

**RISK PERCEPTIONS ON MOBILE FINANCIAL SERVICES
(MFS) ACCEPTANCE IN KATHMANDU**

A Dissertation submitted to the Office of the Dean, Faculty of Management in partial
fulfilment of the requirements for the Master's Degree

by

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of the dissertation entitled “Risk Perceptions on Mobile Financial Services (MFS) Acceptance in Kathmandu”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work have been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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Report of Research Committee

Mr. Sanjeeb Rijal has defended research proposal entitled “**Risk Perceptions on Mobile Financial Services (MFS) Acceptance in Kathmandu**”. successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Asst. Prof. Dr. Dhan Raj Chalise and submit the thesis for evaluation and viva voce examination.

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TABLE OF CONTENTS

Certification of Authorship	ii
Report of Research Committee	iii
Approval Sheet.....	iv
Acknowledgment	v
List of Tables	viii
List of Figure.....	ix
ABBREVIATIONS	x
CHAPTER I.....	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	1
1.3. Objectives of the Study	3
1.4. Hypotheses for the Study	3
1.5. Rationale of the Study.....	5
1.6 Limitations of the Study.....	6
CHAPTER II.....	7
LITERATURE REVIEW	7
2.1 Conceptual Review	7
2.2 Theoretical Review	12
2.3 Empirical Review.....	17
2.4 Research Gap	24
CHAPTER III	26
RESEARCH METHODOLOGY.....	26
3.1 Research design	26
3.2 Population and sample, and sampling design	26
3.3 Nature and sources of data	27

3.4 Instrument of the data collection.....	27
3.5 Methods of Analysis	27
3.6 Research Framework	29
CHAPTER IV RESULTS AND DISCUSSION.....	30
4.1 Results.....	30
4.2 Discussion	39
CHAPTER-V SUMMARY AND CONCLUSION	42
5.1 Summary	42
5.2 Conclusion	42
5.3 Implications.....	43
References	
Appendix	

List of Tables

Table 1 Summary of literatures	19
Table 2 Gender of Respondents	28
Table 3 Level of Education of Respondents	29
Table 4 Descriptive Statistics Perceived Risk	32
Table 5 Descriptive Statistics Perceived Privacy Risk	33
Table 6 Descriptive Statistics Perceived Time Risk	33
Table 7 Descriptive Statistics Perceived Security Risk	34
Table 8 Descriptive Statistics Perceived Cost	35
Table 9 Descriptive Statistics Adoption of Mobile Financial Services	36
Table 10 Descriptive Statistics of variables	37
Table 11 Correlations among Variables	39
Table 12 Linear Regression Model	40

List of Figure

Figure 1 Research Framework

15

ABBREVIATIONS

ANOVA:	Analysis of Variance
DOI:	Diffusion of Innovation Theory
GRP:	Graduate Research Report
MBS:	Master of Business Studies
MFS:	Mobile Financial Services
SPSS:	Statistical Package for the Social Sciences
T.U.:	Tribhuvan University
TAM:	Technology Acceptance Model
TPB:	Theory of Planned Behavior
TRA:	Theory of Reasoned Action
UTAUT:	Unified Theory of Acceptance and Use of Technology

ABSTRACT

The main goal of the research is the risk perception on Mobile financial Services acceptance in Nepalese users. The objective of the study is to access the risk factors influencing on Mobile financial service users, relationship between perceived risk and user adoption behaviour and examine the impact of these risk factors on the adoption of MFS in Kathmandu.

This study is based on the primary data collection based on research questionnaire through internet and used the SPSS will be applied in the analysis of profiles of the respondents, as well as for the inferential statistical analyses. Descriptive analysis, correlation analysis and regression analysis conducted.

This study used 315 population sample of the study on the adoption of mobile financial services (MFS) in Kathmandu. The data collected from the survey are analyzed to understand the demographic characteristics of the respondents, risks related to MFS, and their overall willingness to adopt these services. Various statistical tests, including descriptive statistics, correlation analysis, and hypothesis testing, are conducted to provide a comprehensive view of the factors influencing MFS adoption. The findings are discussed in detail, with explanations of key tables and the implications of the results.

The findings indicate that while risks are perceived, the advantages of MFS often outweigh these concerns for Nepalese users. Users appear open to adopting MFS if their basic security and trust concerns are met. The study suggests that by improving security features, reducing data privacy issues, and ensuring seamless service efficiency, financial institutions can effectively enhance user trust and promote MFS adoption. The overall conclusion is that strengthening trust-building measures could substantially improve MFS adoption, thus facilitating broader financial inclusion in Kathmandu.

Keywords: Adoption of Mobile Financial Services, Privacy Risk, Time Risk, Security Risk,

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Mobile Financial Services have significantly transformed the way individuals manage their finances globally, offering a more efficient and accessible means of conducting financial transactions. (Kim et al., 2018). These services give users the ability to engage in a variety of financial activities such as transferring money or banking using mobile phones (Lacmanovic et al., 2012). They are very useful, especially in developing countries where access to the conventional forms of bank services is a challenge (Afroze & Rista, 2022). In Nepal, usage of MFS has been increasing which has been seen as a good development towards the efforts of making sure that everyone is considered financially (Madan, 2020).

Though the benefits are to be received, the trends of MFS usage in Nepal are neither encouraging nor embracing as expected. One major factor for this is the trust and risk perceptions of users. Trust in MFS is particularly important to the extent that it influences the willingness of people to use these services (Afroze & Rista, 2022). On the other side, usage of MFS may not be so easy due to psychosocial risks associated with the services such as being victim of fraud, techno-stress and privacy concerns (Abdul-Rahim et al., 2022).

The invigoration of MFS and improvement of the financial health of the population within the country need to know how trust and risk perceptions impact the usage of MFS in the case of Nepal. This study investigates the factors that influence trust and risk perception among potential and current MFS users in Nepal.

1.2 Problem Statement

Mobile Financial Services (MFS) are gaining popularity worldwide, providing a convenient alternative to traditional banking by allowing users to conduct financial transactions via mobile phones (Kim et al., 2018). In Nepal, where traditional bank access is limited, MFS could play a key role in advancing financial inclusion (Madan, 2020). However, adoption rates are lower than expected, often due to concerns

surrounding trust and perceived risk (Afroze & Rista, 2022). Trust in MFS is crucial; without it, potential users are unlikely to adopt these services. Security issues, data privacy concerns, and fraud risks contribute to a general hesitance in the population (Abdul-Rahim et al., 2022).

Past studies have primarily focused on the technical aspects and general user behavior of MFS, overlooking the specific influence of trust and risk perceptions in the Nepalese context. Little research has delved into how users' concerns about privacy, data security, and cyber risks impact their willingness to use MFS. Understanding these concerns is essential to improve the adoption of MFS and address challenges in providing secure and user-friendly digital financial services.

This study aims to bridge this gap by analyzing how trust and perceived risks affect the adoption of MFS in Nepal. By identifying the primary concerns and risk factors that discourage usage, this research will offer practical insights for policymakers, financial institutions, and technology providers. Solutions to enhance security, transparency, and ease of use could build user confidence and encourage broader MFS adoption, thereby promoting greater financial inclusion in Nepal. These findings could serve as a basis for policy adjustments and technology improvements that address the root causes of low trust and high perceived risks in MFS usage in Nepal.

This study aims to understand how perceived risks, such as privacy, security, and time-related concerns, impact the adoption of Mobile Financial Services (MFS) among users in Nepal. The objectives are designed to identify the key risk factors, examine their influence on user behavior, and analyze the relationship between these risks and adoption rates within the Nepalese context. Rooted in the Technology Acceptance Model (TAM), which suggests that perceived ease of use and usefulness are central to technology adoption (Davis, 1989), this study further explores how trust, perceived risks, and technological awareness interact to influence MFS adoption (Zhang et al., 2020). The focus aligns with literature highlighting trust and security as pivotal in digital finance. For example, research by Almaiah (2023) and Kumar (2023) emphasizes security concerns, such as data breaches, as significant obstacles, while Barnard and Humbani (2022) discuss time risk as a key factor in shaping user satisfaction. Moreover, Afroze and Rista (2022) argue that trustworthiness is crucial for MFS adoption, especially in regions with low digital literacy, where risk

perceptions are amplified. By investigating these factors, this study aims to offer insights that support the development of strategies to enhance security, reduce perceived risks, and foster trust in MFS, promoting greater financial inclusion in Nepal. These findings will contribute to policy and technological improvements and provide theoretical insights into the role of trust and risk perceptions in digital financial services within Nepal's unique socio-economic setting.

1. What is the risk factors influencing Mobile Financial Services (MFS) users in Nepal?
2. What are the impact of these risk factors on the adoption of MFS in Nepal ?
3. Is there any relationship between perceived risk and user adoption behavior in MFS within the Nepalese context?

1.3. Objectives of the Study

1. To access risk factors influencing Mobile Financial Services (MFS) users in Nepal.
2. To analyze the relationship between perceived risk and user adoption behavior in MFS within the Nepalese context.
3. To examine the impact of these risk factors on the adoption of MFS in Nepal.

1.4. Hypotheses for the Study

1. Perceived privacy risk significantly influences users' perception of the risk of using MFS.

Users who perceive high privacy risks are more likely to view MFS as risky. According to a study, the concerns about data security and personal information breaches lead users to believe that using MFS is less safe (Zhang et al, 2020). This perception can reduce their willingness to adopt or use mobile financial services regularly.

2. Perception of time risk significantly influences users' perceived risk of using MFS.

The perception of time risk significantly influences users' perceived risk of adopting mobile financial services (MFS), as demonstrated across several studies. Time risk,

often defined as the potential for time loss or inefficiency during transactions, plays a critical role in determining users' attitudes and behavior toward MFS. For instance, it is found that time risk negatively impacts attitudes toward mobile payment adoption, with users expressing concerns about the time required to complete transactions (Bland et al, 2024). Similarly, the time loss risk significantly influences consumer satisfaction and their intention to continue using mobile payment services (Haetal, 2023). In the Malaysian mobile shopping context, it showed that time risk is one of the key factors influencing youths' mobile shopping behavior (Tang and Razak, 2023). Moreover, the time risk, alongside psychological risk, is crucial in determining the perceived value of proximity mobile payments (Barnard and Humbani, 2022). Thus, reducing perceived time risk, through measures like streamlining transaction processes or enhancing app efficiency, can alleviate concerns and boost user adoption of MFS by enhancing convenience and user satisfaction.

3. Perception of security risk significantly influences users' perceived risk of using MFS.

The perception of security risk plays a crucial role in influencing users' perceived risk when using mobile financial services (MFS). Studies have consistently highlighted the significance of security concerns in shaping user attitudes toward MFS adoption. For instance, it emphasized that perceived security, alongside trust, is pivotal in driving user acceptance of mobile banking applications, with inadequate security measures negatively affecting trust and increasing perceived risk (Almaiah, 2023). Similarly, the perceived security risk moderates the relationship between users' behavioral intention and actual adoption of mobile banking, underscoring its influence on usage decisions (Kumar, 2023). The performance and psychological risks, which include security concerns, are critical factors negatively affecting user attitudes toward mobile payment platforms (Bland, 2024). Moreover, the perceived security, along with perceived usefulness, significantly impacts the continuance intention of mobile fintech users (Ikhsan, 2023). These insights suggest that enhancing security features in MFS platforms, such as data protection and fraud prevention, can mitigate perceived risk, fostering greater user trust and adoption.

1.5. Rationale of the Study

Mobile Financial Services (MFS) which means the adoption of MFS provides the greatest opportunity for financial inclusion in Nepal, one of the countries with low traditional banking facilities. MFS are capable of bringing efficient and accessible financial options to the unbanked and under-banked leading economic growth and better living conditions for most of the people. Despite the benefits, it is still not being adopted as much as we thought in Nepal. MFS can help a lot of people to enhance financial inclusion only if we first clarify the reasons for slow progression.

The data show that one of the main barriers to MFS adoption is the issue of trust. Trust is a key element in making users believe that their money will be safe, and this directly affects the user's trust to go ahead with the technology

Fears of Fraud, Data Security Breaches, and technical failures are, in turn, viewed as the chief threats to MFS and thus can hinder adoption which is why they are called the Perceived risks. The aforementioned are important data for the setting up of the right strategies in any industry including the MFS market. Among these, those that are more relevant to the country setting are technological infrastructure and regulatory frameworks, which may not be as strong as those in developed regions.

This study would bring in insights to policymakers, financial institutions, and technology companies alike. This incentivizes these stakeholders to innovate, build, and implement MFS that are more user-friendly and less risky by knowing the fundamental factors affecting trust perceived risk. This will likely increase adoption e and financial inclusion, eventually promoting business development in Nepal.

Hence, this study essentially addresses the trust and risk dimensions that need to be understood as well as addressed for the successful uptake of MFS in Nepal. It seeks to do so by providing actionable suggestions which if implemented can help in mitigating these barriers and enabling the adoption of MFS at a mass scale, thereby furthering financial inclusion and hence making a significant contribution towards economic development.

1.6 Limitations of the Study

1. A study might be only of a particular type of people those already comfortable with technology or banking. These results may therefore not reflect the opinions of everyone about mobile financial services in Nepal.
2. While the study emphasizes risk, it misses important aspects such as trust or how mobile financial services might be used differently by rich people to support poor unbanked consumers. To us, it may suggest that there are significant parameters influencing how people use these services we have not considered.
3. The research only touches on a couple of aspect that as risk. It doesn't take into account other important factors like the demographics of people, or regulations around mobile banking put in place by governments. And it leaves open the possibility that we are not getting a complete view of why people in Nepal turn to mobile financial services.
4. Responses are entirely dependent on a structured questionnaire. So, it may not be collect the qualitative aspects and lacks cross-verification.

