

Article

# Legal framework governing consumers' protection in digital banking in Saudi Arabia

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**Abstract:** There is fast growth of digital banking services in Saudi Arabia clearly shows the necessity of well-considered legal decisions. However, there is an obscurity with respect to protecting consumers' rights and creating a reliable atmosphere for digital finance through legal framework in the digital banking sector in the Kingdom. The primary aims and objectives of this research is to scrutinize the digital banking consumers' protection legal framework being overseen in Saudi Arabia, analyzing its content, mechanisms, and impact on different stakeholders. Similarly, the study tires to determine its efficacy as well as identify the roadblocks which can prevent its success. Through an extensive review and examination, the evaluation defines key issues, difficulties and finalizes statements about the legal field. The content analysis methodology was used to help address issues emanating from the existing literature. Various scholarly articles, policy documents, and regulatory guidelines were explored. In other words, data for this study were collected through different search sources such as journals, traditional articles of Google Scholar, policy documents, and library sources. A total of 25 articles were explored and contributed immensely to unveiling various aspects of the legal framework of digital banking as well as consumers' protection in the Kingdom. The findings of this investigation have identified three basic themes on the domestic legal regulation of consumers' protection in the digital banking system in Saudi Arabia. First, the study has analyzed various legislations such as: consumer protection law, sector-specific regulations, among others concerning the rights and duties of consumer protection. Second, legal obligations in seeking remedies when there is a discriminatory treatment in digital banking services. Third, it has been established that Saudi Arabia have taken a proactive step towards a robust safety cushion to protect the consumer rights and minimizing the risks involved in cybersecurity in the context of Saudi Arabia. Theoretically, on one hand, the study highlights the paramount significance to consumers' protection legislations in the Kingdom. On the other hand, practically, the Kingdom's witness of rapid economic growth and technological advancement, ensuring robust consumer protection measures becomes increasingly paramount to foster trust, promote fair business practices, and enhance consumer confidence in the marketplace. Nonetheless, some limitations such as insufficient consumers' education and regulatory inadequacies were noted which need national coordination between stakeholders. Notwithstanding the fact that the legal framework exhibits strong points especially in addressing vital issues, its timely evaluation, amendment, and enforcement is deemed as a key to solve the emerging challenges and obtain confidence of consumers when it comes to digital banking.

**Keywords:** Saudi Arabia; legal framework; consumer protection; digital banking and consumer rights

## 1. Introduction

Digital banking in King Saudi Arabia plays a role similar to safety measures

through its implementation of the consumer protection principle. It is a measure that aims to protect shareholders and depositors when participating in financial trade via digital channel (Sarabdeen, 2023). The motivation for this study is that as the number of digital transactions grows, it is very important to have conflict resolution systems that are easy to use and work well. The legal base of consumer protection in digital banking, in particular, includes some principles and practices for consistency, fairness, and security of banking activities. Primordial factors include provisions on preventing fraud, ensuring data security, and mandatory disclosure, thus, the customers have a chance to learn all the important details about financial products and services respectively.

Furthermore, online conflict settlement procedures become key factors for the processing of fulfillment and the resolution of disputes related to digital deals in an expedient way (Ayush, 2021). With the evolution of the digital banking sector regulators need to amend and reform the existing regulatory frameworks in order to address significant risk-related challenges, while also providing incentives for innovation and financial inclusion. Knowledge of consumer protection in digital banking by the concerned parties such as the policymakers, regulators, financial institutions, or even consumers themselves which are regarded as important components. The digital environment is evolving continuously and responsiveness is also the key.

In the view of Scardovi (2017), the integration of digital technologies and financial services is gradually replacing the traditional way by which consumers solve the problems of money. The scenario of this financial change is more viably recognized and acknowledged in the Kingdom of Saudi Arabia, due to the high-speed growth in the finance sector that has occurred within the last few years. While an overwhelming spread of digital banking is expanding the endeavors of consumer protection as well, regulatory frameworks have been tackling consumer protection as a key aspect lately. Grasping the law covers customer safety in electronic banking within Kingdom requires an extensive study of emerging regulations and their ramifications on the part of financial institutions and customers.

