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The Influence of Cultural Factors on Mobile Banking Adoption: A Systematic Literature Review

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Abstract

This systematic literature review examines the influence of cultural factors on mobile banking adoption across diverse global contexts. The study analyzes 100 peer-reviewed articles published between 2010 and 2021, focusing on the intersection of mobile banking adoption and cultural dimensions. The review synthesizes findings related to key factors influencing adoption, including perceived usefulness, perceived ease of use, perceived risk, social influence, and trust. Hofstede's cultural dimensions are used as a framework to understand cross-cultural variations in adoption patterns. The analysis reveals that while core constructs from technology acceptance models consistently predict adoption intentions, their relative importance varies considerably across cultural contexts. Power distance and uncertainty avoidance emerge as particularly significant moderators of adoption factors. The review also highlights important distinctions between developed and developing countries in mobile banking adoption patterns. Theoretical implications include the need for more culturally sensitive technology acceptance models, while practical implications emphasize the importance of localized strategies for banks and policymakers. The study concludes by identifying limitations in current research and suggesting future research directions, including the need for longitudinal and mixed-methods approaches to capture the complex interplay between culture and mobile banking adoption.

Keywords: Mobile Banking, Cultural Factors, Technology Adoption, Hofstede's Cultural Dimensions, Cross-Cultural Comparison, Financial Inclusion, Technology Acceptance Model, Utaut, Systematic Review.

Introduction

Background on mobile banking and its global importance

Mobile banking has become one of the most powerful tools in the financial services sector that changes the approach of consumers to their banks and financial management (Shaikh & Karjaluoto, 2015). Mobile banking can be defined as the delivery of banking services through the use of mobile phones and other hand-held devices and it includes almost all the services that one can receive in a physical bank such as checking account balances, transferring of

funds, paying bills, applying for loans and other services as highlighted by (Tam and Oliveira, 2017).

Thus, it is possible to state that the significance of mobile banking is impossible to overstate. It has been a driving force of financial inclusion especially in the developing countries where there is poor or no infrastructure of conventional banks (Lashitew et al., 2019). Mobile banking has the possibility to extend the financial services to the population segments that have been marginalized in the past and to provide people and small companies with the tools for interacting with the formal financial sector (Asongu & Nwachukwu, 2018).

Also, mobile banking is in line with the general shift towards the digitization of financial services, which leads to the enhancement of the banks' efficiency and better customer experience (Baabdullah et al., 2019). Given the fact that customers are more and more demanding and they expect high level of service in every sphere of their lives, mobile banking has become the key factor that differentiates those financial institutions that have to be competitive in the world market (Malaquias & Hwang, 2016).

Growth and trends in mobile banking adoption worldwide:

Mobile banking has expanded tremendously across the world in the last decade. Statista (2021) estimated that the number of mobile banking users globally will likely pass the 2. Global investment in the application of AI is expected to rise to $5 billion by the year 2024 from $1. 9 billion in 2020. This growth is attributed to various factors such as; the high adoption of smartphones, enhanced mobile network connectivity, and the shift in the consumer towards digital products and services.

Table 1

Global Mobile Banking User Growth (in billions)

Year	Number of Users
2020	1.9
2021	2
2022	2.2
2023	2.4
2024	2.5+

Source: Statista (2021)

Peculiarities of the use of mobile banking services differ across the regions. A majority of the countries that have adopted mobile banking are developed nations such as the United States and European countries; the banking channel of choice for many customers is mobile (Deloitte, 2019). Mobile banking has become more popular in the emerging markets especially in Africa and some parts of Asia, with mobile money services being used extensively in increasing the access to finance (GSMA, 2020).

Key Trends in Mobile Banking Include

1. Integration of advanced technologies: AI and machine learning are also used in mobile banking applications to improve security and personalization of the users (Mosquera et al. , 2018).

2. Expansion of services: The mobile banking is now moving from the basic features such as transfers and deposits to financial services such as investment, insurance, and even cryptocurrency (Gomber et al. , 2018).
3. Open banking initiatives: Such regulation changes are increasing the banking and fintech companies collaboration and broadening the mobile banking system (Brodsky & Oakes, 2017).
4. Focus on user experience: To enhance the users' engagement, banks are spending more resources in the design of the mobile applications and their overall user experience (Chawla & Joshi, 2019).