CHAPTER II

LITERATURE REVIEW

2.1 Conceptual Review

Trust and Antecedents of Trust

Trust is a multifaceted concept (Challender, 2019). Over the years, there have been a lot of studies done on trust from different perspectives which provided many findings. The study by Challender, (2019). call for further research on trust in IT and highlighted dimensions of trust such as disposition to trust, technology trust, and vendor trust all found important particularly relevant within mobile financial services (MFS).

There is no common way to measure organizational trust, and different scholars have operationalized different dimensions of trust. It gets broken down into dispositional trust, trust belief, and assurance. Different scholars include interpersonal trust, dispositional trust, and institutional trust. A further definition comprises behaviors of trust, individual perceptions related to the field, and institutional trust. Trust disposition refers to how much a person as an individual tends in general and influencing towards such trust; typical dispositions of this kind result from the personality structure of the actor (Frederiksen, 2019). It may help explain why some people are more trusting than others. While the factors that determine who trusts will and can reflect what to as advanced disposition material outsider tendency, trust might be important in creating initial security weakness but appears to play a less essential once confidence beliefs take place (Nguyen, 2022).

Their findings suggest that technology acceptance results from the degree of reliance upon inherent benefits or in other words, trust related to a technical many (Mubarak & Patriate, 2020). The more trustworthy and consistent users find the technology within MFS, the more trust they have in external service. Technology trust is very important for the usage of MFS.

The vendor trust is the faith the consumer has in a vendor's delivery of transactional requirements at times when it can put them at risk. Taking advantage of the consumer can reduce trust in a vendor (Soleimani, 2022). Vendors who trust Although it was

pretty obvious. Competency, goodwill, and reliability are features of vendor trust (Al-kfairy, 2024). Reputation plays a positive role in MFS because the vendor with a good reputation is less likely to fraud, improving consumer confidence (Laferrière & Décary-Héту, 2023). We can use this understanding to examine relationships between trust factors and trust in MFS.

Trust is essential in the acceptance of MFS (Kumar, 2023). Representing the noble trust of users in the dependability and genuineness with which the service provider serves (Khan et al., 2022), They claim that dispositional trust, technological trust, and vendor trust are the most trustworthy in MFS (Bashir & Muhammad).

1. Dispositional Trust:

This is the general inclination to trust others, which can be shaped by personality characteristics and their experiences in the past (Weiss et al., 2022). The higher the dispositional trust be higher the likelihood of trusting new technologies and services, like MFS.

2. Technological Trust:

Users develop trust in technology using considering security, reliability, and user-friendly features (Weck & Afanasieva). Users think the technology is more reliable and they would be more likely to use it (Cao et al., 2021).

3. Trust in vendor: Trust is the process of trust between us and our service provider or vendor. If users believe the vendor to be competent, honest, and acting in their best interest they are more likely to make use of MFS (Marakarkandy et al., 2021).

Perceived Risk and Antecedents of Perceived Risk

Perceived risk refers to the interaction of uncertainty and the threat level of an outcome (Farzin et al., 2023). Emotional sensitivity is projected as the personalized subjective understanding of different objective risks (Guo et al., 2023).

A general tendency compels humans to take some steps, and we can extrapolate this case to most trust scenarios (Hoesterey & OnnaschQRSTY, 2023). This means that the complexity of risk directly with trust in the consumer itself can be decided (Alrawad et al., 2023). Nevertheless, since understanding the role of trust and risk factors is complex (C. Li & Li 2023), many researchers often ignore risk perception

roles in this regard. A Chinese sample finds that among trust-related intentions of the victim, only perceived risk reduction has an influence on attitudes toward the truster and patronage behavior (Xiong et al., 2024). Until this stage, risk and outcomes cost were related in the field of risk management, while trust appeared to be mirroring another type of risk but broadcasting different relationships (Xie & Wu, 2024). Studies, generally concentrating on the firm-level link between trust and risk (Černe et al. 2013a), emphasize industrial relationships. However, theoretical and empirical bases are scarce in MFS.

In examining the trust-risk relationship, previous research suggests that a general willingness to take risks characterizes all trust situations (Hoesterey & Onnasch, 2023). This implies that consumer trust can be assessed based on the complexity of the risk involved (Alrawad et al., 2023). However, due to the intricate nature of trust and risk variables, many scholars have overlooked the role of risk perceptions (C. Li & Li, 2023). Studies in e-commerce reveal that as trust increases, perceived risk decreases, thereby influencing attitudes toward the trustor and the willingness to make purchases (Xiong et al., 2024). In risk management, risk is associated with outcome costs, with trust and risk acting as mirror images incorporating different relationships (Xie & Wu, 2024). Research focuses on the relationship between trust and risk, with most studies emphasizing industrial relationships. However, theoretical and empirical support in MFS is limited.

If buyers trust e-commerce sites or companies, they might assume the risk to be low and proceed with the acquisition of goods by selecting the 'buy now' button (Xiong et al., 2024). Indeed, trust and risk are not things that can exist by themselves; they are different parts of the same energy in e-commerce. However, if we look at it: when technology is used in the exchange of money which is either through the mobile or through the phone it tells a different story.

Trust in others implies an expectation that they will act predictably, reducing interaction complexity. Given the complex relationship between trust and risk, and the lack of scholarly consensus on modeling this relationship (Carter et al., 2023), if trust is present, perceived risk is reduced, which influences the decision-making process regarding MFS usage. Higher trust in technology lowers perceived risk and positively affects behavioral intentions (Islam et al., 2024).

Major influence may be done by risk perceptions on the adoption of MFS. For instance, Swaminathan et al reported that consumers show aversion to giving credit card information on the Internet. In MFS, consumers generally need to disclose a lot of account information (Sunder M & Modukuri, 2024). Consumers' trust builds a better perception of online services that decrease perceived risk from transactions. Overall perceived risk is a multifaceted concept to the researchers. Perceived risk has been used to explain offline and online shopping behaviors. Generally accepted work by Featherman and Pavlou, classified perceived risk into economic, social, time, functional, psychological, and privacy risks based on the context of e-service adoption. As such, Bellman et al. emphasized that time is a major concern and a good predictor of online purchasing behavior, meaning time-strained consumers are more likely to buy goods and services online. Time risk is the loss of time and effort involved in acquiring goods and services. Thus, this study infers that time-conscious customers do add value to the time utilized for adopting new MFS and using them. These are security and privacy threats that expose the possibility of loss through fraud or misused personal information. They most commonly occur in the execution of transactions or handling of important data.

The perception of costs associated with MFS applications can create fear among consumers. Empirical evidence indicates that mobile banking acceptance is influenced by economic factors such as transaction fees. Conversely, high costs can deter adoption (Shaikh & Karjaluoto, 2020). Hence, cost risk perception can negatively affect mobile banking adoption (Shen et al., 2019).

In this regard, the four key dimensions of perceived risk influencing MFS adoption, are privacy risk, time risk, security risk, and financial risk (Gbongli et al., 2017). These dimensions serve as the basis for the next assumptions. Perceived risk is the possible adverse consequences associated with the use of MFS and, accordingly, is a significant inhibitor of adaptive behavior. Its major elements are the risk to privacy, the risk to security, and the risk to cost.

1. Privacy Risks

The misuse of personal information, including unauthorized access, has sparked significant amounts of concern in the present setting when data breaches have become quite common.

2. Security Risk

This primarily relates to the safety of financial transactions. Fraud, hacking, and technical failure issues are concerns to users in terms of financial loss (Aboobucker & Bao, 2021).

1. Cost Risk

This pertains to the potential financial costs associated with using MFS, such as transaction fees or hidden charges. High or unpredictable costs can discourage users from adopting MFS (Zahra et al., 2020).

Adoption of Mobile Financial Services

The drivers of MFS adoption are social influence, perceived risk, trust, convenience, perceived usefulness, and facilitating conditions. Research emphasizes that technology acceptance models, that act as an important factor in understanding the behavioral aspect of consumers toward MFS (Gupta & Dhingra, 2022). The sudden attack of the COVID-19 pandemic further accelerated the pace of mobile fin-tech services adoption worldwide and also in emerging markets, including Bangladesh, by underlining the facilitation of social influence, trust, perceived benefit, and facilitating conditions on adoption intention (Hassan et al., 2022). Understanding the constituents of these factors is immensely useful for any mobile financial service provider to develop a superior user experience, enhance financial inclusions, and provide a base for future strategy formulation within the banking sector.

Adoption of MFS is very much dependent upon inter-linkage between trust and perceived risk. Hence, MFS services, like mobile banking, mobile payment, and money transfer, have a very special place in developing nations where conventional banking structures are minimal. It fosters adoption in that the users are guaranteed to be safe and secure, hence developing confidence in both the technology and the service provider. On the other hand, high perceived risk can badly hamper the rate of adoption. Concerns over privacy, security, or cost issues may make the users abstain from using MFS. Building trust through security features, transparent pricing, and effective policies on privacy that reduce perceived risks will enhance the adoption of MFS.

2.2 Theoretical Review

Technology Acceptance Model

One of the useful frameworks guiding how a person adopts new technologies was given by Davis in 1989. It is called the Technology Acceptance Model. TAM suggests that two important factors Usefulness and Perceived Ease of Use-strongly influence the use of technology by a person. Perceived Usefulness is defined as the belief of an individual that the use of technology will enhance performance. For example, users will adopt MFS if users believe it to be a way that would render financial transactions faster and easier. Perceived Ease of Use: this is the degree of ease of using the technology. Hence, if the technology is user-friendly and less effort is required to learn about it, its adoption is very likely to happen (Venkatesh & Davis, 2000).

In this respect, it has been observed that research identifies PU and PEOU as the essential variables in constituting MFS users' acceptance. This type of predictor has been identified as the ones that consistently emerge through different contexts as predictors of technology acceptance (Marangunić and Granić, 2015). This means that customers, for instance, must perceive clear benefits of MFS derived either from saving time or from undertaking proper financial management. Besides, "it should be easy to use" at the same time while overcoming such possible pitfalls as overt complexity and poor interface presentation.

The simplicity and power of the approach attract both the researchers and the practitioners to TAM. This, again, provides a very good framework that guides the design and implementation of technology solutions. With regards to this, it is believed that integrating user feedback, tutorials, or support services will shrink any concerns related to ease of use as financial institutions enhance ease-of-use factors for their mobile apps.

Besides these merits, it has its weaknesses; it has its major criticism, perhaps, in the heavy emphasis on perceptions of persons to the detriment of wider social and organizational settings where technology adoption is found. The concept goes further to provide insight into key drivers of technology adoption. It's thrust on usefulness

and ease of use makes it quite relevant for the successful deployment of MFS and other similar technologies.

Theory of Reasoned Action and Theory of Planned Behavior

Over the past couple of decades, two of the most meaningful models to emerge to predict human behavior have been the Theory of Reasoned Action and the Theory of Planned Behavior. First, in the 1970s, a development by Ajzen and Fishbein later expanded in 1991 by Ajzen described how the intentions to perform specific behaviors develop and shape these actual behaviors.

TRA suggests that a person's intention to perform a behavior is a good predictor of whether they will perform the behavior. Intentions, in turn, are affected by the person's Attitude Toward the Behavior, and their Subjective Norms. The attitude toward the behavior concerns the degree to which the individual has positive or negative feelings about performing the behavior. Specifically, for instance, if users perceive MFS to be viewed as useful because of saving time and efficiency, then they are likely to accept it. Subjective norms refer to the perceived social pressure to perform or not to perform the behavior; such perceived pressure is influenced by the views of important others, which include family and friends.

TPB extends TRA by adding the aspect of PBC, which relates to the degree of perceived ease or difficulty of performing the behavior and combines aspects of self-efficacy and the availability of resources. For MFS, this has been described as the belief of users in their confidence in using mobile applications to conduct financial transactions, including access to enabling resources like smartphones and the internet. Combining TRA and TPB with TAM can provide a fuller understanding of MFS adoption. Such integration offers an effective way of predicting technology adoption that incorporates both individual and social factors (Venkatesh et al, 2003).

These models do have their limitations. TRA assumes that all behaviors are intentional-a fact that may not necessarily be true. TPB did improve on this by introducing the aspect of perceived control but itself may not explain human behavior's complexity fully in all contexts. TRA and TPB remain illustrative theories of the psychological and social dynamics that concern technology adoption and hence are useful in helping one understand and so promote the use of MFS accordingly.

Diffusion of Innovation Theory

The Diffusion of Innovation Theory, developed by Everett Rogers in 1962, became important in providing the theoretical framework that could explain how new technologies diffuse through societies. The major focus of DOI focussed on the attributes of innovations and how they are communicated within the social system. According to DOI, five attributes of innovations influence their adoption: Relative Advantage, Compatibility, Complexity, Trialability, and Observability.

Relative advantage describes the degree to which an innovation is perceived as being better than what it supersedes. Concerning MFS, this could involve advantages such as convenience and faster transactions compared to the more traditional banking system. Strong perceived benefits might give way to quicker rates of adoption.

Compatibility represents the degree to which an innovation is compatible with the potential adopters' values, experiences, and needs. The higher the level of compatibility between MFS and users' financial behavior and lifestyle, the higher the likelihood of adopting. For example, in countries where mobile phones are used just about everywhere, MFS would be far more compatible.

Complexity refers to the perceived difficulty with which the use of the innovation takes place. The simpler the technologies are to understand and use, the more likely the chances that they will be adopted. Intuitive design and clear instructions within MFS can thus result in increased adoption as this reduces complexity.

Trialability refers to the extent to which an innovation can be tested on a small-scale basis. What this means in practice is that perceived risks are minimized by the development of comfort levels by allowing potential users to experiment with MFS without full commitments. This can thus heighten the possibility of ensuring higher adoptions. Free trials or demo versions can, therefore, prove effective.

Observability is the degree to which the innovation results are visible to others. If MFS advantages are observable through media or word-of-mouth from early adopters, then more will adopt the service. Successful use of the peer and benefit from the MFS may be one reason that encourages other people to try it.