Salem et al. (2019) described that as more and more people use the Internet to do their shopping, safety and security issues related to online banking transactions have grown. In this study, the governmental actions taken in this specific situation are looked into in order to lower the risks that come with fraud, unauthorized data transfers, and protocol violations. Furthermore, the paper not only describes the duties related to the openness and honesty of digital banking, but it also gives a more thorough look at the rules that control these areas. This is very important for protecting consumers. The main goal of the study is to find out if the current transparency rules tell people enough about how digital banking works on the inside. It is possible to do this by looking at the rules and laws that institutions have to follow.

A number of studies such as Belwal et al. (2021) have investigated banking system in Saudi Arabia; however, there is a less focus of attention regarding the exploration of legal framework relating to consumers' protection in the banking system in Saudi Arabia (Fasnacht and Fasnacht, 2018). The research involves a deep examination of the legal framework of the Kingdom of Saudi Arabia within the consumer protection area related to the digital banking. This area will be scrutinized

with the aim of finding out whether the framework is effective enough in these fields such as safeguarding consumer rights, fostering trust, and eventually promoting financial inclusion in the fast-growing digital world. At the heart of the investigation lies the examination of regulatory approach of Saudi Arabia designed to address the unique challenges and opportunities presented by digital banking. In Saudi Arabia, the regulatory environment is always changing as new ideas and old law frameworks which are expected to work together in order to make sense of the complicated world of digital financial services. This piece tries to give an overall picture of the many consumer protection laws that exist in Saudi Arabia by looking at all of the relevant statutes, regulations, and supervisory guidelines. This study therefore tries to bridge this gap by looking at how regulatory bodies through the changes in their approaches to deal with the growing problems that come with digital banking, such as the rise of new financial technologies and digital currencies. The study looks at a number of legal approaches that can be used to support new ideas and keep customers safe in Saudi Arabia. The study also sheds light on how digital banking regulations are changing in the recent time.

## **2. Literature review**

This part presents the review of related literature which covers triadic aspects as follows: Consumer protection legislations in Saudi Arabia, legal obligations and rights of consumer in digital banking environment, regulatory mechanisms for consumer trust and security in digital banking services in Saudi Arabia and urban planning strategies are gradually being implemented to mitigate climate change in Saudi Arabia. Each of these is elucidated in the subsequent paragraphs.

First, consumer protection legislations in Saudi Arabia encompass various aspects such as allergen-labelling regulations, combating electronic commercial deception, protecting consumers from counterfeit cosmetic products, and analyzing consumer rights under Islamic law as literature contends (Belwal et al., 2021) It should be reiterated that the Saudi Food and Drug Authority mandates allergen labelling on menus to safeguard consumers with food allergies. Additionally, efforts are made to prevent electronic commercial fraud through regulatory measures. The protection of cosmetic trademarks is crucial to prevent the influx of counterfeit products and ensure consumer safety utilizing Fintech in financial sector in fostering the economy (Lukonga, 2021). Furthermore, Islamic law serves as a foundation for consumer protection in Saudi Arabia, emphasizing respect for consumer rights and adherence to religious principles. These legislative measures aim to enhance consumer welfare and ensure fair practices in the marketplace as literature contends (Belwal et al., 2021).

Second, in the digital banking environment of Saudi Arabia, consumers have legal rights and obligations that are influenced by various factors. The Technology Acceptance Model (TAM) highlights that factors like perceived ease of use, perceived usefulness, and trust significantly impact digital banking adoption in improving the economy (Safeena et al., 2011). Additionally, the legal framework in Saudi Arabia addresses the use of digital wallets, emphasizing that customers have a relationship with digital wallets similar to current accounts, allowing for bill payments, purchases, and fund transfers (Belwal et al., 2021). Furthermore, the Saudi banking system's e-

banking services offer efficiency and reliability, aligning with international standards and encouraging customer usage. Moreover, the legal landscape in Saudi Arabia is evolving to accommodate digital evidence within the proof law, emphasizing the importance of regulating digital means within legal provisions (Belwal et al., 2021). These insights collectively underscore the evolving legal obligations and rights of consumers in the digital banking landscape of Saudi Arabia.