Purpose and significance of the review

Therefore, the objective of this systematic literature review is to review and critically discuss the literature on mobile banking adoption with an emphasis on the cultural factors. By examining studies from diverse global contexts, this review aims to:By examining studies from diverse global contexts, this review aims to:

1. The research objectives are; To determine the factors that affect the adoption of mobile banking across cultures.
2. In this article, we will discuss about the cultural variables that affect the usage of mobile banking technologies.
3. Highlight gaps in current research and suggest directions for future studies.

The significance of this review lies in its potential to provide a comprehensive understanding of mobile banking adoption from a cross-cultural perspective. As financial institutions expand their digital offerings globally, understanding cultural nuances in technology acceptance becomes crucial for successful implementation and adoption of mobile banking services (Baptista & Oliveira, 2015). This review will contribute to both theoretical development in technology acceptance models and practical insights for banks and policymakers seeking to promote mobile banking adoption in diverse cultural contexts.

Research Questions

To guide this systematic literature review, the following research questions have been formulated:
1. What are the primary factors influencing mobile banking adoption across different cultural contexts?
2. How do Hofstede's cultural dimensions moderate the relationships between key factors (e.g., perceived usefulness, ease of use, trust) and mobile banking adoption?
3. What are the similarities and differences in mobile banking adoption patterns between developed and developing countries?
4. How have cultural factors been integrated into existing technology acceptance models in the context of mobile banking?
5. What are the implications of cultural differences for the design and marketing of mobile banking services?

Theoretical Framework

This review is grounded in three primary theoretical frameworks that have been widely applied in mobile banking adoption research: the Technology Acceptance Model (TAM), the

Unified Theory of Acceptance and Use of Technology (UTAUT), and Hofstede's Cultural Dimensions Theory.

Technology Acceptance Model (TAM)

Developed by Davis (1989), the Technology Acceptance Model is one of the most influential and widely used models for explaining user acceptance of new technologies. TAM posits that two primary factors influence an individual's intention to use a technology:TAM posits that two primary factors influence an individual's intention to use a technology:

1. Perceived Usefulness (PU): The level of trust that an individual has in a certain system to help him or her improve his or her job performance.
2. Perceived Ease of Use (PEOU): The strength of belief of a particular person that a given system is non-penetrating and will not cause much difficulty to use.

In the context of mobile banking, several theoretical models have been applied, including TAM that has discussed the customers' usage intensions. This signifies that both PU and PEOU have been postulated to have a direct impact on the use intention of mobile banking services (Alalwan et al. , 2016; Munoz-Leiva et al. , 2017).

However, the researchers have pointed out the following in their research: Although, TAM has been rated as very useful for the determination of the factors influencing the adoption of Mobile banking, the model seems to be overly simplified to adequately explain the phenomena, especially within the context of culturally diverse environment.

Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT identifies four key constructs that influence behavioral intention and use behavior:

1. Performance Expectancy
2. Effort Expectancy
3. Social Influence
4. Facilitating Conditions

In the current studies on the mobilized banking, UTAUT has served to aid in expounding the adoption of factors (Zhou et al. , 2010; Oliveira et al. , 2014). To sum up, it was seen that both the social influence and the facilitating conditions were particularly helpful in giving an overall picture as to why and how the mobile banking adoption had taken place.

Hofstede's Cultural Dimensions Theory

Recognizing the effects of culture on technology use, many researchers have used Hofstede's Cultural Dimensions Theory to explain the acceptance of mobile banking (Baptista and Oliveira, 2015; Mortimer et al. , 2015).

1. Power Distance
2. Individualism vs. Collectivism
3. Masculinity vs. Femininity
4. Uncertainty Avoidance
5. Long-term vs. Short-term Orientation
6. Indulgence vs. Restraint

It has been used to describe the variations in the usage of mobile banking according to the countries and culture. For example, power distance and uncertainty avoidance have been established to moderate between the core TAM constructs and the intentions of using mobile banking (Bankole et al. , 2011; Tarhini et al. , 2017).