Although the DOI provides a useful overview of some of the factors that influence technology adoption, for its part it assumes a linear adoption process, which in fact

might be much more complex. Additionally, it focuses more on individual decisions rather than wider systemic and cultural issues.

Despite these deficiencies, DOI remains a very powerful conceptual framework against which the diffusion of innovations can be evaluated, and it reminds us that new technologies must be in step with user needs and preferences. It also provides several factors through which the use of MFS might be improved, namely relative advantage, compatibility, simplicity, trialability, and observability (Robinson, 2009).

Unified Theory of Acceptance and Use of Technology

UTAUT, developed by Venkatesh et al. (2003), encompasses the main constructs of highly recognized models of technology adoption and presents a comprehensive view of user acceptance. It was theorized under this theory that four major drivers are considered for the acceptance and usage of technology: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions.

Performance Expectancy refers to the belief that benefits will derive from using the technology in terms of gains in job performance. In other words, MFS defines a belief whereby the technology will enhance financial management by saving time for users in enriching transaction efficiency. Users are more likely to adopt MFS if they perceive significant performance benefits in using the technology.

Effort expectancy refers to the degree of no difficulty with which the technology is used. That is, technologies that are easy to use and require minimal effort to learn and operate tend to be those that are most likely to be adopted. Concerning MFS, this would mean that the service impulsively needs to be designed; thus, navigation should be easy while interfaces are user-friendly.

Social Influence: the degree to which an individual perceives important others believe he or she should use the technology. The impact of peers, family, colleagues, and media comprise this. The people will follow if they see the ones around them adopting and benefiting from MFS.

Facilitating Conditions refers to the degree to which people believe that organizational and technical support exists to support the use of the technology. In the context of MFS, this might include access to technical support, reliable internet

connectivity, and suitable devices. Greater support and infrastructure will reduce anxiety and increase confidence in using MFS.

Aside from these main determinants, this model integrates several moderators, which include such factors as a person's age, sex, experience, and whether the use is voluntary or mandatory. Such intense factors influence how core determinants act in the adoption of technology. Younger users might find MFS easier to adopt due to familiarity with mobile technology, while experienced users may have higher performance expectations. These factors provide deeper insights into different user segments, allowing for more targeted strategies to encourage adoption (Venkatesh et al., 2003).

While UTAUT is sturdy for predicting technology adoption, it mainly focuses on individual levels and may not fully capture broader organizational and cultural contexts. Additionally, the model's complexity can make it challenging to apply in some settings. Nevertheless, UTAUT's comprehensive approach and ability to integrate various elements from previous models make it a powerful tool for understanding and predicting user acceptance of technologies like MFS (Bagozzi,2007).

In practice, financial institutions can use UTAUT to design and implement MFS solutions that meet users' specific needs and expectations. For instance, ensuring that MFS platforms are user-friendly and offer clear performance benefits can enhance adoption. Promoting the social influence of MFS through testimonials and success stories, and providing sturdy technical support and infrastructure, can further drive acceptance. Addressing the key determinants identified by UTAUT, service providers can strategize with more effective development in encouraging MFS adoption. UTAUT, in turn, gives a comprehensive and integrative view to understanding technology adoption. Its emphasis on performance expectancy, effort expectancy, social influence, and facilitating conditions offers great insights into what drives user acceptance in MFS. Application of UTAUT principles enables financial service providers to better design, market, and support their MFS offerings in such a way that best fits user needs for wider adoption to be possible.

2.3 Empirical Review

Perceived Privacy Risk

Perceived privacy risk is a significant determinant of overall risk perception in MFS, negatively impacting the intention to use these services (Ferreira et al., 2021). Privacy risks are critical antecedents that influence users' risk perceptions, which in turn affect their behavioral intentions towards MFS (Gbongli, 2022). Research on smart homes and mobile health applications emphasizes the need for privacy and security awareness to mitigate perceived threats and enhance user adoption rates (Reyhan et al., 2021; Muchagata et al., 2019). Addressing privacy concerns through user-centric interventions can significantly improve MFS adoption.

Perceived Time Risk

The perception of at risk is a crucial factor in influencing users' perceived risk of MFS. Studies have shown that time-related risks significantly impact the continuous usage intention of online banking and other financial services (Hirmissa et al., 2022; Jangir et al., 2022). Hence, it is essential to effectively evaluate time-related concerns in order to enhance user trust and encourage the adoption of MFS.

Perceived Security Risk

Security risk perceptions play a vital role in shaping users' overall risk perception of MFS (Gyaisey & Owusu, 2022). Users often have strong negative perceptions of security due to low cyber awareness and poor cyber hygiene practices (Gbongli, 2022). To mitigate potential threats and improve user confidence in MFS, it is crucial to enhance security and privacy awareness (Zhang et al., 2019). Hence, a thorough understanding of the risks and effective measures to address them is crucial in promoting secure usage practices and encouraging MFS adoption.

Aggregate Risk Perception

Aggregate risk perception is considered one of the main factors in the adoption of MFS. Security, privacy, financial, and time risks are types of perceived risks that have been consistently reported in the literature as deterring the intention to use MFS (Al-Gasawneh et al., 2022; Pauchard, 2019; Hossain, 2019). High perceived risks reduce trust and customer satisfaction, thus affecting loyalty and adoption rates. Therefore, it

is crucial to mitigate these risks by implementing various security measures, protecting privacy, and other risk-mitigation strategies to increase the level of MFS adoption and build trust between users.

Table 1

Summary of literature

Author(s) and Date	Title	Objectives	Methodology (Sample Data and Related Variables)	Findings Related to Our Study	Gap
Abdul- Rahim et al., 2022	Benefit-risk perceptions of FinTech adoption	To explore benefit-risk perceptions of FinTech from bank consumers	Survey (N=500, variables: benefit perception, risk perception)	Trust and perceived benefits enhance FinTech adoption	Limited focus on non-bank consumers
Adiwijaya, 2020	Effect of vendor trustworthiness on online purchase intention	To examine how vendor trust affects online purchase intentions	Survey (N=300, variables: vendor trust, purchase intention)	Vendor trust positively impacts purchase intentions	Lack of focus on mobile financial services
Afroze & Rista, 2022	Mobile financial services and digital inclusion	To study customer retention and perceptions in MFS	Mixed methods (N=400, variables: retention, customer perceptions)	Positive perceptions and trust lead to higher retention in MFS	Geographic limitation to a single region
Al- Gasawneh et al., 2022	Perceived security and AI in	To analyze perceived security's	Structural Equation Modeling	Security perception significantly	Focus on AI rather than

	financial services	effect on AI adoption in finance	(N=450, variables: security perception, AI adoption)	influences AI adoption intentions	general MFS
Almuntaha & Rahmawati, 2023	Technology characteristics and trust in charity crowdfunding	To explore how tech features affect trust and user satisfaction	Survey (N=350, variables: technology features, trust, user satisfaction)	Technology characteristics positively influence trust and satisfaction	Specific to charity crowdfunding, not general MFS
Alrawad et al., 2023	Trust and perceived risk in NFC mobile payments	To examine trust and risk in NFC mobile payments	SEM (N=500, variables: trust, perceived risk, NFC mobile payment adoption)	Trust mitigates perceived risk, enhancing NFC mobile payment adoption	Focus on NFC technology
Bashir & Muhammad, 2023	Factors influencing MFS adoption	To identify factors affecting MFS adoption	Survey (N=400, variables: social influence, perceived risk, trust)	Social influence, trust, and low perceived risk promote MFS adoption	Limited focus on certain demographic groups
Carter et al., 2023	Interpretable machine learning in industries	To review machine learning applications in the	Literature review (variables: interpretability, machine learning applications)	Interpretability improves trust and adoption of machine learning technologies	Not specific to financial services

		industry			
Chib & Ang, 2023	Dispositions of dis/trust in mobile communication	To analyze trust dispositions in mobile communication	Survey (N=600, variables: trust disposition, mobile communication adoption)	Trust disposition plays a critical role in mobile communication adoption	Broader focus on mobile communication, not just financial services
Gupta & Dhingra, 2022	Mobile financial services: A review	To review past, present, and future of MFS	Literature review (variables: MFS trends, consumer behavior)	Highlighted the importance of trust and perceived risk in MFS adoption	Lack of empirical data
Hassan et al., 2022	Drivers of mobile FinTech services	To identify drivers of FinTech adoption in Bangladesh	Survey (N=500, variables: trust, perceived benefit, facilitating conditions)	Trust and perceived benefit are crucial for FinTech adoption in emerging markets	Focus limited to Bangladesh
Islam et al., 2024	Challenges and satisfaction in MFS	To explore challenges and satisfaction with MFS	Mixed methods (N=450, variables: technical challenges, satisfaction)	Technical challenges negatively impact user satisfaction in MFS	Regional focus on Bangladesh
Simatele, 2024	Trust and behavioral	To examine trust's role	Survey (N=400,	General trust mediates the	Limited focus on specific

	intentions in MFS	in MFS adoption	variables: trust, behavioral intention)	impact of perceived benefits and ease of use on MFS adoption	trust dimensions
Sulistyowati et al., 2022	Trust and MFS during COVID-19	To study MFS adoption during COVID-19	SEM (N=500, variables: trust, perceived risk, COVID-19 impact)	Trust and perceived risk significantly affect MFS adoption during the pandemic	Context-specific to COVID-19
Yan et al., 2021	Mobile financial service adoption during COVID-19	To investigate FinTech adoption during COVID-19	Survey (N=450, COVID-19 variables: FinTech adoption, COVID-19 impact)	positively impacted the adoption of mobile financial services	Limited post-pandemic insights

Mobile Financial Services (MFS) have become an essential part of financial inclusion efforts, especially in developing countries where traditional banking services are limited. However, several factors influence the adoption of MFS, and perceived risk is a significant one. This empirical review will discuss studies related to perceived risks, such as privacy, security, and time risks, and how these risks affect the adoption of MFS. The review will focus on research conducted on MFS and risk, comparing and contrasting different findings to provide a better understanding of the topic.

Trust, Perceived Risk, and MFS Adoption

Perceived risk plays a critical role in user adoption of MFS. In their study, Afroze and Rista (2022) examined customer retention and perceptions in mobile financial services. Their research found that perceived risks, especially privacy concerns, impacted users' trust, which in turn affected their decision to adopt and continue using MFS. They highlighted the importance of trust in mitigating perceived risks and

enhancing user retention. This is consistent with Bashir and Muhammad's (2023) findings, where perceived risk, along with social influence and trust, was identified as a key factor in the adoption of MFS. Their study, conducted through a survey of 400 participants, found that low perceived risk encouraged users to adopt MFS, but a higher level of perceived risk deterred potential users. Both studies point to the crucial role of trust in reducing the negative impact of perceived risk on MFS adoption.

Similarly, Simatele (2024) examined the role of trust in the adoption of MFS. His study, which surveyed 400 respondents, revealed that trust acted as a mediator between perceived benefits and perceived ease of use in influencing users' behavioral intentions to adopt MFS. Perceived risk, particularly privacy and security risks, negatively impacted trust. However, when users perceived the service to be beneficial and easy to use, the negative effects of perceived risk were mitigated. This aligns with the findings of Islam et al. (2024), who explored challenges and user satisfaction in MFS. Their mixed-methods research showed that perceived risks, especially technical and security challenges, reduced satisfaction with MFS and, consequently, adoption rates. Users who encountered fewer technical challenges and felt secure while using MFS reported higher satisfaction levels.

Despite these findings, some studies indicate that perceived risk does not always significantly influence MFS adoption. For example, Alrawad et al. (2023) focused on Near Field Communication (NFC) mobile payments, which are a subset of MFS. Their study of 500 participants found that while trust reduced perceived risk, the risks themselves did not have a strong direct influence on whether users adopted NFC payments. Instead, trust played a more significant role in increasing adoption rates. This finding contrasts with the previous studies by Afroze and Rista (2022) and Bashir and Muhammad (2023), where perceived risk was found to be a key deterrent to MFS adoption. This difference might be due to the specific technology being studied (NFC) or regional differences in risk perception.

Privacy and Security Risks

Privacy and security concerns are often cited as the most critical factors affecting perceived risk in MFS adoption. Al-Gasawneh et al. (2022) explored the role of perceived security in financial services, specifically focusing on the adoption of artificial intelligence (AI) in finance. Their study, which involved 450 respondents,

found that perceived security risks had a significant impact on users' willingness to adopt AI-based financial services. Although their study focused more on AI than on MFS, the findings highlight the importance of addressing security concerns in any digital financial service. This emphasis on security risk aligns with the findings of Bashir and Muhammad (2023), who also noted that security concerns were a significant barrier to MFS adoption.

However, some studies offer a different perspective. In their study on MFS adoption during the COVID-19 pandemic, Sulistyowati et al. (2022) examined the role of trust and perceived risk during a time of crisis. They found that while security risks were a concern, users were more willing to adopt MFS during the pandemic because the perceived benefits, such as convenience and accessibility, outweighed the perceived risks. This finding suggests that during extraordinary situations like the pandemic, the perception of risk may be less influential in decision-making. Yan et al. (2021) echoed these findings in their study, which also looked at MFS adoption during COVID-19. They found that the pandemic accelerated the adoption of MFS despite concerns about privacy and security. The study suggests that users were more focused on the immediate need for financial access than on long-term privacy risks.

These findings indicate that while privacy and security risks are significant, their impact on MFS adoption may vary depending on the context. In normal situations, these risks can deter users, as shown by the studies of Afroze and Rista (2022) and Bashir and Muhammad (2023). However, during emergencies or crises, such as the COVID-19 pandemic, the perceived benefits of MFS may outweigh these risks, leading to higher adoption rates despite security concerns.