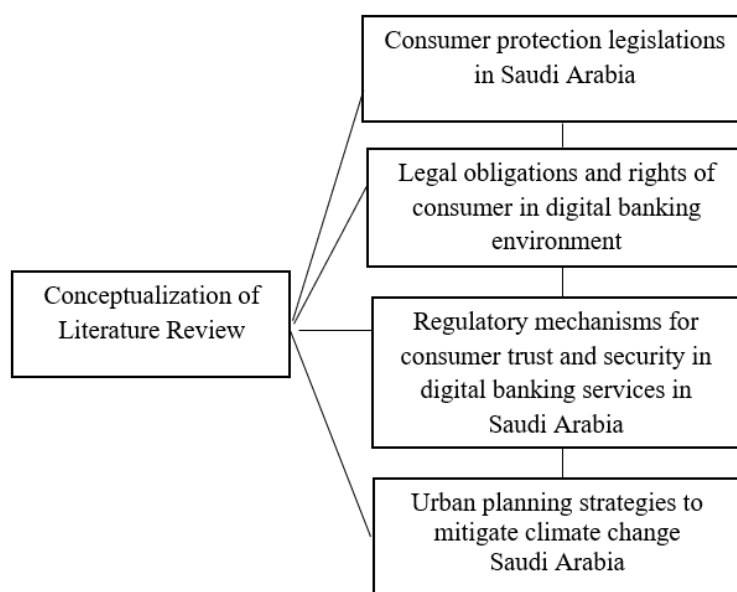
Third, regulatory mechanisms for consumer trust and security in digital banking services in Saudi Arabia are crucial for fostering adoption. The Kingdom of Saudi Arabia has established a regulatory sandbox to stimulate FinTech innovation, showcasing economic effects like “Buy now, pay later” and digital savings associations. Comparing Saudi Arabia’s digital transformation with other countries like the U.S., the U.K., and Malaysia, it is evident that regulatory frameworks play a vital role in ensuring trust and security in digital banking services (Belwal et al., 2021). Studies on mobile commerce applications in Saudi Arabia highlight the need for improved security perceptions among consumers, emphasizing the importance of enhancing security infrastructure and trustworthiness. Additionally, research on e-commerce applications in Saudi Arabia emphasizes factors like trust, security, reputation, benefits, and convenience that influence customer perceptions of payment methods and security (Safeena et al., 2011). Consumer Protection Law (CPL) in Saudi Arabia is a multifaceted issue addressed in various research papers. The Kingdom of Saudi Arabia has established mechanisms like the Insurance Dispute Committee (IDC) to resolve insurance disputes, ensuring consumer protection (Belwal et al., 2021). In addition, there is a growing trend towards implementing collective redress mechanisms, such as class actions, to empower consumers against corporate misconduct and maintain a balance between businesses and consumers. The significance of Islamic law in shaping consumer protection in Saudi Arabia is highlighted, emphasizing its role in safeguarding consumer rights through the utilization of Fintech in promoting sustainable digital services as literature asserts (Aboalsamh et al., 2023). Furthermore, the presence of counterfeit products in Saudi markets has led to the enactment of laws to protect consumers from substandard goods, showcasing the government’s efforts to regulate and monitor market activities through digital banking system and green innovation in financial sector (Ramzan et al., 2023).

Fourth, it is essential to note that green economy has been manifested in advocacy for green banking which is directly related to environmental and climate change. In Saudi Arabia, urban planning strategies are gradually being implemented to mitigate climate change, focusing on urban greening, public transportation, and green building projects. On the other hand, in the realm of consumer protection in digital banking services, efforts are being made to enhance consumer protection through banking services and privacy, with factors like training, media, and electronic communication playing crucial roles (Abubakar and Dano, 2020). The country’s vulnerability to climate change necessitates sustainable urban planning, while the financial sector is adapting to improve consumer protection policies post-global financial crises. These initiatives highlight the importance of both environmental sustainability and consumer rights in Saudi Arabia’s development trajectory (Aboalsamh et al., 2023). It is thus paramount that urban planning strategies for mitigating climate change in Saudi Arabia include enhancing green spaces (GSs) availability, implementing sustainable