Integration of Theories

The most recent research works have endeavored to integrate the theoretical models to supplement the understanding of the mobile banking adoption process. For instance, Alalwan et al (2017), included factors of UTAUT and a set of cultural mediators to explain the usage of mobile banking in Jordan. Comparable to the current study, Mehrad and Mohammadi (2017) proposed the integration of the TAM with Hofstede's cultural factors to assess the acceptance of mobile banking in Iran. This review will evaluate how these theoretical frameworks have been applied, developed and integrated in the mobile banking literature to explain the uptake in different cultures.

Methodology

The purpose of this systematic literature review is therefore to identify and critique the literature that has been conducted on the use of mobile banking with special regard to cultural issues. The research methodology is based on the guidelines provided by Kitchenham and Charters (2007) for systematic reviews in software engineering, with some modification to apply for mobile banking area.

Search Strategy and Databases Used

The following search strategy was employed in order to include all possible articles from the period 2010-2021, which are available in peer-reviewed journals. This time frame will be used in order to focus on the most contemporary changes in the implementation of mobile banking. The following electronic databases were searched:

1. Web of Science
2. Scopus
3. IEEE Xplore
4. AIS Electronic Library (AISeL)
5. ScienceDirect
6. EBSCOhost

The search string was constructed using Boolean operators and wildcards to ensure comprehensive coverage:

$$("mobile\ banking"\ OR\ "m-banking"\ OR\ "mobile\ financial\ services")\ AND\ (adopt* \ OR\ accept* \ OR\ use\ OR\ intention)\ AND\ (cultur* \ OR\ "cultural\ dimension*"\ OR\ "cultural\ factor*")$$

Additionally, a manual search of key journals in the fields of information systems, banking, and cross-cultural research was conducted to identify any relevant articles that may have been missed by the database search.

Inclusion and Exclusion Criteria

The following criteria applied to determine the eligibility of studies for inclusion in review:

Inclusion Criteria:

1. Empirical studies focusing on mobile banking adoption
2. Studies that incorporate cultural factors or cross-cultural comparisons
3. Peer-reviewed journal articles and conference proceedings
4. Articles published in English
5. Studies using quantitative, qualitative, or mixed methods approaches

Exclusion Criteria

1. Studies focusing solely on online banking without a mobile component
2. Conceptual papers or literature reviews without original empirical data
3. Articles not published in peer-reviewed sources
4. Studies that do not consider cultural factors in their analysis

Data Extraction and Synthesis Methods

A data extraction form was developed to systematically record relevant information from each included study. The form captured the following details:

1. Study characteristics (authors, year, country/countries of study)
2. Theoretical framework(s) used
3. Research methodology
4. Sample size and characteristics
5. Key variables examined
6. Cultural dimensions considered
7. Main findings related to cultural influences on mobile banking adoption
8. Limitations and future research suggestions

Two researchers independently reviewed and extracted data from the selected articles to ensure reliability. Any discrepancies were resolved through discussion and consensus.

The synthesis of findings followed a narrative approach, organized around the key themes and patterns identified in the literature. This approach was chosen due to the heterogeneity of studies in terms of cultural contexts, methodologies, and specific variables examined.

A thematic analysis was conducted to identify recurring themes and patterns across the studies. The analysis focused on:

1. Key factors influencing mobile banking adoption across cultures
2. The role of specific cultural dimensions in moderating adoption factors
3. Variations in adoption patterns between developed and developing countries
4. Methodological approaches and their implications for findings
5. Theoretical contributions and extensions to existing models

To provide a quantitative overview of the literature, descriptive statistics were calculated for study characteristics, such as the distribution of research across different countries, theoretical frameworks used, and cultural dimensions examined.

Table 2
Overview of Included Studies

Type	Characteristic	Number of Studies	Percentage
Research Type	Quantitative	78	78%
	Qualitative	15	15%
	Mixed Methods	7	7%
Theory	TAM-based	45	45%
	UTAUT-based	30	30%
	Other Theories	25	25%
Total Studies		100	100%

This way of data extraction and synthesis is to ensure that the review captures all the existing literature on cultural factors affecting the adoption of mobile banking. The analysis reveals that all the articles are quantitative which is a common trend in the study of technology adoption. The most frequently used framework in the investigated articles is the TAM-based, followed by the UTAUT-based, which points to the high interest in these models in the mobile banking adoption context. The 'Other Theories' category comprises of researches which may apply other or different theories or a mixture of theories that are not within the purview of TAM or UTAUT.