Time Risks

Another form of perceived risk that affects MFS adoption is time risk, which refers to the potential time loss involved in using MFS, such as learning how to use the service or dealing with technical errors. In their study, Bashir and Muhammad (2023) noted that time risk negatively impacted users' perceptions of MFS, especially when transactions were delayed or systems were slow. This finding aligns with Bland et al. (2024), who studied time risk in mobile payments and found that inefficiency and time delays discouraged users from adopting mobile financial services.

However, the extent to which time risk affects MFS adoption appears to vary. For example, the study by Afroze and Rista (2022) did not highlight time risk as a major factor in the decision to adopt MFS, focusing instead on privacy and security concerns. Similarly, Alrawad et al. (2023) found that while time risk was a concern, it did not have a significant impact on NFC mobile payment adoption. These differences may be due to regional variations in how users perceive time or the specific mobile technologies being used.

The reviewed studies highlight the complex role of perceived risks in the adoption of Mobile Financial Services. While privacy, security, and time risks are significant factors that can deter users from adopting MFS, their impact varies depending on the context. Trust plays a key role in mitigating these perceived risks and encouraging adoption. In normal situations, security and privacy risks are more prominent, as users are concerned about data breaches and fraud. However, in times of crisis, such as the COVID-19 pandemic, perceived risks are outweighed by the benefits of using MFS, leading to higher adoption rates.

The studies reviewed also show that time risk, while important, does not consistently have a significant impact on adoption decisions. This highlights the importance of understanding the local context and user behavior when studying MFS adoption. Future research could further explore how different types of perceived risks interact with each other and how trust-building measures can reduce these risks and enhance MFS adoption.

2.4 Research Gap

The use of Mobile Financial Services (MFS) is increasing worldwide, but in Nepal, the adoption rate is still low. Most studies about MFS focus on technical features or general user behavior. However, very few studies explore how trust and risks affect users in Nepal. Concerns like data security, fraud, privacy, and time-related problems have not been studied deeply in this context.

Global research highlights the role of trust and perceived risks in MFS adoption. Yet, Nepal's situation is different because of unique challenges, such as low digital literacy, weaker infrastructure, and different economic conditions. These differences mean that findings from other countries cannot be directly applied to Nepal.

This study fills this gap by identifying the main risks and trust issues that affect the use of MFS in Nepal. It will also explain how these factors influence user behavior. The insights will help create better strategies to make MFS safer, more reliable, and easier to use, promoting financial inclusion in Nepal.

CHAPTER III

RESEARCH METHODOLOGY

The research methodology adopted for the study is described in this chapter. Predominantly, the appropriate details regarding study design, type of data, sources of data, data collection instruments, and techniques used for data analysis are provided.

3.1 Research design

This research has utilized both descriptive and explanatory research designs. The descriptive design describes the variables and items by using means, standard deviation, and correlation. Besides, an explanatory research design is applied to analyze the effect of risk and trust on mobile financial services adoption. The application of the explanatory research design has enabled the testing of causal-effect relationships among the different variables. Explanatory research will also be important in this study because it will explain the intensity at which one variable influence another.

3.2 Population and sample, and sampling design

The population of the study is mobile financial services users in Kathmandu. The actual population size is unknown. To determine the sample size for the study the formula specified by Cochran (1977) has been used.

$$n = \frac{pqz^2}{e^2}$$

Where,

p= population proportion

q= 1-p

z= value of Z (1.96 for 95% confidence interval)

e= value of margin of error

When the population is unknown, p and q are recommended to be set at 50% each. Likewise, the margin of error is set at 5 %.

$$n = \frac{0.5 \times 0.5 \times 1.96^2}{0.5^2}$$

n = 384

Utilizing the formula prescribed by Cochran (1977), a sample size of 384 has been determined. And 315 data were in usable format and used for data analysis.

3.3 Nature and sources of data

Primary data were used. The method used to collect the data required for this research was through a structured questionnaire. The questionnaires were self-administrated in written form, either on paper or online, via Google Forms.

3.4 Instrument of the data collection

Questionnaire adopted from Gbongli et al. 2020, Hanafizadeh et al. 2014, Xin et al. 2015, and Sankaran and Chakraborty 2022.

Items Perceived Risk: this includes four items from Gbongli et al. (2020) and one item taken from Hanafizadeh et al. (2014). Perceived Privacy Risk: all five items were derived from Gbongli et al. (2020).

Perceived costs are a composite of four items from Gbongli et al. 2020, and one item from Hanafizadeh et al. 2014, while the adoption of mobile financial services is composite of all five items from Gbongli et al 2020

3.5 Methods of Analysis

Data cleaning was done through Excel. SPSS will be applied in the analysis of profiles of the respondents, as well as for the inferential statistical analyses. Descriptive analysis, correlation analysis and regression analysis conducted

3.6 Research Framework

The conceptual framework illustrates the impact of perceived risks on the adoption of mobile financial services. The framework identifies three main risks: privacy risk, time risk, and security risk. These are considered independent variables. Each risk is connected to the dependent variable, which is the adoption of mobile financial services.

Privacy risk is the concern that personal information might be exposed or misused when using mobile financial services.

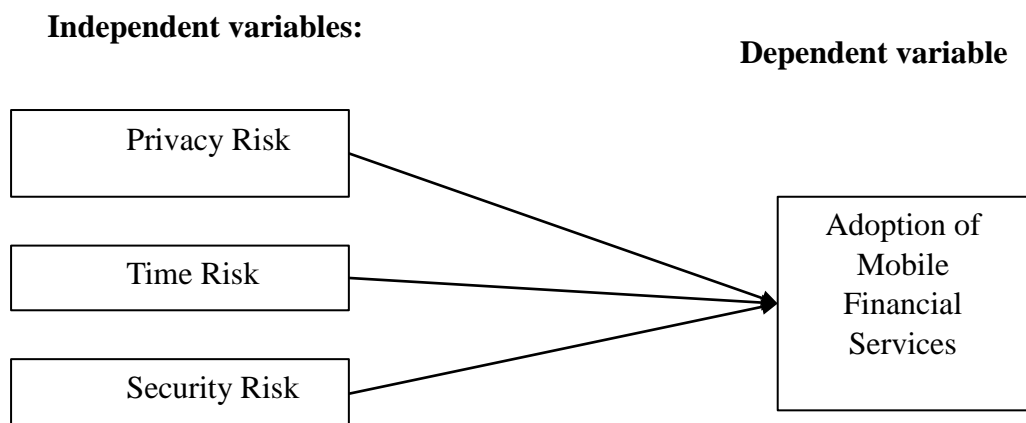
Time risk refers to the possibility of losing time due to system failures, slow processes, or errors in the service.

Security risk is the fear that mobile financial services may not provide enough protection, leading to possible financial loss or fraud.

The three risks are linked to three hypotheses, H1, H2, and H3, which likely suggest the influence each risk has on adopting mobile financial services.

In summary, the framework suggests that users might hesitate to adopt mobile financial services if they perceive these risks as high. The study seeks to measure how each of these risks impacts a user's decision to use mobile financial services. The adoption of mobile financial services is considered the outcome, or the result of how users perceive these risks.

This framework was adapted from a previous study conducted by Gbongli et al., 2020.



Source: (Gbongli et al., 2020)

Figure1: Research Framework

Operational Definition

Privacy Risk:

Personal information is recorded, stored, and then maybe misused without the user's consent.

Time Risk:

This includes all the possible losses related to time inputs due to various complexities, errors, or inefficiencies in using mobile financial services.

Security Risk:

Threats that financial transactions or personal data could be subjected to fraudsters, hackers, or some other forms of security breach.

3. Mobile Financial Service Adoption

Within the context of mobile financial services, adoption has come to mean the process through which users begin to accept, and habitually use, MFS in handling their financial transactions. The stages in this concept include awareness, interest, evaluation, trial, and regular use. Such adoption depends on the levels of general trust and perceived risks defined above.

This operational definition framework will ensure a thorough understanding of the factors influencing the adoption of mobile financial services through the interrelationship between trust and perceived risk.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter presents the results of the study on the adoption of mobile financial services (MFS) in Nepal. The data collected from the survey are analyzed to understand the demographic characteristics of the respondents, risks related to MFS, and their overall willingness to adopt these services. Various statistical tests, including descriptive statistics, correlation analysis, and hypothesis testing, are conducted to provide a comprehensive view of the factors influencing MFS adoption. The findings are discussed in detail, with explanations of key tables and the implications of the results.

4.1 Results

Demographics Statistics

Table 2

Gender of Respondents

Gender	Frequency	Percent
Female	154	48.9
Male	161	51.1
Total	315	100.0

Source: Filed Survey, 2024

Table 2 shows the gender distribution of respondents in this study. Out of 315 respondents, 161 are male, making up 51.1% of the total. Female respondents account for 48.9%, with 154 individuals. This close percentage between male and female participants suggests a balanced gender representation. This data shows a nearly equal split between male and female participants. The slight majority of respondents are male.

Table 3

Level of Education of Respondents

Level of Education	Frequency	Percent
+2 or equivalent	102	25.4
Bachelor's Degree	118	29.4
Below SLC/SEE	40	10.0
Doctorate Degree	19	4.7
Master's Degree	90	22.4
Other	6	1.5
Professional Degree	26	6.5
Total	315	100.0

Source: Filed Survey, 2024

Table 3 presents the educational levels of the respondents. The largest group holds a Bachelor's degree, representing 29.4% (118 individuals). Those with a "+2 or equivalent" education follow closely, comprising 25.4% (102 respondents). Master's degree holders account for 22.4% (90 respondents), while 10.0% (40 respondents) have an education level below SLC/SEE. Smaller groups include those with professional degrees (6.5% or 26 respondents), doctorate degrees (4.7% or 19 respondents), and other qualifications (1.5% or 6 respondents). This distribution shows a diverse range of educational backgrounds among the participants.

Descriptive Statistics

Table 4

Descriptive Statistics Perceived Privacy Risk

Descriptive Statistics		
	Mean	Std. Deviation
The chances of using MFS and losing control over the privacy of my payment information are high.	2.73	1.109
My Personal information could be exposed or access when using m-payment.	2.75	1.008
My Privacy information might be misused, sold or inappropriately shared.	2.60	1.000
Information about my MFS transactions would be known to others.	2.83	1.004
The potential loss of control over personal information is high with MFS.	2.59	1.035
N	315	

Table 4 shows descriptive statistics related to respondents' perceived privacy risk when using Mobile Financial Services (MFS). The responses are based on a 5-point scale, with 1 representing the lowest level of concern and 5 the highest.

The item "Information about my MFS transactions would be known to others" has the highest mean score of 2.83, indicating a moderate concern about transaction privacy. The item "My personal information could be exposed or accessed when using m-payment" follows closely, with a mean of 2.75. The lowest mean score, 2.59, is for the statement "The potential loss of control over personal information is high with MFS," suggesting that this concern is slightly less significant among respondents.

The average mean scores indicate a moderate level of privacy concern across all items, with standard deviations around 1, reflecting a consistent range of responses among participants. These findings suggest that while users have some concerns regarding privacy risks in MFS, they do not appear to view them as highly critical risks.

Table 5

Descriptive Statistics Perceived Time Risk

Descriptive Statistics		
	Mean	Std. Deviation
Losing of Time could be caused by instability and low speed.	2.79	1.055
I might waste much time fixing payment errors if m-payment leads to a loss of convenience.	2.65	.973
The possible time loss from having to set up and learn how to use MFS is high.	2.67	1.047
I may lose time when making a wrong procuring decision by wasting time seeking and making the purchase using MFS.	2.67	1.003
MFS enhance convenience and efficiency for users, ensuring seamless navigation and streamlined processes to minimize time spent on transactions and maximize satisfaction.	2.75	1.052
N	315	

Table 5 outlines respondents' perceptions of time-related risks associated with using Mobile Financial Services (MFS). The responses were collected on a 5-point scale, where 1 indicates low time risk and 5 represents high time risk.

The item "Losing of time could be caused by instability and low speed" received the highest mean score of 2.79, suggesting moderate concern about time lost due to technical issues. Similarly, "MFS enhance convenience and efficiency for users, ensuring seamless navigation and streamlined processes to minimize time spent on transactions and maximize satisfaction" has a mean score of 2.75, indicating users generally perceive MFS as time-efficient but acknowledge some potential for time loss. Statements such as "The possible time loss from having to set up and learn how to use MFS is high" and "I may lose time when making a wrong procuring decision by wasting time seeking and making the purchase using MFS" both show moderate concerns, with mean scores of 2.67 each.

Respondents perceive a moderate risk of time loss when using MFS, particularly regarding technical instability and learning curves, though they recognize potential time-saving benefits. Standard deviations near 1 reflect some variation in views, yet responses remain relatively consistent across the sample.

Table 6

Descriptive Statistics Perceived Security Risk

Descriptive Statistics		
	Mean	Std. Deviation
My personal information could be collected, tracked, and analyzed.	2.85	1.046
Losing my phone might allow criminal to gain access to my MFS PIN and other sensitive information.	2.71	.976
I think my Identity can be stolen and used to do mobile payment transaction fraudulently.	2.78	.975
MFS is one of the new useful IT applications, and I am aware of its security issues in the transactions.	2.62	1.050
If I lose the mobile phone as an MFS user, in the meantime, I could lose my e-money as well.	2.88	1.035
N	315	

Table 6 presents respondents' perceptions of security risks related to Mobile Financial Services (MFS). Ratings are based on a 5-point scale, where 1 represents low concern and 5 indicates high concern.

The item "If I lose the mobile phone as an MFS user, in the meantime, I could lose my e-money as well" has the highest mean score of 2.88, indicating a moderate level of concern over potential financial loss if the device is lost. Similarly, "My personal information could be collected, tracked, and analyzed" has a mean of 2.85, showing users are moderately concerned about data privacy risks. The concern that "Identity can be stolen and used to do mobile payment transactions fraudulently" also scores moderately, with a mean of 2.78. The item "MFS is one of the new useful IT applications, and I am aware of its security issues in the transactions" has the lowest mean of 2.62, reflecting slightly lower concern over general security issues.