urban planning, promoting public transportation, and adopting green building projects as literature contends (Abubakar and Dano, 2020). In Saudi Arabia, various planning strategies are being implemented to address climate change impacts which include sustainable urban planning initiatives focusing on urban greening, public transportation, and green building projects (Aina et al., 2019). Additionally, there is a need for optimal irrigation planning, crop pattern selection, and modern irrigation technologies to manage water resources effectively in the face of increasing irrigation water requirements due to climate change. However, there are challenges in urban water infrastructure preparedness for climate change in cities like Jeddah, highlighting the necessity for reconfiguring and expanding grey and green infrastructure, along with capacity building and awareness initiatives (Abu Ali et al., 2021).

Moreso, Saudi Arabia's public transport policy shows clear objectives for improving public transport, as highlighted in a study analyzing the country's transportation sector. It has been manifested in the introduction of the First National Transport Strategy in 2011 that the purpose of the policy is to enhance efficiency, safety, and economic activity in the Kingdom. Transport planning policy in Saudi Arabia is a multifaceted issue that encompasses various aspects such as public transport, sustainable mobility, and logistics. The country has seen a significant increase in GDP and population, leading to high car usage and urbanization (Aburuzaiza, 2017; Alqahtany, 2022). Similarly, the digital banking sector in Saudi Arabia has seen significant progress, with a study revealing that 51.5% of respondents have adopted digital banking services, influenced by factors like perceived ease of use and perceived usefulness. Additionally, research on e-banking adoption factors in Saudi Arabia suggests that behavioral intention, compatibility, promotions, perceived ease of use, service quality, experience, and customer support positively impact e-bank adoption rates. This indicates a growing emphasis on enhancing consumer protection legislation in digital banking services to promote trust and adoption among Saudi customers. To address these challenges, the government has introduced initiatives like Transit-Oriented Development (TOD) to promote sustainable living environments and reduce car dependency (Almatar, 2022; Knowles and Ferbrache, 2019; Zhang, 2020).

It is reiterated that Transit-oriented development (TOD) is a key transport planning policy in Saudi Arabia, particularly in Riyadh, aiming to enhance sustainable mobility, reduce car use, and urban sprawl as literature contends (Almatar, 2022). Literature advocates for designing transport policy for sustainable freight movement in Saudi Arabia, focusing on logistics, infrastructure, fuel consumption rationalization, and reducing greenhouse gas emissions and air pollutants. It has been emphatically stressed that modeling modal shift towards sustainable transport, particularly analyzing factors influencing commuters' choice between modes like the Riyadh Metro and cars (Almatar, 2023a). Reiteratively, Saudi Arabia is implementing sustainable transport policies like metro and bus networks, electric vehicle charger stations, and targets to reduce road accidents, aiming for sustainable transportation in Riyadh. Transport planning policy in Saudi Arabia focuses on reshaping Travel Demand Management, enhancing public transport infrastructure, promoting safety, and implementing parking control measures to reduce private vehicle dependency (Almatar, 2022, 2023b). **Figure 1** explains the variables conceptually explored in the literature review of this study:



**Figure 1.** Conceptualization of literature review (Adapted from: Aburuzaiza, 2017; Abubakar and Dano, 2020; Alqahtany, 2022; Almatar, 2022; Aboalsamh et al., 2023; Almatar, 2023a, 2023b, 2023c; Belwal et al., 2021; Knowles and Ferbrache, 2019; Lukonga, 2021; Zhang, 2020).