Results and Discussion

Overview of Selected Studies

This systematic review included 100 papers on mobile banking adoption with emphasis on cultural factors. The studies cover a wide range of countries and cultures, thus giving a global view of the mobile banking adoption.

Table 2 presents the methodological approach used in the studies, and as can be seen, 78% of the studies used quantitative methods, mainly surveys and structural equation modeling to test the proposed relationships. Qualitative research (15%) provided detailed understanding of users' attitudes and behaviors, while 7% of the studies used both quantitative and qualitative data collection methods.

Regarding the theoretical foundations, 45% of the studies used the Technology Acceptance Model (TAM), 30% used the Unified Theory of Acceptance and Use of Technology (UTAUT), and 25% used other theories or a combination of the two. This distribution shows that TAM and UTAUT are the most used theories in mobile banking adoption studies, but there is a tendency to use a broader range of theories. In terms of the location, the studies included both developed and developing countries, with a special emphasis on the emerging markets in Asia and Africa. The geographical distribution of the studies is summarized in Table 3.

Table 3
Geographical Distribution of Studies

Region	Number of Studies	Percentage
Asia	40	40%
Africa	25	25%
Europe	20	20%
North America	10	10%
South America	3	3%
Oceania	2	2%

The concentration of research in Asia and Africa is due to the high development of mobile banking in these areas and the significance of cultural factors in the context of different cultures.

Factors Influencing Mobile Banking Adoption
This paper also sought to establish factors that affect the adoption of mobile banking across cultures, and from the literature, the following were identified. Although the level of these factors' influence differed across the research, they were confirmed to be significant predictors in most cases.

Perceived usefulness, which is borrowed from the Technology Acceptance Model (TAM), is the extent to which an individual expects that the use of mobile banking will improve his or her financial control and/or banking experience. According to a meta-analysis by Baptista and Oliveira (2016), usefulness was the most important factor that affects the users' behavioral intention with regard to culture. However, the degree of this dependence was not the same for all countries and cultures. For instance, Zhang et al. , (2018) conducted a study in China and discovered that the usefulness had a higher impact on the intention to adopt compared to ease of use as expected in the Chinese culture. A similar case is made by Singh and Srivastava (2020), in India; they noted that the effect of perceived usefulness was conditioned by culture for instance uncertainty avoidance.

Several researchers have elaborated on the factor of perceived usefulness in the context of mobile banking. Chawla and Joshi (2019), observed that time-saving was important to the customers in diverse cultures since they did not have to physically visit banks. Malaquias and Hwang (2016), also highlighted the advantage that clients can use the services of banks at any time and from any place. Also, Alalwan et al (2017), identified that real time account information and transactions for the better management of personal finances were considered very useful.

Perceived ease of use which is another factor of TAM deals with the level of difficulty that a user believes using mobile banking will be easy. On the whole, it was established that this factor was usually a strong predictor of the adoption intentions; however, its influence was not always consistent across cultures. Teo et al (2012), indicated that in cultures with high power distance index such as Malaysia, the perceived ease of use had a direct significant effect on the intention to adopt due to the users' expectation of getting instructions from their supervisors. Contrary to this, Shareef et al (2018), established in their research conducted in the United States that perceived ease of use does not have a strong relationship with the

adoption intentions as compared to perceived usefulness due to advanced technology use among the population.

A number of previous works have also supported the role of user interface design and system's navigability in determining the level of ease of use. Kim et al (2020), in their study in South Korea also found that the interface that is easy to use and has an attractive appearance also increases perceived ease of use. Singh et al (2020), revealed that in the multilingual countries such as India, having language that the users can easily comprehend in the interface greatly influenced the users' perception of the application being easy to use. Chaouali et al. 's (2016), and Tarhini et al (2019), cross-country research in both developed and developing countries also confirmed that ease of access for users with disabilities influenced convenience.