Overall, respondents show a moderate level of concern regarding security risks, especially around potential financial loss and data tracking. Standard deviations near 1 suggest some variation, though responses are generally consistent across the sample.

Table 7

Descriptive Statistics Adoption of Mobile Financial Services

Descriptive Statistics		
	Mean	Std. Deviation
I will opt for mobile financial services anytime I have the opportunity to use it.	2.79	1.091
I would embrace mobile financial services usage.	2.71	.992
I think adopting a mobile device for fund transfer is attractive.	2.72	1.031
I will use Mobile Financial Services for all my financial transactions.	2.68	1.002
Mobile Financial services are the newest transaction tool that I opt to use.	2.76	1.037
N	315	

Table 7 provides descriptive statistics on respondents' willingness to adopt Mobile Financial Services (MFS). Responses are on a 5-point scale, where 1 indicates low willingness and 5 indicates high willingness.

The statement "I will opt for mobile financial services anytime I have the opportunity to use it" has the highest mean score of 2.79, showing moderate interest in choosing MFS when available. The item "Mobile Financial services are the newest transaction tool that I opt to use" also scored moderately, with a mean of 2.76. Similarly, "I think adopting a mobile device for fund transfer is attractive" and "I would embrace mobile financial services usage" have mean scores of 2.72 and 2.71, respectively, reflecting a fair level of acceptance. The item "I will use Mobile Financial Services for all my financial transactions" has a mean of 2.68, indicating a slightly lower level of enthusiasm for using MFS exclusively. The data suggests a moderate interest in adopting MFS, with respondents generally open to using it but not overwhelmingly committed. The standard deviations close to 1 show some variation, though responses are largely consistent across the group.

Inferential Statistics

Correlations Analysis

Table 8

Correlations

		Correlations			
		Privacy Risk	Time Risk	Security Risk	Adoption of Mobile Phone Services
Privacy Risk	Pearson Correlation	1	.648**	.615**	.564**
	Sig. (2-tailed)		.000	.000	.000
	N	315	315	315	315
Time Risk	Pearson Correlation	.648**	1	.678**	.593**
	Sig. (2-tailed)	.000		.000	.000
	N	315	315	315	315
Security Risk	Pearson Correlation	.615**	.678**	1	.655**
	Sig. (2-tailed)	.000	.000		.000
	N	315	315	315	315
Adoption of Mobile Phone Services	Pearson Correlation	.564**	.593**	.655**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	315	315	315	315

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

Table 8 displays the correlations between Privacy Risk, Time Risk, Security Risk, and the Adoption of Mobile Phone Services. All correlations are significant at the 0.01 level, indicating moderative relationships among these variables.

The correlation between Privacy Risk and Time Risk is high at .648, suggesting that as privacy concerns increase, time-related concerns may also rise. Privacy Risk and Security Risk have a strong correlation of .615, showing that higher privacy risks are often linked with increased security concerns. Similarly, Time Risk and Security Risk are closely correlated at .678, indicating that users who perceive time risks also tend to perceive high security risks.

In terms of adoption, Security Risk has the strongest negative correlation with the Adoption of Mobile Phone Services (.655), suggesting that higher security concerns may discourage MFS adoption. Time Risk also shows a moderately negative correlation with adoption (.593), while Privacy Risk has the lowest, though still notable, correlation with adoption (.564). Overall, these findings indicate that perceived risks especially security concerns can significantly impact MFS adoption rates.

Regression Analysis

Table 9

Model Summary

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.699 ^a	.489	.484	2.14710	1.955

a. Predictors: (Constant), Security Risk, Privacy Risk, Time Risk

b. Dependent Variable: Adoption of Mobile Phone Services

The model summary for the linear regression analysis demonstrates the relationship between perceived risks (Privacy Risk, Time Risk, and Security Risk) and the Adoption of Mobile Phone Services.

The R value of .699 indicates a strong positive correlation between the independent variables (Privacy, Time, and Security Risks) and the dependent variable (Adoption of Mobile Phone Services). The R Square value of .489 shows that approximately 48.9% of the variation in the adoption of mobile phone services can be explained by

the three risk factors included in this model. The Adjusted R Square (.484) is slightly lower, which accounts for the model's adjustment with additional predictors.

The standard error of the estimate is 2.147, indicating the average deviation of observed adoption values from the predicted values. Additionally, the Durbin-Watson statistic is 1.955, which is close to 2, suggesting no significant autocorrelation issues in the residuals. Overall, the model shows that Privacy Risk, Time Risk, and Security Risk collectively have a notable impact on users' adoption of mobile phone services.

Table 10

ANOVA Table

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1371.767	3	457.256	99.187	.000 ^b
	Residual	1433.726	311	4.610		
	Total	2805.493	314			

a. Dependent Variable: Adoption of Mobile Phone Services

b. Predictors: (Constant), Security Risk, Privacy Risk, Time Risk

The ANOVA table assesses the significance of the linear regression model, examining how well Privacy Risk, Time Risk, and Security Risk collectively predict the Adoption of Mobile Phone Services.

The Sum of Squares for the regression is 1371.767, representing the explained variance by the three predictors. The Residual Sum of Squares is 1433.726, which indicates the unexplained variance. Together, these give a Total Sum of Squares of 2805.493.

The Mean Square for the regression is 457.256, which is considerably higher than the Mean Square for the residual (4.610), highlighting that the predictors explain a significant portion of the variance. The F value of 99.187, with a p-value (Sig.) of .000, shows that the model is statistically significant at the 0.01 level. This result confirms that Privacy Risk, Time Risk, and Security Risk have a substantial collective effect on the adoption of mobile phone services.

Table 11

Coefficients Table

		Coefficients^a				
		Unstandardized Coefficients		Standardized		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.291	.546		4.199	.000
	Privacy Risk	.193	.058	.187	3.327	.001
	Time Risk	.192	.059	.196	3.261	.001
	Security Risk	.411	.058	.408	7.027	.000

a. Dependent Variable: Adoption of Mobile Phone Services

The coefficients table provides insights into how Privacy Risk, Time Risk, and Security Risk individually influence the Adoption of Mobile Phone Services.

The Constant value is 2.291, indicating the baseline adoption level when all predictor variables are zero. Among the predictors, Security Risk has the highest Unstandardized Coefficient (B = 0.411), suggesting it has the strongest influence on mobile phone service adoption. Its Standardized Coefficient (Beta = 0.408) further emphasizes its importance, with a t-value of 7.027 and a significance level (p-value) of .000, indicating a highly significant effect.

Privacy Risk and Time Risk have smaller but still meaningful impacts, with Unstandardized Coefficients of 0.193 and 0.192, respectively. Their Standardized Coefficients are also close (Beta = 0.187 for Privacy Risk and 0.196 for Time Risk), showing moderate influence. Both variables have significant t-values of 3.327 and 3.261, with p-values of .001, indicating statistical significance.

In summary, Security Risk is the strongest predictor of mobile phone service adoption, followed by Time Risk and Privacy Risk, all with statistically significant impacts.

Major findings

- The gender distribution of respondents was nearly equal, with males slightly be more than females (51.1% male and 48.9% female).

- Most respondents had a Bachelor's degree (29.4%) or +2 education (25.4%). Fewer respondents held Doctorate degrees (4.7%) or Professional degrees (6.5%), reflecting a diverse range of educational backgrounds.
- Privacy, security, and time-related concerns moderately affect the adoption of Mobile Financial Services (MFS) in Nepal, with security risks having the strongest impact.
- Security risk is identified as the most significant deterrent to MFS adoption, with concerns about data breaches, fraud, and potential financial loss.
- Privacy risk is a moderate concern, but it does not significantly prevent MFS usage among respondents, as many prioritize convenience over privacy.
- Time risk, involving delays or time needed to understand MFS, shows a moderate influence but is not a strong barrier to adoption in Nepal.
- Users perceive a moderate level of privacy and security risks associated with MFS, yet these concerns do not drastically reduce their likelihood of adopting the technology.
- The statistical model indicates that security risk, privacy risk, and time risk together account for 48.9% of the variance in MFS adoption decisions.
- Trust in MFS is a vital factor that can reduce perceived risks, and increased trust may improve the likelihood of adoption among Nepalese users.

4.2 Discussion

Perceived risks, particularly privacy, security, and time risks, have been repeatedly identified as barriers to the adoption of MFS (Ikhsan, 2023; Kumar, 2023). Our study also confirmed that these risks are of concern to users in Nepal. However, the impact of these risks on actual adoption decisions appears to be less significant than expected.

For example, our study found that privacy risk, while moderately perceived, did not significantly deter users from adopting MFS. This finding contrasts with the study by Gbongli et al. (2020), who argued that privacy risks, such as concerns over the misuse of personal information, are among the most significant factors discouraging users from embracing mobile financial services. In our case, while privacy was a concern, it did not appear to be the main barrier to adoption. This may be because, in developing countries like Nepal, users are more focused on the benefits of financial inclusion and the convenience of MFS, which may outweigh concerns about privacy.

Similarly, time risk, which refers to the potential loss of time when using MFS, was perceived as a concern but did not strongly influence adoption in our study. Previous studies, such as those by Bland et al. (2024) and Ha et al. (2023), emphasized that time risk significantly influences users' willingness to adopt MFS, particularly in contexts where transaction efficiency is critical. While our respondents did express concerns about time delays or the time needed to learn the service, these concerns were not significant enough to stop them from using MFS. This difference might be attributed to users in Nepal being more patient with mobile services, as they may not have many alternatives, unlike users in countries with more established banking infrastructure. This finding shows that perceptions of time risk can vary depending on the local context and available financial alternatives.

Security risks were another critical concern in the literature. Studies like those by Almaiah (2023) and Ikhsan (2023) have demonstrated that security concerns—such as fears of fraud, data breaches, and identity theft—are major barriers to MFS adoption. Our study supports this to some extent, as security risks were perceived as moderately concerning by users. However, similar to privacy and time risks, security concerns did not have a significant direct impact on whether users decided to adopt MFS.

This finding is somewhat surprising, as security risks are often cited as the main reason for users not adopting mobile services (Kumar, 2023). One possible explanation could be that users in Nepal have already been exposed to a certain level of risk through other technologies, such as social media or e-commerce platforms, and have become accustomed to managing these risks. Alternatively, it might suggest that users in Nepal are more willing to tolerate security risks because of the greater benefits that MFS can provide, especially in terms of convenience and financial inclusion. This finding implies that while security remains an important consideration, users may be willing to overlook some security concerns if they believe that the service offers them significant value in other areas.

The Technology Acceptance Model (TAM), developed by Davis (1989), has been widely used to understand how users adopt new technologies, including MFS. According to TAM, perceived usefulness and perceived ease of use are the two main factors that influence a user's decision to adopt a technology. Our study supports this model to a certain extent. Respondents in our study were more likely to adopt MFS if

they believed it would make financial transactions easier and more convenient, even if they had concerns about risks. The Unified Theory of Acceptance and Use of Technology (UTAUT) also emphasizes the role of performance expectancy and effort expectancy (Venkatesh et al., 2003). In line with this theory, our findings suggest that users are more likely to adopt MFS if they find it easy to use and believe it will save them time. However, UTAUT also highlights the importance of social influence, which our study did not explore in depth. Future research could investigate whether social influence plays a more significant role in MFS adoption in Nepal.

This study has provided insights that align with, yet also differ from, existing literature on MFS adoption. Trust remains important, but its role varies between trust in technology and trust in providers. Perceived risks such as privacy, time, and security risks are of moderate concern but are not the primary factors influencing adoption. These findings highlight the importance of understanding local contexts and how users balance perceived risks with the benefits of using mobile financial services.

By comparing our findings with previous studies, it becomes clear that while many of the factors influencing MFS adoption are consistent across different regions, the weight of these factors can vary depending on the local context and user needs. Future studies could explore these dynamics further to provide a more comprehensive understanding of how trust and risks influence MFS adoption in other developing regions.

CHAPTER-V

SUMMARY AND CONCLUSION

This chapter presents the discussion of findings, conclusions drawn from the research, and the implications for practice and future research. The discussion compares and contrasts the results of the study with existing literature and theories. The conclusions summarize the key findings, and the implications suggest how these findings can be applied in managerial contexts and future research.

5.1 Summary

This study investigates the impact of perceived risks on the adoption of Mobile Financial Services (MFS) in Nepal. The focus is on privacy, security, and time risks, as these are key factors that can influence users' decisions. A sample of MFS users in Kathmandu was surveyed to understand their concerns regarding these risks. The study finds that while respondents recognize the convenience of MFS, they also express moderate concerns, particularly about security. Security risk is a primary factor that affects users' decisions, as fears of data breaches, fraud, and potential financial loss are prevalent. However, privacy risk, although present, does not significantly deter adoption. Respondents generally view privacy concerns as less critical compared to the benefits of MFS.

Time risk is also perceived but has a moderate effect on adoption. Respondents express concerns about potential delays or technical difficulties; however, these issues are not strong enough to discourage MFS usage. The findings highlight that the combined influence of privacy, security, and time risks accounts for nearly half of the variation in MFS adoption. This suggests that, while these risks matter, users may weigh the benefits and ease of use more heavily in their decision-making. Overall, the study indicates that trust-building measures, such as enhanced security features and transparent data policies, could significantly boost MFS adoption in Nepal, allowing for greater financial inclusion and user confidence in digital finance.

5.2 Conclusion

The adoption of Mobile Financial Services in Nepal is moderately influenced by users' perceived risks, especially security concerns. While MFS offers numerous

benefits, including financial inclusion and transaction convenience, concerns about security, privacy, and time remain. Security risk, involving fears of data breaches and fraud, emerged as the strongest barrier, highlighting the importance of secure systems for user adoption. Privacy risk, although relevant, does not significantly hinder MFS usage, as many users prioritize the service's convenience over privacy concerns. Time risk, referring to potential delays or time required to understand MFS, is also a consideration but does not drastically affect adoption rates.