### 3. Materials and methods

This investigation used content analysis of various scholarly studies which were extensively explored in this research. More importantly, papers on policy, magazine articles, library databases, and Google Scholar were all used as searching strategies for different scholarly studies. Visualization of Similarities (VOS) was used to find books and topics that were relevant to various themes of this study as literature asserts (Kraus, Breier, Lim, et al., 2022). The manuscript employs a content analysis methodology, reviewing a variety of sources including scholarly articles, policy documents, and regulatory guidelines. Content analysis as an integral part of literature review has been employed in various studies (Kraus, Breier, Lim, et al., 2022; Kraus, Mahto, et al., 2023) and this study also adds to the existing body of knowledge in the use of content analysis. The language analysis showed three main themes namely: consumer protection legislations in Saudi Arabia, legal obligation and rights of consumer in digital banking environment and regulatory mechanisms for consumer trust and security in digital banking services in Saudi Arabia. they use online banking. Sixty-one (61) scholarly articles were used as secondary sources for the study which are explicitly connected to the key findings of the study. Through meticulous review and analysis, the research paper contributes significantly to the existing body of knowledge, offering valuable insights and paving the way for future empirical investigations in the field of digital banking regulation and consumer protection in the context of Saudi Arabia. The study heavily relies on secondary data, which is appropriate for the scope but may not capture the most current or nuanced views of consumers and practitioners. Thereby, limitation of this research is that primary data was not used, which might limit the depth of empirical insights of this which future and further studies may be investigated.

## **4. Results and discussion**

This section presents the overall results according to the themes generated from the study namely: consumer protection legislations in Saudi Arabia, legal obligation and rights of consumer in digital banking environment and regulatory mechanisms for consumer trust and security in digital banking services in Saudi Arabia. Each of these is explicated in the subsequent sub-headings.

## **5. Consumer protection legislations in Saudi Arabia**

The findings from cursory literature demonstrated that in 2004, the Consumer Protection Law (CPL) became a cardinal legal instrument with respect to defining rights, duties of consumers and also protect mechanisms in the Kingdom. It describes, among others, how to deal with the product shelf-life, quality elaboration, just pricing, the conditions related to the advertising and finally, rights of consumers are also mentioned (Fatma and Imran. 2023). This assertion is in accordance with the findings by Chawla and Kumar (2022) that posited that the Kingdom's witness of rapid economic growth and technological advancement, ensuring robust consumer protection measures becomes increasingly paramount to foster trust, promote fair business practices, and enhance consumer confidence in the marketplace. In the view of Richards and Hartzog (2021), fairness, transparency, and accountability are the guiding norms of the CPL, thus all businesses are mindful of their processes and operate in an ethical manner, and refrain from fraudulent and deceptive practices just to appease their interests.

It outlines the obligation of suppliers, manufacturers, and providers of services to be certain that the safety and quality of goods/services they offer the consumers meet judging criteria. Besides, the CPL prevents false advertising, confusing claims, and trick marketing via which the consumers get adequate information to be able to make fair selection of purchases. Besides CPL, Saudi Arabia had put in place sector specific regulations and the so-called institution responsible for overall consumer oversight within various industries as literature contends (Al-Mamari, 2018; Alajmi and Ahmed Memon, 2022). For instance, CPL finds its place inside banking and finance with specific attention of the activities of the Saudi Arabian Monetary Authority (SAMA) which is being regarded as one of the most important regulatory and supervisory bodies (Alshathri, 2022). Of such activities includes everything occurring in the banking industry and related to digital banking. In this regard, SAMA shoulders the challenge of surveillance, evaluation, inspections and complaint settlement related to financial services as literature contends (Alajmi and Ahmed Memon, 2022).

Moreso, Zain et al. (2019) described that the Central Bank through SAMA has issued certain guidelines and directives in this context of digital banking, with a view to waste any kind of fraud and cyber security issue so as to safeguard the security and legitimacy of the system of electronic payments, online banking platforms and digital financial transactions. This assertion is further buttressed with the extant literature that regulations provided by SAMA tend to delineate such disciplines like user information protection, exclusion of the fraud and unauthorized accesses, and strengthen the cyber security against the ubiquitous new and known threats throughout the world (Abumughli and Aysan, 2021). Reiteratively, the Saudi Arabian regulatory body

highlights the necessity of consumer education and possessing information programmes to give people more comprehensive knowledge and understanding on how to easily maneuver the digital banking environment as literature contends (Faudot, 2019). SAMA cooperates with government departments, finance institutions, and consumer guard groups in harnessing the information, launching awareness campaigns and giving assistance to clients on the consumer rights, obligations, and adjudication channels that can be utilized in case of a misunderstanding or argument. It is therefore essential to describe few regulations relating to consumers' protection in the banking sector in the country.