The level of perceived risk has been recognized to be a key predictor of the adoption of mobile banking particularly in cultures that are high on the uncertainty avoidance index. This construct includes the financial, privacy, and security threats. Sarkar et al (2020), did a meta-synthesis of the studies and noted that perceived risk had a negative effect on the intention to use mobile banking across cultures. But, the magnitude of different risk factors was different from one another. For instance, Agu et al (2016), have established that in fragile banking systems such as the one in Nigeria, financial risk was deemed to be the most significant. Mortimer et al (2015), have observed that in the cultures, which are characterized by individualism such as the United States, privacy was a more crucial factor that influenced risk perception than in collectivist cultures. Malaquias and Hwang (2016), noted that both privacy and fraud remained the biggest concerns across all the cultures and these depended on aspects such as the level of trust in technology and financial institutions.

Other variables which were also seen to influence the relationship between perceived risk and adoption intentions include cultural variables. In a similar vein, Takieddine and Sun (2015), noted that cultures that are high in uncertainty avoidance such as Japanese have a more negative perception of risk when it comes to adoption intentions. Baptista and Oliveira (2015), reported that in the case of collectivist culture, the influence of perceived risk was mitigated by social and institutional factors.

They postulated social influence as a important determinant of the intention to use mobile banking based on the Unified Theory of Acceptance and Use of Technology (UTAUT). This factor relates to the degree to which an individual perceives that important people in his/her life expect him/her to use mobile banking. The effect of social influence was observed to be differential across cultural groups. Zhou et al (2010), stated that in the collectivistic culture such as China, social influence affected the adoption intentions positively, while Shareef et al (2018), stated that the same was not the case in the individualistic culture of the United States.

Many papers have been conducted to investigate various aspects of social influence. Tan and Lau (2016), established that peer influence was most notable among young users in Malaysia. According to Singh et al (2020), in India, where family is a significant part of society, the family members' perception influences the adoption of Mobile Banking. Since there are cultures that

embraced the use of mobile banking, the service was considered fashionable and related to the contemporary society.

The analysis of literature shows that one of the most important factors that influence the use of mobile banking across different cultures is the level of trust. It entails the confidence in the banking institution, the channel of mobile banking, and the technology applied in the process. Sarkar et al (2020), performed a meta-synthesis of literature and found that trust influenced positively the mobile banking adoption intention across cultures. Nevertheless, the causes and the outcomes of trust were different. In a study done by Asongu and Nwachukwu (2018), they established that in cultures that embrace power distance index such as most African countries, the level of trust in the banking institutions affected the level of trust in mobile banking. According to Malaquias and Hwang (2016), in the societies which are advanced in technology, the confidence in the reliability of the mobile banking system is the core factor. Baptista and Oliveira (2015), also established that in collectivist cultures, trust which is gained through word of mouth was a significant influencer of the adoption process.

The results also indicated that cultural factors influenced the strength of the association between trust and adoption intentions. Tarhini et al (2017), revealed that the influence of trust on the adoption intention was greater in cultures that have low uncertainty avoidance. Mortimer et al. (2015) pointed out that cultures that are more long-term oriented paid more attention to the development of trust and this affected the adoption process.

This paper has noted that security and privacy concerns have been listed as the main factors that have limited the adoption of mobile banking across cultures. These concerns are closely related to the perceived risk but sometimes they are discussed as different concepts in the literature. Alkhowaiter's (2020), study that compared six countries revealed that the concerns for security and privacy were global but the priority differed. Koenig-Lewis et al (2010), discovered that in developed countries which have strong laws on data protection like Germany, privacy is a big issue. According to Agu et al (2016), issues on fraudulent transactions and unauthorized access that are prevalent in developing countries were more relevant.

It was established that cultural dimensions affected the extent of the effect of security and privacy issues. In the same study by Mortimer et al (2015), it was discovered that the privacy of the individual's data was valued highly in individualistic cultures. In this regard, Takieddine and Sun (2015), observed that the cultures that score high on the uncertainty avoidance index are most concerned with security risks. Many research works have been conducted to address the identified challenges on security and privacy. Chawla and Joshi (2019), pointed out that the clarification of the security measures and the data management procedures decreased anxiety in all the cultures. In a survey conducted by Kim et al (2020), the authors concluded that enabling users to manage their data and security choices had a positive impact on the level of trust while decreasing anxiety. According to Alkhowaiter (2020), the effective data protection and financial transaction laws increased the confidence on security and privacy in various cultures.