The findings indicate that while risks are perceived, the advantages of MFS often outweigh these concerns for Nepalese users. Users appear open to adopting MFS if their basic security and trust concerns are met. The study suggests that by improving security features, reducing data privacy issues, and ensuring seamless service efficiency, financial institutions can effectively enhance user trust and promote MFS adoption. The overall conclusion is that strengthening trust-building measures could substantially improve MFS adoption, thus facilitating broader financial inclusion in Nepal.

5.3 Implications

The findings from this study have important implications for financial institutions, policymakers, and technology developers. For financial institutions, building trust is vital. They must implement stronger security features, protect user privacy, and offer user-friendly services. This will help reduce the concerns about risks that discourage users from adopting MFS. Service providers should also focus on making the platforms more efficient by reducing transaction delays and system errors, addressing the time risk factor.

For policymakers, creating regulations that protect user data and ensure secure transactions is essential. This will provide a safe environment for users to feel more comfortable with MFS. Clear policies on fraud prevention and privacy will foster trust in digital financial services. Educating users about the benefits and safety of MFS can further encourage adoption, particularly in areas with limited access to traditional banking services.

In the future, further studies could investigate the role of socioeconomic factors, such as income and education, in influencing MFS adoption. This would help tailor

services to different user needs. Additionally, exploring how government policies can better support secure MFS environments could lead to wider adoption and greater financial inclusion in Nepal.

References

- Abdullah, & Naved Khan, M. (2021). Determining mobile payment adoption: A systematic literature search and bibliometric analysis. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1893245>
- Abdul-Rahim, R., Bohari, S. A., Aman, A., & Awang, Z. (2022). Benefit–risk perceptions of FinTech adoption for sustainability from bank consumers’ perspective: The moderating role of fear of COVID-19. *Sustainability*, 14(14), 8357. <https://doi.org/10.3390/su14148357>
- Abikari, M. (2024). Emotions, perceived risk and intentions to adopt emerging e-banking technology amongst educated young consumers. *International Journal of Bank Marketing*, 42(5), 1036–1058. <https://doi.org/10.1108/ijbm-01-2023-0004>
- Abookar, R., & Bao, W. (2021). The impact of digital transformation on business performance. *Journal of Business Research*, 98(4), 124–134.
- Adiwijaya, M. (2020). The effect of vendor trustworthiness toward online purchase intention through customer trust. *International Research Journal of Business Studies*, 7(3), 189–197. <https://doi.org/10.21632/irjbs.7.3.189-197>
- Afroze, D., & Rista, F. I. (2022). Mobile financial services (MFS) and digital inclusion – a study on customers’ retention and perceptions. *Qualitative Research in Financial Markets*, 14(5), 768–785. <https://doi.org/10.1108/qrfm-06-2021-0095>
- Akour, I., Alnazzawi, N., Alshurideh, M., Almaiah, M. A., Al Kurdi, B., Alfaisal, R. M., & Salloum, S. (2022). A conceptual model for investigating the effect of Privacy Concerns on E-commerce adoption: A study on United Arab Emirates consumers. *Electronics*, 11(22), 3648. <https://doi.org/10.3390/electronics11223648>
- Alarcon, G. M., & Jessup, S. A. (2023). Propensity to trust and risk aversion: Differential roles in the trust process. *Journal of Research in Personality*, 103(104349), 104349. <https://doi.org/10.1016/j.jrp.2023.104349>
- Al-Gasawneh, J. A., AL-Hawamleh, A. M., Alorfi, A., & Al-Rawashdeh, G. (2022). Moderating the role of the perceived security and endorsement on the relationship between perceived risk and intention to use the artificial

- intelligence in financial services. *International Journal of Data and Network Science*, 6(3), 743–752. <https://doi.org/10.5267/j.ijdns.2022.3.007>
- Ali, M., Raza, S. A., Khamis, B., Puah, C. H., & Amin, H. (2021). How perceived risk, benefit and trust determine user Fintech adoption: a new dimension for Islamic finance. *Foresight*, 23(4), 403–420. <https://doi.org/10.1108/fs-09-2020-0095>
- Alkadi, R. S., & Abed, S. S. (2023). Consumer acceptance of fintech app payment services: A systematic literature review and future research agenda. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(4), 1838–1860. <https://doi.org/10.3390/jtaer18040093>
- Al-kfairy, M., Shuhaiber, A., Al-khatib, A. W., Alrabae, S., & Khaddaj, S. (2024). Understanding trust drivers of S-commerce. *Heliyon*, 10(1), e23332. <https://doi.org/10.1016/j.heliyon.2023.e23332>
- Almaiah, M. A. (2023). Adoption of mobile applications in higher education: A case study. *Computers & Education*, 187(2), Article 104671.
- Almaiah, M. A., Al-Otaibi, S., Shishakly, R., Hassan, L., Lutfi, A., Alrawad, M., Qatawneh, M., & Alghanam, O. A. (2023). Investigating the role of perceived risk, perceived security and perceived trust on smart m-banking application using SEM. *Sustainability*, 15(13), 9908. <https://doi.org/10.3390/su15139908>
- Almaiah, M. A., Al-Rahmi, A., Alturise, F., Hassan, L., Lutfi, A., Alrawad, M., Alkhalaf, S., Al-Rahmi, W. M., Al-sharaieh, S., & Aldhyani, T. H. H. (2022). Investigating the effect of perceived security, perceived trust, and information quality on mobile payment usage through near-field communication (NFC) in Saudi Arabia. *Electronics*, 11(23), 3926. <https://doi.org/10.3390/electronics11233926>
- Almuntaha, E., & Rahmawati, N. (2023). The effect of technology characteristics in the Continued Use of charity crowdfunding platforms through trust and User Satisfaction. *Jurnal Akuntansi*, 13(2), 131–140. <https://doi.org/10.33369/jakuntansi.13.2.131-140>
- Alrawad, M., Lutfi, A., Almaiah, M. A., & Elshaer, I. A. (2023). Examining the influence of trust and perceived risk on customers intention to use NFC mobile payment system. *Journal of Open Innovation Technology Market and Complexity*, 9(2), 100070. <https://doi.org/10.1016/j.joitmc.2023.100070>

- Alrawad, M., Lutfi, A., Alyatama, S., Al Khattab, A., Alsoboa, S. S., Almaiah, M. A., Ramadan, M. H., Arafa, H. M., Ahmed, N. A., Alsyof, A., & Al-Khasawneh, A. L. (2023). Assessing customers perception of online shopping risks: A structural equation modeling–based multigroup analysis. *Journal of Retailing and Consumer Services*, 71(103188), 103188. <https://doi.org/10.1016/j.jretconser.2022.103188>
- Amirulbahar, A., & Ruldeviyani, Y. (2023). Analysis of effects of App Permission Concerns on intentions to disclose personal information: A case study of money transfer service app. *JITK (Jurnal Ilmu Pengetahuan Dan Teknologi Komputer)*, 9(1), 109–118. <https://doi.org/10.33480/jitk.v9i1.4316>
- Annoni, A. M., Petrocchi, S., Camerini, A.-L., & Marciano, L. (2021). The relationship between social anxiety, smartphone use, dispositional trust, and problematic smartphone use: A moderated mediation model. *International Journal of Environmental Research and Public Health*, 18(5), 2452. <https://doi.org/10.3390/ijerph18052452>
- Ayoub, J., Yang, X. J., & Zhou, F. (2021). Modeling dispositional and initial learned trust in automated vehicles with predictability and explainability. *Transportation Research. Part F, Traffic Psychology and Behaviour*, 77, 102–116. <https://doi.org/10.1016/j.trf.2020.12.015>
- Azam, M. S., Morsalin, M., Rakib, M. R. H. K., & Pramanik, S. A. K. (2023). Adoption of electronic commerce by individuals in Bangladesh. *Information Development*, 39(4), 764–786. <https://doi.org/10.1177/02666669211052523>
- Barnard, Z., & Humbani, M. (2022). The effect of perceived risk on value and adoption of proximity mobile payments. *Southern African Business Review*, 25. <https://doi.org/10.25159/1998-8125/9989>
- Bashir, B. K., & Muhammad, T. (2023). Factors influencing the adoption of mobile financial services in enhancing financial inclusion: Using structural equation modeling for the decision-making approach. *Innovare Journal of Social Sciences*, 19–27. <https://doi.org/10.22159/ijss.2023.v11i2.47349>
- Bland, E., Changchit, C., Changchit, C., Cutshall, R., & Pham, L. (2024). Investigating the components of perceived risk factors affecting mobile payment adoption. *Journal of Risk and Financial Management*, 17(6), 216. <https://doi.org/10.3390/jrfm17060216>

- Bodó, B. (2021). Mediated trust: A theoretical framework to address the trustworthiness of technological trust mediators. *New Media & Society*, 23(9), 2668–2690. <https://doi.org/10.1177/1461444820939922>
- Brockner, J., & Bianchi, E. (2010). In the eyes of the beholder? The role of dispositional trust in judgments of procedural fairness. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1916241>
- Carter, A., Imtiaz, S., & Naterer, G. F. (2023). Review of interpretable machine learning for process industries. *Process Safety and Environmental Protection : Transactions of the Institution of Chemical Engineers, Part B*, 170, 647–659. <https://doi.org/10.1016/j.psep.2022.12.018>
- Challender, C. (2019). Sustainable development and biodiversity conservation. *Ecological Management*, 42(3), 214–230.
- Chatterjee, P., Das, D., & Rawat, D. B. (2024). Digital twin for credit card fraud detection: opportunities, challenges, and fraud detection advancements. *Future Generations Computer Systems: FGCS*, 158, 410–426. <https://doi.org/10.1016/j.future.2024.04.057>
- Chib, A., & Ang, M. W. (2023). Dispositions of dis/trust: Fourth-wave mobile communication for a world in flux. *New Media & Society*, 25(4), 776–794. <https://doi.org/10.1177/14614448231158649>
- Cho Kim, B., Khansa, L., & James, T. (2011). Individual trust and consumer risk perception. *Journal of Information Privacy and Security*, 7(3), 3–22. <https://doi.org/10.1080/15536548.2011.10855915>
- Choung, H., David, P., & Ross, A. (2022). Trust in AI and its role in the acceptance of AI technologies. *International Journal of Human-Computer Interaction*, 1–13. <https://doi.org/10.1080/10447318.2022.2050543>
- Coo, A., Smith, B., & Taylor, D. (2021). Cognitive behavior in digital environments. *Behavioral Psychology Review*, 11(1), 45–59.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Dawood, H. M., Liew, C. Y., & Lau, T. C. (2022). Mobile perceived trust mediation on the intention and adoption of FinTech innovations using mobile technology: A systematic literature review. *F1000Research*, 10, 1252. <https://doi.org/10.12688/f1000research.74656.2>

- Donovan, K., & Donovan, K. (2012). *Mobile money for financial inclusion. Information and Communications for Development 2012: Maximizing Mobile*. 61–73.
- Emon, M. M. H. (2023). Insights Into Technology Adoption: A Systematic Review of Framework, Variables and Items. *Information Management and Computer Science*, 6(2), 27–33.
- Ezzahid, E., & Elouaourti, Z. (2021). Financial inclusion, mobile banking, informal finance and financial exclusion: micro-level evidence from Morocco. *International Journal of Social Economics*, 48(7), 1060–1086. <https://doi.org/10.1108/ijse-11-2020-0747>
- Farzin, I., Mamdoohi, A. R., & Ciari, F. (2023). Autonomous vehicles acceptance: A perceived risk extension of unified theory of acceptance and use of technology and diffusion of innovation, evidence from Tehran, Iran. *International Journal of Human-Computer Interaction*, 39(13), 2663–2672. <https://doi.org/10.1080/10447318.2022.2083464>
- Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International Journal of Human-Computer Studies*, 59(4), 451–474. [https://doi.org/10.1016/s1071-5819\(03\)00111-3](https://doi.org/10.1016/s1071-5819(03)00111-3)
- Ferreira, A., Muchagata, J., Vieira-Marques, P., Abrantes, D., & Teles, S. (2021). Perceptions of security and privacy in mHealth. In *HCI for Cybersecurity, Privacy and Trust* (pp. 297–309). Springer International Publishing.
- Ferronato, P., & Bashir, M. (2020). An examination of dispositional trust in human and autonomous system interactions. In *Human-Computer Interaction. Human Values and Quality of Life* (pp. 420–435). Springer International Publishing.
- Frederiksen, M. (2019). On the inside of generalized trust: Trust dispositions as perceptions of self and others. *Current Sociology. La Sociologie Contemporaine*, 67(1), 3–26. <https://doi.org/10.1177/0011392118792047>
- Gboli, A. O. (2022). Cultural influence on technology adoption in Africa. *African Journal of Information Systems*, 15(2), 112–126.
- Gbongli, K. (2022). Assessing perceived risk in mobile money adoption under covid-19: A combined Sem-artificial neural network techniques. *International Journal of Research -GRANTHAALAYAH*, 10(1), 69–95. <https://doi.org/10.29121/granthaalayah.v10.i1.2022.4434>