Literature identifies consumer protection law (CPL); sector-specific regulations, consumer education initiatives, alternative dispute resolutions and International Cooperation (Abumughli and Aysan, 2021; Kiernan, 2018; Tiwari et al., 2023). It is explicitly demonstrated the paramount importance of various regulations in solving the challenge of consumer protection in the banking sector. This assertion has further indicated by an extant literature that the implementation of laws and regulation is not the only endeavour to promote alternative dispute resolution but also, there is a growing emphasis in Saudi Arabia on the use of alternative dispute mechanisms for the expeditious resolution of consumer complaints and disputes apart from judicial process as literature contends (Moreira and Vecellio Segate, 2021). Mediation processes, arbitration and reconciliation provide consumers with the more simplified, effective and economic ways for a recourse of disputes that are emerged from any commercial transactions, including digital banking services that they are involved in as literature posits (Chen et al., 2020). And last but not the least, the Kingdom of Saudi Arabia (KSA) places high importance on multilateral cooperation and its expediency in terms of aligning with benchmarks of good and advancing consumer protection objectives digitally. It should be reiterated that consumer protection law (CPL) was enacted in 2004 to demonstrate transparency in commercial activities as literature contends (Tiwari et al., 2023). In addition, sector specific regulations have been provided to guide the activities of various sectors including financial and banking sector in order to achieve effectiveness and efficiency of the sector (Abumughli and Aysan, 2021). Similarly, consumer education initiatives by the financial sector plays paramount role in enlightening the citizens concerning their rights and duties for fostering digital financial activities. However, in case of any misunderstanding, alternative dispute resolution (ADR) has been put in place as an arbitration or reconciliatory mechanism in resolving dispute that involve customers as literature contends (Kiernan, 2018). It is noteworthy to say that Saudi Arabia actively partake in various activities that will demonstrate international cooperation that will protect consumer and foster digital banking system of the economy. **Table 1** shows the description of legislations/regulations of the banking sector in the Kingdom.

**Table 1.** Description of legislations/regulations.

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Consumer Protection Law (CPL)	Implemented in 2004, the CPL controls commercial negotiations so that honesty, clarity, and responsibility to a deal become apparent. It sets out formulation of guidelines and coverage of deceptive practices and appropriate product safety standards (Tiwari et al., 2023).
Sector-specific Regulations	Saudi Arabia applies specific regulations targeting the sectors in which concerns of industries relate to, including financial services and banking. The regulations govern exclusively electronic banking operations and are implemented by independent regulatory institutions such as SAMA (Abumughli and Aysan, 2021).

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**Table 1. (Continued).**

Consumer Education Initiatives	Through the public enlightenment campaigns and in collaboration with strategic partners, the government help the citizens by telling them their rights, duties and remedies in the context of digital banking.
Alternative Dispute Resolution	Alternative mechanism such as mediation, arbitration, or conciliation sessions are available to consumers and they are inexpensive and use time efficiently so as to resolve disputes outside the formal system of courts, helping in resolving the dispute as soon as possible (Kiernan, 2018).
International Cooperation	Saudi Arabian authorities get involved in international co-operation to achieve the end of aligning with global best practices, to contribute to the enhancement of regulatory harmonization, and to promote co-operation in the consumer protection and digital banking regulation matters.

Source: Abumughli and Aysan, 2021; Kiernan, 2018; Tiwari et al., 2023.

