent variable: fintech adoption in Islamic banking sector of Karachi, Pakistan, and mediating role of government support. The p-value as well as the beta value are shown in the Table 2 that follows. The p-value is used to represent the degree of significance, whereas the beta value is used to highlight the nature of the connection between the dependent and independent variables. The data indicates that there is a positive relationship between awareness (Beta value=0.247, p-value=0.005), perceived trust (Beta value=0.204, p-value=0.010), perceived usefulness (Beta value=0.172, p-value=0.042). In addition, these the mediating role of government support between awareness and fintech adoption revealed a partial mediation effect (Beta value=0.094, p-value=0.003). However, the mediating role of government support between perceived trust and fintech adoption revealed a full mediation effect (Beta value=0.040, p-value=0.120). Lastly, the mediating role of government support between perceived usefulness and fintech adoption revealed a partial mediation effect (Beta value=0.099, p-value=0.009).

<table>
<thead>
<tr>
<th>Path Directions</th>
<th>Value of Beta (Standard Coefficient)</th>
<th>Significance Level(P-value)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness -&gt; Fintech Adoption</td>
<td>0.247</td>
<td>0.005</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived Trust -&gt; Fintech</td>
<td>0.204</td>
<td>0.010</td>
<td>Supported</td>
</tr>
</tbody>
</table>
### Table

<table>
<thead>
<tr>
<th>Adoption</th>
<th>0.172</th>
<th>0.042</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness -&gt; Fintech Adoption</td>
<td>0.094</td>
<td>0.003</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>Awareness -&gt; Government Support -&gt; Fintech Adoption</td>
<td>0.040</td>
<td>0.120</td>
<td>Full Mediation</td>
</tr>
<tr>
<td>Perceived Trust -&gt; Government Support -&gt; Fintech Adoption</td>
<td>0.099</td>
<td>0.009</td>
<td>Partial Mediation</td>
</tr>
</tbody>
</table>

**Source:** This study

![Figure 1: Structural Equation Modelling](image)

**DISCUSSION ON RESULTS**

Earlier research indicated that regulatory authority has a positive effect or influence on Fintech Adoption (Rahman et al., 2021), that Awareness has a positive and significant effect on Fintech Adoption (Singh et al., 2020), and that the Awareness has a positive and significant effect on Fintech Adoption (Jin et al., 2018). Previous research indicated that regulatory authority has a positive effect or influence on the Fintech Adoption (Meyliana et al., 2019), furthermore that Perceived Trust has a positive and significant effect on the Fintech Adoption (Ali et al., 2021), and that the Perceived Trust had a positive and significant effect on Fintech Adoption (Rahman et al., 2021). Previous research indicated that regulatory authority had a positive influence or effect on Fintech Adoption (Setiawan et al., 2021), and also Perceived Usefulness had a positive and significant influence on Fintech Adoption...
(Al-Okaily et al., 2021), and that Perceived Usefulness had a positive and significant influence on Fintech Adoption (Meyliana et al., 2019). Previous research had also indicated that regulatory authority had a positive effect on Fintech Adoption (Al-Nathan et al., 2022). The Government Support also had has the positive and significant effect on Fintech Adoption (Albarrak&Alokley's 2021).

CONCLUSION

For this study, we utilized the primary data that was gathered from Fintech Service Users in all over the Karachi. The purpose of this research was to determine the influence that these individuals have on the adoption of Fintech. All three independent variables including awareness, perceived trust and perceived usefulness have a significant and positive influence on the adoption of fintech services in Islamic banking industry of Karachi, Pakistan. Moreover, the mediating role of government support revealed partial mediation effect on awareness and perceived usefulness. However, full mediation effect for the perceived trust.

MANAGERIAL IMPLICATIONS

This study plays an important part in the influence that is related to the adoption of fintech services has had on the Islamic banking industry of Karachi. This study will be helpful to the organizations and employees in the banking industry such as looking to achieve a competitive advantage by increasing their use of fintech services. This research can take advantage of studying those factors, that are important to enhance the adoption of fintech services, particularly for the banking sector because this research is particularly for banking-based companies, whereas the factors, such as awareness, perceived trust, perceived usefulness, and government support.

THEORETICAL IMPLICATIONS

The variables of awareness, perceived trust, perceived usefulness, and government support are derived from the Industrial Theory and Technology Acceptance Model. This theory was tested for the first time in Karachi, Pakistan. Awareness, perceived trust, perceived usefulness, and government support have a positive and significant impact on the adoption of fintech services in the Banking Industry of Karachi Sindh, according to the testing and results. Therefore, we have demonstrated for the first time these theories in the context of Karachi, Pakistan’s banking Industry.

FUTURE RESEARCH

This research has limitations; the first limitation is that the current research is only able to assess Fintech Adoption based on four factors: awareness, perceived trust, perceived usefulness, and government support. Second, the target audience limited towards the finance sector users only. Thirdly, another restriction was the limited sample size of only 270 banking sector users, and geographically, we were restricted to Karachi, Sindh, Pakistan, as the sole location of fintech service users, it can be extended towards the other provinces of Pakistan.

REFERENCES