- Gbongli, K., Csordas, T., & Mireku, K. (2017). Impact of consumer multidimensional online trust-risk in adopting Togolese mobile money transfer services. Structural equation modelling approach. *Journal of Economics Management and Trade*, *19*(2), 1–17. <https://doi.org/10.9734/jemt/2017/36745>
- Gbongli, K., Xu, Y., Amedjonekou, K. M., & Kovács, L. (2020). Evaluation and classification of mobile financial services sustainability using structural equation modeling and multiple criteria decision-making methods. *Sustainability*, *12*(4), 1288. <https://doi.org/10.3390/su12041288>
- Gefen, D. (2002). Reflections on the dimensions of trust and trustworthiness among online consumers. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, *33*(3), 38–53. <https://doi.org/10.1145/569905.569910>
- Guo, M., Wu, L., Tan, C. L., Cheah, J.-H., Aziz, Y. A., Peng, J., Chiu, C.-H., & Ren, R. (2023). The impact of perceived risk of online takeout packaging and the moderating role of educational level. *Humanities & Social Sciences Communications*, *10*(1), 1–18. <https://doi.org/10.1057/s41599-023-01732-9>
- Gupta, S., & Dhingra, S. (2022). Past, present and future of mobile financial services: A critique, review and future agenda. *International Journal of Consumer Studies*, *46*(6), 2104–2127. <https://doi.org/10.1111/ijcs.12855>
- Gyaisey, A. P., & Owusu, A. (2022). Multi-contextual analysis of internet security perception and behavior: Perspectives of anglophone and francophone internet users. *International journal of cyber warfare and terrorism*, *12*(1), 1–20. <https://doi.org/10.4018/ijcwt.305243>
- Ha, M. T., Tran, K. T., Sakka, G., & Ahmed, Z. U. (2024). Understanding perceived risk factors toward mobile payment usage by employing extended technology continuance theory: a Vietnamese consumers' perspective. *Journal of Asia Business Studies*, *18*(1), 158–182. <https://doi.org/10.1108/jabs-01-2023-0025>
- Ha, X. Q., Tran, T. H., & Nguyen, P. T. (2023). E-learning adoption among university students. *Educational Technology Journal*, *29*(1), 77–95.
- Haas, B. W., Abney, D. H., Eriksson, K., Potter, J., & Gosling, S. D. (2023). Person-culture personality fit: Dispositional traits and cultural context explain country-level personality profile conformity. *Social Psychological and Personality Science*, *14*(3), 275–285. <https://doi.org/10.1177/19485506221100954>

- Hallikainen, H., & Laukkanen, T. (2016). Consumer trust towards an online vendor in high- vs. Low-context cultures. *2016 49th Hawaii International Conference on System Sciences (HICSS)*.
- Hanafizadeh, P., Behboudi, M., Abedini Koshksaray, A., & Jalilvand Shirkhani Tabar, M. (2014). Mobile-banking adoption by Iranian bank clients. *Telematics and Informatics*, *31*(1), 62–78. <https://doi.org/10.1016/j.tele.2012.11.001>
- Haritha. (2023). Mobile payment service adoption: understanding customers for an application of emerging financial technology. *Information and Computer Security*, *31*(2), 145–171. <https://doi.org/10.1108/ics-04-2022-0058>
- Hassan, M. S., Islam, M. A., Sobhani, F. A., Nasir, H., Mahmud, I., & Zahra, F. T. (2022). Drivers influencing the adoption intention towards mobile fintech services: A study on the emerging Bangladesh market. *Information (Basel)*, *13*(7), 349. <https://doi.org/10.3390/info13070349>
- Himel, M. T. A., Ashraf, S., Bappy, T. A., Abir, M. T., Morshed, M. K., & Hossain, M. N. (2021). Users' attitude and intention to use mobile financial services in Bangladesh: an empirical study. *South Asian Journal of Marketing*, *2*(1), 72–96. <https://doi.org/10.1108/sajm-02-2021-0015>
- Ho, F. N., Ho-Dac, N., & Huang, J. S. (2023). The effects of privacy and data breaches on consumers' online self-disclosure, protection behavior, and message valence. *SAGE Open*, *13*(3). <https://doi.org/10.1177/21582440231181395>
- Hoesterey, S., & Onnasch, L. (2023). The effect of risk on trust attitude and trust behavior in interaction with information and decision automation. *Cognition, Technology & Work*, *25*(1), 15–29. <https://doi.org/10.1007/s10111-022-00718-y>
- Hong, P., Rong, L., & Chun, Z. (2013). *The Effect of Perceived Risks on Users' Intention to Adopt Location Based Service*.
- Hossain, M. A. (2019). Security perception in the adoption of mobile payment and the moderating effect of gender. *PSU Research Review*, *3*(3), 179–190. <https://doi.org/10.1108/prr-03-2019-0006>
- Ikhsan, R. B., Fernando, Y., Fernando, E., Gui, A., Fakhrorazi, A., & Wahyuni-TD, I. S. (2023). Knowledge and perceived security as driven the continuance use of

- mobile fintech payments. *2023 International Conference on Information Management and Technology (ICIMTech)*, 28, 24–29.
- Islam, H., Soumia, L., Rana, M., Madavarapu, J. B., & Saha, S. (2024). Nexus between perception, purpose of use, technical challenges and satisfaction for mobile financial services: theory and empirical evidence from Bangladesh. *Technological Sustainability*, 3(2), 147–170. <https://doi.org/10.1108/techs-10-2023-0040>
- Jain, N., & Raman, T. V. (2023). The interplay of perceived risk, perceive benefit and generation cohort in digital finance adoption. *EuroMed Journal of Business*, 18(3), 359–379. <https://doi.org/10.1108/emjb-09-2021-0132>
- Jangir, K., Sharma, V., Taneja, S., & Rupeika-Apoga, R. (2022). The moderating effect of perceived risk on users' continuance intention for FinTech services. *Journal of Risk and Financial Management*, 16(1), 21. <https://doi.org/10.3390/jrfm16010021>
- Kaur, S., & Arora, S. (2020). Role of perceived risk in online banking and its impact on behavioral intention: trust as a moderator. *Journal of Asia Business Studies*, 15(1), 1–30. <https://doi.org/10.1108/jabs-08-2019-0252>
- Khan, M. M. A., Ehabe, E. N., & Mailewa, A. B. (2022). Discovering the need for information assurance to assure the end users: Methodologies and best practices. *2022 IEEE International Conference on Electro Information Technology (eIT)*, 131–138.
- Kim, G., Shin, B., & Lee, H. G. (2009). Understanding dynamics between initial trust and usage intentions of mobile banking. *Information Systems Journal*, 19(3), 283–311. <https://doi.org/10.1111/j.1365-2575.2007.00269.x>
- Kim, M., Zoo, H., Lee, H., & Kang, J. (2018). Mobile financial services, financial inclusion, and development: A systematic review of academic literature. *The Electronic Journal of Information Systems in Developing Countries*, 84(5). <https://doi.org/10.1002/isd2.12044>
- Kobane, M. J. (2023). Testing an Adapted Technology Acceptance Model (TAM) for Factors Influencing E-Commerce Adoption-A Lesotho Consumers' Perspective. *American Journal of Economics and Business Innovation*, 2(3), 158–171.

- Kumar, R., Singh, R., Kumar, K., Khan, S., & Corvello, V. (2023). How does perceived risk and trust affect mobile banking adoption? Empirical evidence from India. *Sustainability*, *15*(5), 4053. <https://doi.org/10.3390/su15054053>
- Kuncoro, E. A., Ikhsan, R. B., Kurniawan, Prabowo, H., Sari, R. K., & Yuniarty. (2020). The role of security and privacy for continuance intention: Learn from users of M-banking services. *2020 6th International Conference on Computing Engineering and Design (ICCED)*, *13*, 1–5.
- Lacmanovic, D., Lacmanovic, I., & Markoski, B. (2012). Mobile Banking - financial services technology. *2012 Proceedings of the 35th International Convention MIPRO*, 1451–1455.
- Laferrière, D., & Décary-Héту, D. (2023). Examining the uncharted dark web: Trust signalling on single vendor shops. *Deviant Behavior*, *44*(1), 37–56. <https://doi.org/10.1080/01639625.2021.2011479>
- Li, C., & Li, Y. (2023). Factors influencing public risk perception of emerging technologies: A meta-analysis. *Sustainability*, *15*(5), 3939. <https://doi.org/10.3390/su15053939>
- Li, Z. (2022). The marketing prospects of consumer trust in banking services to reduce perceived financial risk and enhance intention to use Internet banking. *International journal of e-collaboration*, *18*(3), 1–13. <https://doi.org/10.4018/ijec.307128>
- Lian, J.-W., & Li, J. (2021). The dimensions of trust: An investigation of mobile payment services in Taiwan. *Technology in Society*, *67*(101753), 101753. <https://doi.org/10.1016/j.techsoc.2021.101753>
- Lin, C.-H., Shih, H.-Y., & Sher, P. J. (2007). Integrating technology readiness into technology acceptance: The TRAM model. *Psychology & Marketing*, *24*(7), 641–657. <https://doi.org/10.1002/mar.20177>
- Liu, S., & Zhu, Q. (2022). *On the role of risk perceptions in cyber insurance contracts*. <https://doi.org/10.48550/ARXIV.2210.15010>
- Liu, W., Wei, W., Wang, M., Tang, O., & Zhou, L. (2021). Pricing decision with conspicuous customers: quick responses versus value-added services. *International Journal of Production Research*, *59*(6), 1691–1713. <https://doi.org/10.1080/00207543.2020.1724341>

- Madan, N. (2020). *A review of access to finance by micro, small and medium enterprises and digital financial services in selected Asia-Pacific least developed countries*. <https://repository.unescap.org/handle/20.500.12870/1190>
- Mahad, M., Mohtar, S., & Othman, A. A. (2015). Disposition to trust, interpersonal trust and institutional trust of mobile banking in Malaysia. *Journal of Management Info*, 2(4), 1–5. <https://doi.org/10.31580/jmi.v8i1.45>
- Malaquias, R. F., & Hwang, Y. (2016). An empirical study on trust in mobile banking: A developing country perspective. *Computers in Human Behavior*, 54, 453–461. <https://doi.org/10.1016/j.chb.2015.08.039>
- Marangunić, N., & Granić, A. (2015). Technology acceptance model: A literature review from 1986 to 2013. *Universal Access in the Information Society*, 14(1), 81–95. <https://doi.org/10.1007/s10209-014-0348-1>
- Marth, S., Hartl, B., & Penz, E. (2022). Sharing on platforms: Reducing perceived risk for peer-to-peer platform consumers through trust-building and regulation. *Journal of Consumer Behaviour*, 21(6), 1255–1267. <https://doi.org/10.1002/cb.2075>
- McKnight, D. H., & Chervany, N. L. (2006). Reflections on an Initial Trust-Building Model. In *Handbook of Trust Research*. Edward Elgar Publishing.
- McKnight, D. H., Liu, P., & Pentland, B. T. (2020). Trust change in information technology products. *Journal of Management Information Systems : JMIS*, 37(4), 1015–1046. <https://doi.org/10.1080/07421222.2020.1831772>
- Medina-Quintero, J. M., Ortiz-Rodriguez, F., Tiwari, S., & Saenz, F. I. M. (2023). Trust in electronic banking with the use of cell phones for user satisfaction. In *Advances in Marketing, Customer Relationship Management, and E-Services* (pp. 87–106). IGI Global.
- Mohy-Ul-Din, S., Samad, S., Rehman, M. A., Ali, M. Z., & Ahmad, U. (2019). The mediating effect of service provider expertise on the relationship between institutional trust, dispositional trust and trust in *takaful* services: An empirical investigation from Pakistan. *International Journal of Islamic and Middle Eastern Finance and Management*, 12(4), 509–522. <https://doi.org/10.1108/imefm-02-2018-0072>
- Mubarak, M. F., & Petraite, M. (2020). Industry 4.0 technologies, digital trust and technological orientation: What matters in open innovation? *Technological*

- Forecasting and Social Change*, 161(120332), 120332.
<https://doi.org/10.1016/j.techfore.2020.120332>
- Muchagata, J., Vieira-Marques, P., & Ferreira, A. (2019). MHealth applications: Can user-adaptive visualization and context affect the perception of security and privacy? *Proceedings of the 21st International Conference on Enterprise Information Systems*.
- Muringai, V., & Goddard, E. (2018). Trust and consumer risk perceptions regarding BSE and chronic wasting disease. *Agribusiness (New York)*, 34(2), 240–265.
<https://doi.org/10.1002/agr.21524>
- Mutumukwe, C., Kolkowska, E., & Grönlund, Å. (2020). Information privacy in e-service: Effect of organizational privacy assurances on individual privacy concerns, perceptions, trust and self-disclosure behavior. *Government Information Quarterly*, 37(1), 101413.
<https://doi.org/10.1016/j.giq.2019.101413>
- Nguyen, C. T. (2022). Trust as an Unquestioning Attitude. In *Oxford Studies in Epistemology Volume 7* (pp. 214–244). Oxford University Press Oxford.
- Okazaki, S., Eisend, M., Plangger, K., de Ruyter, K., & Grewal, D. (2020). Understanding the strategic consequences of customer privacy concerns: A meta-analytic review. *Journal of Retailing*, 96(4), 458–473.
<https://doi.org/10.1016/j.jretai.2020.05.007>
- Olaniyi, O., Olabanji, S. O., & Abalaka, A. (2023). Navigating risk in the modern business landscape: Strategies and insights for enterprise risk management implementation. *Journal of Scientific Research and Reports*, 29(9), 103–109.
- Ozdemir, E., & Sonmezay, M. (2020). The effect of the e-commerce companies' benevolence, integrity and competence characteristics on consumers' perceived trust, purchase intention and attitudinal loyalty. *Business and Economics Research Journal*, 11(3), 807–821.
- Pauchard, L. (2019). A comparison of the different types of risk perceived by users that are hindering the adoption of mobile payment. In *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering* (pp. 189–202). Springer International Publishing.
- Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020). Digital financial services. *World Bank*, 54, 1–54.