Cultural Dimensions and Mobile Banking Adoption

Germans' cultural dimensions as postulated by Hofstede have been employed in the analysis of mobile banking adoption with a view to appreciating the cultural disparities in the use of the service. These dimensions can be used to explain how culture affects the uptake and use of the mobile banking service in different societies.

Power distance which is the extent to which subordinates in organizations and institutions can agree with the proposition that power is not distributed equitably has been found to have relationships with mobile banking adoption. Teo et al (2012), established that in cultures with high power distance such as Malaysian and Chinese cultures, users would prefer to use mobile banking if it is endorsed by authorities or institutions. Baptista and Oliveira (2015), disclosed that the influence of perceived ease of use on adoption intentions was higher in cultures with high power distance due to people's reliance on directions and assistance. On the other hand, in countries with low power distance index, for instance Denmark and New Zealand, the studies conducted by Mortimer et al (2015), showed that usefulness and perceived receipt of advantage in the adoption process was the main determiner. Shaikh and Karjaluoto (2015), also concluded that users of low power distance culture sought information and made decisions on their own with regards to the utilization of mobile banking.

The dimension of individualism versus collectivism, which is concerned with the degree of people's incorporation into groups, has been identified to exert a strong influence on several relationships in mobile banking adoption models. It was also observed in the collectivist cultures by Zhou et al (2010), that the level of social influence was higher in China and South Korean societies. Singh et al. (2020) revealed that the information on friends and family and pressure from family was identified to have the greatest influence in the adoption process in collectivist societies. Baptista and Oliveira (2015), noted that word of mouth that is relation-based was the most influential in these cultures regarding the adoption of the product. On the other hand, for individualist cultures, Shareef et al (2018), revealed that the perceived advantages and the perceived value are the constructs that had higher influence in societies like United States and United Kingdom. Mortimer et al (2015), pointed out that privacy concerns had a greater influence on the adoption intentions than the cultural dimensions in individualistic societies.

Uncertainty avoidance, which relates to a society's ability to adapt to or manage change or the level of discomfort with ambiguous situations, has been identified to have a strong relationship with the use of mobile banking. In the high uncertainty avoidance countries including Japan and Germany, as stated by Takieddine and Sun (2015), the perceived risk had a more enhanced negative influence on the adoption intentions. Tarhini et al (2017), explained the role of trust in the adoption intention was higher for these cultures According to Alalwan et al. (2017) consumers from cultures that have high uncertainty avoidance index considered security and assurance as a very important factor. However, in low uncertainty avoidance countries such as Sweden and Singapore, Laukkanen (2016), revealed that there is a high possibility of customers to adopt new mobile banking features and services. According to Baptista and Oliveira (2016), the effect of usefulness on the adoption intentions was relatively higher in these cultures.

The masculinity-femininity dimension, which deals with the division of emotional tasks between men and women, has been identified to affect mobile banking usage in the following ways. Takieddine and Sun (2015), conducted a study in Japan and Germany which are countries that are said to have a masculine culture and discovered that the performance and achievement related factors of mobile banking such as efficiency and time saving were the major determinants of the adoption of mobile banking. According to Laukkanen (2016), the capabilities that were perceived as more favorable in masculine cultures included the capability to compare one's financial position with other firms. Similarly, Mortimer et al. (2015), stated that in countries with feminine values such as Sweden and Norway, convenience and stress relief that are linked to the quality of life and work-life balance were the primary drivers of the adoption process. Shaikh and Karjaluoto (2015), stated that the aspects such as collaboration and social component of the mobile banking was deemed valuable in cultural environments that are more feminine.

The long-term vs. short-term orientation dimension reflects the understanding of the fact that every society has to preserve certain links with the past in the process of functioning in the present and the future. This dimension has an effect on the mobile banking adoption in the following manner. Zhang et al (2018), discovered that in cultures that focus on the long-term like China and South Korea consumers are willing to invest time as they familiarize themselves with mobile banking applications. Malaquias and Hwang (2016), stated that the relationship between trust and adoption intention was stronger since the users were ready to build a long-term relationship with their banks. On the other hand, for short term culture like United States and United Kingdom, Shareef et al (2018), revealed that the benefits and outcomes that are observed in the short term will be the major determinants of the adoption. Alalwan et al (2017), also noted that customers in these cultures were more likely to engage in using several mobile banking applications and switch from one to another for a number of reasons depending on the short term gains that they would get from the application.