## **6. Legal obligations and rights of consumer in digital banking environment**

It is paramount to note that consumers have the right to transparency, privacy, fair value, service and accessible remedy in digital banking. They should have a clear and transparent information, data protection, accessible services, fair dispute resolutions and responsive customer support considerations observe equity and integrity of financial dealings. In the mode of Saudi's digital banking, which makes the transactions secure and fair, the understanding of regulatory control, facts, and rights is critical (Sarabdeen, 2023). In this backdrop, the digital banking legal framework in the Kingdom outlines the main expected deliverables to be performed by financial institutions and guaranteed consumers rights as they deal in digital financial services. There are two basic elements of consumer protection in the digital banking monad namely: transparency and convenience. Such transparency, as a result, brings in the accountability, which, in turn, helps form the consumer confidence in digital banking.

Reiteratively, under the laws of the Kingdom of Saudi Arabia financial institutions present in the Kingdom have the legal enforcement to give precise and truthful information to clients about the features of their products, fees, and terms of use as literature posits (Herath and Alsulmi, 2017). By doing so, single mindedly, individuals have the ability to do such things as choose the right financial advisor or credible service provisional, all of which is necessary for establishing mutual trust and confidence within the financial sector. For example, the financial sector in Saudi Arabia is regulated and multiple data protection regulations are imposed upon the industry to protect its data information of consumers (AlGhamdi et al., 2012). After the mass adoption of digital payments, defending personal data of consumers against access without authorization, fraud or abuse is a key priority to preserve privacy during transactions (Chawla and Kumar, 2022). The institutions of finance have to adopt the functions of technologically savvy defense strategies, encryption, and data storage to serve the cybersecurity purpose of reducing data leakage and unauthorized access.

Legal obligations or rights refer to the right to seek remedy when employees receive discriminatory treatment. In case transactions get authorized without the permission of user, billing errors or any dispute arising after using digital banking services, the consumers have the legal right to seek grievance redressal through formal mechanism that is provided by regulators and financial institutions (Meskic et al., 2022). Such tools can consist of mediation, arbitration, or making claims to consumer

protection authorities and creating rescue platforms for the people to choose the most relevant channel to express their concerns (van Gelder, 2022). Notably, the Saudi consumers have the rights to have their banks history transparent and be accountable for their behaviours. In order to make sure that the institutions provide regular statements, transaction records and necessary disclosures to consumers, as a result which they can track their daily financial activities and any suspicious events will be caught as soon as possible (Polat, 2021).

According to Fernández-Villaverde et al. (2021), a central issue in terms of the rights of consumer in the digital banking setting is the right to the fair and equitable treatment. Financial institutions cannot do anything prohibiting them from discrimination of any kind that is imposed on factors such as gender, ethnicity, religion or the one's socioeconomic status. It goes without saying that all consumers deserve the same probability to obtain financial products, services, and options, with no regard to class or lifestyle. Additionally, Saudi Arabian laws necessarily require the existence of customer service teams and technical support departments for persons who use digital banking systems (Alkrajji and Ameen, 2022). Financial providers are expected to have channels of clientele service that are responsive and accessible, such as telephone lines, emails, as well as online chats, for query handling, grievance resolutions, and complaints settlement to be done in time.

## **7. Regulatory mechanisms for consumer trust and security in digital banking services in Saudi Arabia**

The digital banking services environment come under accelerated digitalization in Saudi Arabia, regulatory mechanisms are one of the most important aspects ensuring ethical accountability, data safety, and credibility. Amidst ongoing technological disruptions in banking, the regulators in Saudi Arabia took a proactive step towards the implementation of a robust safety cushion (Alboqami, 2018). This is necessary to protect the consumer rights while ascertaining the trust in the digital banking platforms and minimizing the risks involved in cybersecurity and fraud as literature contends (Rabbani 2022). The first line of defense in the regulation project lands with the SAMA, the central bank of the country who is responsible for the oversight and supervision of the banking sector, among other monetary activities (Calliess and Baumgarten, 2020). Being the historical regulator of money and credit operations within the country, the SAMA puts in place prudential regulations, implements standards of compliance, and maintains financial stability (Ageeli, 2022; Polat, 2021).