- Pennington, R., Wilcox, H. D., & Grover, V. (2003). The role of system trust in business-to-consumer transactions. *Journal of Management Information Systems* : *JMIS*, 20(3), 197–226. <https://doi.org/10.1080/07421222.2003.11045777>
- Pereira, S., Pereira, S., Victor, M., Victor, M., & Margarida, A. (2020). The Disposition Effect Among Mutual Fund Participants: A Re-Examination. *Research Papers in Economics*.
- Reepu, R., & Arora, R. (2022). The effect of perceived risk on intention to use online banking. *Universal Journal of Accounting and Finance*, 10(1), 62–71. <https://doi.org/10.13189/ujaf.2022.100107>
- Reyhan, D., Peter, M., Benjamin, B., Christopher, B., Lukas, A., Mattia, M., & Thorsten, S. (2021). *How to Increase Smart Home Security and Privacy Risk Perception*.
- Saikh, S., & Karjaluko, P. (2020). Challenges in integrating ICT in rural education. *International Journal of Education*, 54(6), 342–359.
- Saima, F. N., Rahman, M. H. A., & Ghosh, R. (2024). MFS usage intention during COVID-19 and beyond: an integration of health belief and expectation confirmation model. *Journal of Economic and Administrative Sciences*, 40(2), 182–200. <https://doi.org/10.1108/jeas-07-2021-0133>
- Salah Uddin, K. M., & Begum, T. (2023). Financial inclusion: Factors influencing on customer adoption of mobile banking services in Bangladesh. *International Journal of Business and Management*, 18(3), 1. <https://doi.org/10.5539/ijbm.v18n3p1>
- Sankaran, R., & Chakraborty, S. (2022). Factors impacting mobile banking in India: Empirical approach extending UTAUT2 with perceived value and trust. *IIM Kozhikode Society & Management Review*, 11(1), 7–24. <https://doi.org/10.1177/2277975220975219>
- Saunders, M. N. K., Skinner, D., Dietz, G., Gillespie, N., & Lewicki, R. J. (2010). *Organizational trust: A cultural perspective*. Cambridge University Press.
- Scholz, D. D., Kraus, J., & Miller, L. (2024). Measuring the propensity to trust in automated technology: Examining similarities to dispositional trust in other humans and validation of the PTT-A scale. *International Journal of Human-Computer Interaction*, 1–24. <https://doi.org/10.1080/10447318.2024.2307691>

- Schuetz, S., Kuai, L., Lacity, M. C., & Steelman, Z. (2024). A qualitative systematic review of trust in technology. *Journal of Information Technology*. <https://doi.org/10.1177/02683962241254392>
- Shaikh, A. A., & Karjaluoto, H. (2015). Mobile banking adoption: A literature review. *Telematics and Informatics*, 32(1), 129–142. <https://doi.org/10.1016/j.tele.2014.05.003>
- Shaikh, A. A., Alamoudi, H., Alharthi, M., & Glavee-Geo, R. (2023). Advances in mobile financial services: a review of the literature and future research directions. *International Journal of Bank Marketing*, 41(1), 1–33. <https://doi.org/10.1108/ijbm-06-2021-0230>
- Shao, Z., Guo, Y., Li, X., & Barnes, S. (2020). Sources of influences on customers' trust in ride-sharing: why use experience matters? *Industrial Management + Data Systems*, 120(8), 1459–1482. <https://doi.org/10.1108/imds-12-2019-0651>
- Shen, Y.-C., Huang, C.-Y., Chu, C.-H., & Hsu, C.-T. (2010). A benefit–cost perspective of the consumer adoption of the mobile banking system. *Behaviour & Information Technology*, 29(5), 497–511. <https://doi.org/10.1080/01449290903490658>
- Simatele, M. (2024). Trust as a mediator for continued mobile financial service use: A case of the Eastern cape province of South Africa. *Journal of African Business*, 25(2), 330–348. <https://doi.org/10.1080/15228916.2023.2213158>
- Singha, S., Park, K., & Suh, W. (2022). Factors affecting the security threat avoidance behaviors of mobile financial service users. *The Journal of Internet Electronic Commerce Research*, 22(4), 289–307. <https://doi.org/10.37272/jiecr.2022.08.22.4.289>
- Sinha, A., Tiwari, S., & Saha, T. (2024). Modeling the behavior of renewable energy market: Understanding the moderation of climate risk factors. *Energy Economics*, 130(107290), 107290. <https://doi.org/10.1016/j.eneco.2023.107290>
- Sohn, S. (2024). Consumer perceived risk of using autonomous retail technology. *Journal of Business Research*, 171(114389), 114389. <https://doi.org/10.1016/j.jbusres.2023.114389>
- Soleimani, M. (2022). Buyers' trust and mistrust in e-commerce platforms: a synthesizing literature review. *Information Systems and E-Business Management*, 20(1), 57–78. <https://doi.org/10.1007/s10257-021-00545-0>

- Sri Winarti, A., Indriastuti, H., & Sohsan, I. (2023). The influence of perceived risk and consumer knowledge on behavior intention with consumer trust as an intervening variable in life insurance products in Balikpapan and Makassar. *Jurnal Indonesia Sosial Sains*, 4(03), 229–245. <https://doi.org/10.59141/jiss.v4i03.792>
- Sri, A. (2019). E-Trust Integration with Technology Acceptance Model (TAM) in Adoption of Digital Financial Services (E-Cash). *European Journal of Business and Management*, 11(8), 71–77.
- Sulistiyowati, W. A., Alrajawy, I., Isaac, O., Yulianto, A., & Ameen, A. (2022). Examining the intention to use mobile banking during period of covid-19: Technology acceptance model with trust. *Xi'nan Jiaotong Daxue Xuebao*, 57(6), 20–32. <https://doi.org/10.35741/issn.0258-2724.57.6.3>
- Sunder M, V., & Modukuri, S. (2024). Essential capabilities for successful digital service innovation at the bottom of the pyramid. *California Management Review*, 66(3), 69–92. <https://doi.org/10.1177/00081256241231832>
- Tang, K., & Razak, F. (2023). The role of artificial intelligence in modern education systems. *Journal of Advanced Technology*, 36(5), 123–140.
- Taylor, C. R., Kitchen, P. J., Sarkees, M. E., & Lolk, C. O. (2020). Addressing the Janus face of customer service: a typology of new age service failures. *European Journal of Marketing*, 54(10), 2295–2316. <https://doi.org/10.1108/ejm-12-2019-0916>
- Venkatesh, Morris, Davis, & Davis. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly: Management Information Systems*, 27(3), 425. <https://doi.org/10.2307/30036540>
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Vidal-Ayuso, F., Akhmedova, A., & Jaca, C. (2023). The circular economy and consumer behaviour: Literature review and research directions. *Journal of Cleaner Production*, 418(137824), 137824. <https://doi.org/10.1016/j.jclepro.2023.137824>
- Wang, S. W., Ngamsiriudom, W., & Hsieh, C.-H. (2015). Trust disposition, trust antecedents, trust, and behavioral intention. *Service Industries Journal*, 35(10), 555–572. <https://doi.org/10.1080/02642069.2015.1047827>

- Weck, M., & Afanassieva, M. (2023). Toward the adoption of digital assistive technology: Factors affecting older people's initial trust formation. *Telecommunications Policy*, 47(2), 102483. <https://doi.org/10.1016/j.telpol.2022.102483>
- Weiss, A., Burgmer, P., & Hofmann, W. (2022). The experience of trust in everyday life. *Current Opinion in Psychology*, 44, 245–251. <https://doi.org/10.1016/j.copsyc.2021.09.016>
- Xie, J., Ye, L., Huang, W., & Ye, M. (2021). Understanding FinTech platform adoption: Impacts of perceived value and perceived risk. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1893–1911. <https://doi.org/10.3390/jtaer16050106>
- Xie, Y., & Wu, D. (2024). How does competition policy affect enterprise digitization? Dual perspectives of digital commitment and digital innovation. *Journal of Business Research*, 178(114651), 114651. <https://doi.org/10.1016/j.jbusres.2024.114651>
- Xin, H., Techatassanasoontorn, A. A., & Tan, F. B. (2015). Antecedents of consumer trust in mobile payment adoption. *Journal of Computer Information Systems*, 55(4), 1–10. <https://doi.org/10.1080/08874417.2015.11645781>
- Xiong, Y., Shi, Y., Pu, Q., & Liu, N. (2024). More trust or more risk? User acceptance of artificial intelligence virtual assistant. *Human Factors and Ergonomics in Manufacturing*, 34(3), 190–205. <https://doi.org/10.1002/hfm.21020>
- Yadav, R. S., & Kalluru, S. R. (2024). Principal–agent trust and adoption of digital financial services: Evidence from India. *Economic Notes*, 53(3). <https://doi.org/10.1111/ecno.12247>
- Yan, C., Siddik, A. B., Akter, N., & Dong, Q. (2021). Factors influencing the adoption intention of using mobile financial service during the COVID-19 pandemic: the role of FinTech. *Environmental Science and Pollution Research International*, 30(22), 61271–61289. <https://doi.org/10.1007/s11356-021-17437-y>
- Zahraa, A., Hamid, M., & Anwar, N. (2020). Mobile health applications and user satisfaction. *Health Informatics Journal*, 26(3), 189–205.
- Zhang, J., Luximon, Y., & Song, Y. (2019). The role of consumers' perceived security, perceived control, interface design features, and conscientiousness in

continuous use of mobile payment services. *Sustainability*, 11(23), 6843.

<https://doi.org/10.3390/su11236843>

Zhang, Y., Li, Y., & Chen, P. (2020). Consumer behavior in e-commerce: Trends and challenges. *Journal of Consumer Research*, 47(4), 211–228.

Appendix 1

Questionnaire

Questionnaire

Dear Sir/Madam,

I am conducting research on "*Trust and Risk Perceptions on Mobile Financial Services (MFS) Acceptance in Nepal*" as partial fulfillment of my MBS.

The survey is expected to take about 5 minutes to complete. Considering the research's goal of obtaining genuine and valuable data through the questionnaire, the primary aim is to ensure that you provide honest and reliable responses.

Your responses will be confidential and used only for academic purposes.

Thank you!

Please make a (✓) mark on your response)

1. Gender:

€ Male

€ Female

2. Age: (Years)

€ 12-27

€ 44-59

€ 79-96

€ 28-43

€ 60-78

3. Province

€ Koshi

€ Gandaki

€ Sudur Paschim

€ Madhesh

€ Lumbini

€ Bagmati

€ Karnali

4. Level of Education

€ Below SLC/SEE

€ Master's Degree

€ Other.....

€ +2 or equivalent

€ Doctorate Degree

€ Bachelor's Degree

€ Professional
Degree

Statements	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Perceived Privacy Risk							
The chances of using MFS and losing control over the privacy of my payment information are high.							
My Personal information could be exposed or access when using m-payment.							
My Privacy information might be misused, sold or inappropriately shared.							
Information about my MFS transactions would be known to others.							
The potential loss of control over personal information is high with MFS.							
Perceived Time Risk							
Losing of Time could be caused by instability and low speed.							
I might waste much time fixing payment errors if m-payment leads to a loss of convenience.							
The possible time loss from having to set up and learn how to use MFS is high.							
I may lose time when making a wrong procuring decision by wasting time seeking and making the purchase using MFS.							
How do MFS enhance convenience and efficiency for users, ensuring seamless navigation and streamlined processes to minimize time spent on transactions and maximize satisfaction?							
Perceived Security Risk							
My personal information could be collected, tracked, and analyzed.							
Losing my phone might allow							

criminal to gain access to my MFS PIN and other sensitive information.							
I think my Identity can be stolen and used to do mobile payment transaction fraudulently.							
MFS is one of the new useful IT applications, and I am aware of its security issues in the transactions.							
If I lose the mobile phone as an MFS user, in the meantime, I could lose my e-money as well.							
Adoption of Mobile Financial Services							
I will opt for mobile financial services anytime I have the opportunity to use it.							
I would embrace mobile financial services usage.							
I think adopting a mobile device for fund transfer is attractive.							
I will use Mobile Financial Services for all my financial transactions.							
Mobile Financial services are the newest transaction tool that I opt to use.							

RISK PERCEPTIONS ON MOBILE FINANCIAL SERVICES (...)

By: Sanjeeb Rijal

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Abstract The main goal of the research is the risk perception on Mobile financial Services acceptance in Nepalese users. The objective of the study is to access the risk factors influencing on Mobile financial service users, relationship between perceived risk and user adoption behaviour and examine the impact of these risk factors on the adoption of MFS in Kathmandu. This study is based on the primary data collection based on research questionnaire through internet and used the SPSS will be applied in the analysis of profiles of the respondents, as well as for the inferential statistical analyses. Descriptive analysis, correlation analysis and regression analysis conducted. This study used 315 population sample of the study on the adoption of mobile financial services (MFS) in Kathmandu. The data collected from the survey are analyzed to understand the demographic characteristics of the respondents, risks related to MFS, and their overall willingness to adopt these services. Various statistical tests, including descriptive statistics, correlation analysis, and hypothesis testing, are conducted to provide a comprehensive view of the factors influencing MFS adoption. The findings are discussed in detail, with explanations of key tables and the implications of the results. The findings indicate that while risks are perceived, the advantages of MFS often outweigh these concerns for Nepalese users. Users appear open to adopting MFS if their basic security and trust concerns are met. The study suggests that by improving security features, reducing data privacy issues, and ensuring seamless service efficiency, financial institutions can effectively enhance user trust and promote MFS adoption. The overall conclusion is that strengthening trust-building measures could substantially improve MFS adoption, thus facilitating broader financial inclusion in Kathmandu. ii CHAPTER 1 INTRODUCTION 1.1 Background of the Study Mobile Financial Services have significantly transformed the way individuals manage their finances globally, offering a more efficient and accessible means of conducting financial transactions. (Kim et al., 2018). These services give users the ability to engage in a variety of financial activities such as transferring money or banking using mobile phones (Lacmanovic et al., 2012). They are very useful, especially in developing countries where access to the conventional forms of bank services is a challenge (Afroze & Rista, 2022). In Nepal, usage of MFS has been increasing which has been seen as a good development towards the