Consequently, this research underlines the cultural dimensions' importance in influencing mobile banking adoption behaviours in various societies. Appreciation of these cultural values can go a long way in enabling the financial institutions and the mobile banking service providers to design and market their products and services in a way that will be more palatable to the target consumers' culture.

Table 4
Summary of Cultural Dimensions' Impact on Mobile Banking Adoption

Cultural Dimension	High Score Impact	Low Score Impact
Power Distance	Strong influence of authority endorsements; Higher importance of ease of use	Greater emphasis on individual assessment; Independent decision-making
Individualism vs. Collectivism	Strong social influence; Importance of word-of-mouth	Focus on personal benefits; Higher privacy concerns
Uncertainty Avoidance	Stronger impact of perceived risk and trust; Emphasis on security	Greater willingness to try new features; Stronger impact of perceived usefulness
Masculinity vs. Femininity	Focus on performance and achievement aspects	Emphasis on quality of life and convenience aspects
Long-term vs. Short-term Orientation	Willingness to invest in learning; Stronger trust relationships	Focus on immediate benefits; More likely to switch between apps

Cross-Cultural Comparisons

Researches that have been done to compare the use of mobile banking across different cultures have shown that there are as well as differences. These comparisons are useful for the scholars and in the practical field in determining the details of the mobile banking adaptation across the globe.

Some common patterns have been reported. Baptista and Oliveira (2016), indicated that in all the cultures looked at, usefulness and ease of use were the two factors that were most likely to determine intention to adopt. Alkhowaiter (2020), highlighted that security and privacy issues were raised by the participants of all the cultures, but their importance was not the same. Sarkar et al (2020), stated that another factor that applied in all the cultural contexts is the level of confidence towards the bank and the technology used.

Nevertheless, some differences have been revealed in the cross-cultural research as well. Zhou et al (2010), and Shareef et al (2018), studied that the level of social influence plays a major role for the collectivist culture than the individualist culture. According to Takieddine and Sun (2015), the relationship between the perceived risk and adoption intentions was more significant in cultures that scored high on the uncertainty avoidance index. As stated by Teo et al (2012), factors like authority endorsements, and institutional trust were seen to count a lot more in cultures with high power distance levels.

Researches have also pointed out differences between developed and developing countries. In a similar study, Asongu and Nwachukwu (2018), further revealed that factors such as network quality, reliability, and availability of smartphones came into play in the developing countries. According to Lashitew et al (2019), the above implication was noted where mobile banking in developing countries is mainly used to deliver banking services to the unbanked population thus influencing the adoption rate. Alkhowaiter (2020), stated that the moderation of trust and perceived risk on adoption intention was contingent in the stringency of the legal frameworks that were present in developed and developing countries.

A notable study by Tam and Oliveira (2019), compared the level of mobile banking adoption in four countries from different cultural groups: The four countries/areas of interest in this framework are Portugal, Brazil, China, and Mozambique. They found that the fundamental constructs of the TAM held across cultures but the strength of these constructs was different. For example, the level of social influence was the highest in China which is a collectivistic culture and the lowest in Portugal, which is an individualistic culture.

The above findings of cross cultural analysis support the fact that cultural factors are crucial in mobile banking adoption research and implementation. They argue that some factors are general but the relevance and the role they have on adoption may vary depending on culture. This underlines the requirement for a more complex theoretical framework that takes into consideration cultural differences in the context of mobile banking usage.

Limitations and Future Research Directions

While this systematic review provides valuable insights into the role of cultural factors in mobile banking adoption, it is important to acknowledge its limitations:

1. Publication bias: The review also only included articles that were published in English and were peer-reviewed which means that other articles that could have been relevant were excluded from the review.
2. Temporal limitations: Some papers are outdated because the development of mobile banking technologies is quite fast, and new technologies are emerging every year.
3. Methodological homogeneity: This may present limited understanding of the cultural factors that affect adoption because the review is mostly composed of quantitative studies.
4. Cultural framework limitations: Although such an approach is informative and helpful, it can be seen as rather reductionist, because it draws on Hofstede's cultural dimensions.

Future Research Directions

1. Longitudinal studies: Further research is required to establish how cultural factors affect the mobile banking adoption in the course of time especially when the technology is rapidly advancing and the society is fast changing.
2. Mixed-methods approaches: Further research could help from integrating quantitative surveys with qualitative methods to explain the cultural aspects of adoption better.
3. Alternative cultural frameworks: Future studies may also use culturally different theories, for instance, the GLOBE study or Schwartz's cultural values to explain the culture impacts on the mobile banking adoption.
4. Emerging technologies: Considering the fact that the use of mobile banking has advanced to the integration of new technologies such as artificial intelligence and blockchain among others, it is important to carry out research on the effects of culture on the uptake of such advanced features.
5. Intra-cultural variations: Possible future research could investigate how the culture influences the mobile banking adoption within the same country as culture can be quite diverse even within the one country.
6. Cross-cultural team research: Forming the research teams from individuals of different cultural orientations would give richer understanding of cross-cultural differences.
7. Integration with other disciplines: As a part of future work it may be useful to draw from the theories of anthropology, sociology, and psychology to build a more refined framework for understanding how culture affects the adoption of technology.

Conclusion

This systematic literature review has, therefore, synthesized the existing literature and explored the effect of culture on the adoption of mobile banking in different parts of the world. In this research, we have reviewed 100 articles from different countries and cultures, and thus, revealed a number of important findings concerning the influence of cultural factors on the acceptance of mobile banking technologies.

From the findings of the current research, it is established that the basic constructs of technology acceptance models like perceived usefulness and perceived ease of use are significant determinants of adoption intentions and that their significance and the way they are expressed differ with the cultural background. For instance, it is known that the influence of other people is critical in driving adoption in cultures such as China and South Korea than in cultures such as the United States which is individualistic.

Hofstede's cultural dimensions have been found useful in explaining these cross cultural differences as outlined here. Power distance and uncertainty avoidance were found to moderate relationships between adoption factors in the current study. High power distance cultures had a higher sensitivity to authority recommendations on adoption than the low power distance cultures and high uncertainty avoidance cultures had a stronger negative relationship between the perceived risk and adoption of the technology.

The review however, provided a clear understanding of the differences between the developed and the developing countries concerning this form of banking. Mobile banking is widely used in developing countries as a means of financial inclusion where factors like the reliability of the infrastructure and the legal environment play a significant role. This can only stress the importance of the contextualized approaches in both the research and operational levels.

Trust was identified as a common factor that influenced all the cultures but the antecedents of trust differed. In high power distance cultures, people relied more on the organizations and institutions, while in the low power distance cultures, people depended more on the technology in question and its ability to secure data.

These are the issues that have implications for theory, practice, and policy. In theory, they demand for cultural model of technology acceptance that incorporates cultural variables as moderator. In practice, they call for understanding of cultural nuances that applies to the banks and other financial institutions in the sense that they should design mobile banking applications and marketing strategies that fit into the culture of the society.

The findings should therefore be useful for policy makers when designing regulations that can build confidence among the users while at the same time taking into consideration the cultural practices on privacy and data protection. This is very important in the context of increasing mobile banking uptake especially in the developing countries in order to increase the levels of financial inclusion.

Nevertheless, this review also identified some gaps in the existing literature: the majority of the studies were quantitative in nature and most of them used Hofstede's cultural

dimensions. For future research, it is possible to suggest the application of mixed-methods research design and the use of other cultural constructs to better understand the process of culture in the context of work. Furthermore, as the mobile banking technology is still growing with the inclusion of the AI and the blockchain, there is a need for more research on cultural factors that affect the uptake of these features.

Therefore, this systematic review shows that although mobile banking technology is global, its use is highly influenced by cultural factors. With the globalisation of economy, culture sensitivity and the consideration of the above-mentioned factors would be crucial in having accurate information, in the eyes of researchers, financial institutions and policy makers. Taking into account the cultural context for the mobile banking adoption, it is possible to strive for the future where everyone can enjoy the opportunities of digital financial services without prejudice.

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