Digital banking is subjected to these normative rules through both the directives and guidelines for management and a supervision system, which targets risks and vulnerabilities. It is noteworthy to say that among the major regulatory activities that can be used by SAMA to support customers' trustworthiness and security in digital banking services are the development of strong cybersecurity measures. Referring to the worsening threat problem due to cyberattacks, data breaches and online fraud, SAMA has released cybersecurity standards and guidelines for banks in order to tackle risks and thus to increase the reliability of digital banking platforms as literature explains (Manning and Kowalska, 2023). This is in agreement with the recent study

that posited that the regulator of the financial institutions that are in Saudi Arabia is enforcing to abide into some prescribed cybersecurity rules that include the encryption protocols, access controls, and the threat detection mechanisms to ensure protection of confidential information and avoid the unauthorized access (AlBenJasim et al., 2023). For instance, SAMA has enacted sanitization and authorization rules and regulations for digital banking transfers to increase the safety level and stop illegitimate access to consumer accounts. SAMA mandates users' authentication methods based on multi-factor authentication, biometric identification, and token-based security verify (Cherif, 2023; Halder, 2022). Accordingly, these users' accounts are not exposed to identity thefts and account takeovers threats.

SAMA also highlights that cyber security measures are not enough and therefore he underlines the role of consumer education and awareness activities which aim to provide a broad spectrum of knowledge and skills needed for effective protection of financial assets and personal information in the digital environment (Mian and Alatawi, 2023). SAMA cooperates with the government departments, financial institutions and consumer associations to transmit the messages and conduct education and information initiatives as well as give guidance to customers on the best practices of secure and safe digital banking (Ahmad et al., 2021; Alzubaidi, 2021). Though educating customers on the threats of phishing, scamming, and digital schemes are paramount, SAMA has been playing a proactive role to enlighten customers about cyber-threats so that they will be resilient and vigilant against such threats as literature asserts (Sharma and Thapa, 2023). Moreover, SAMA enforces strict control regulations for data privacy and security to ensure consumers personal and account details are safe from external threats like access without the consent of those involved (Authority, 2017). Financial institutions are subject to the regulations of data protection law and data encryption are taken care of in deep, along with an established data retention policy to ensure the integrity, availability, and confidentiality of consumer data (Baabdullah et al., 2019).

In the view of Srinivas et al. (2019), implementing cybersecurity and data protection directives, the Central Bank of the nation has set monitoring systems and enforcement procedures to ensure that all digital banking service providers are compliant with the regulatory requirements. During the period of audits, examinations, and inspections, SAMA will review the performance of managing risks, internal controls, and governance decisions since putting these strategies in place (Muhammad et al., 2022). In case of regulatory standards violation non-compliance penalties, sanctions or remedial measures is adopted to fight a wrongdoing within the financial sector and enforce the accountability (Armour et al., 2020). Those are SAMA which further collaborates with the international regulatory associations, industry associations and cybersecurity experts to be as new technologies, threats and good practices are vigilant (Alotaibi et al., 2016).

The study has analyzed various legislations such as: consumer protection law, sector-specific regulations, among others concerning the rights and duties of consumer protection which is consonance with several studies (Abumughli and Aysan, 2021; Kiernan, 2018; Tiwari et al., 2023). In addition, the study has further buttressed those legal obligations in seeking remedies when there is a discriminatory treatment in digital banking services which is in agreement with a number of studies (Chawla and

Kumar, 2022; Herath and Alsulmi, 2017; Sarabdeen, 2023). The study has been reiterated that Saudi Arabia have taken a proactive step towards a robust safety cushion to protect the consumer rights and minimizing the risks involved in cybersecurity in the context of Saudi Arabia which are in agreement with a number of studies (Alboqami, 2018; Ageeli, 2022; Calliess and Baumgarten, 2020; Polat, 2021; Rabbani 2022). Similarly, this study is in consonance with the extant study the green innovation tries to promote financial globalization which contribute significantly to sustainability in the context of United Kingdom (Ramzan et al., 2023). It is established in this study that digital financial service can bring sustainable development and it is in agreement with the study (2023c) which proposes sustainable green mobility in various cities in the context of Saudi Arabia.

The analysis of different legislations regarding the consumer protection has been elucidated as an integral part of effectiveness and efficiency of digital banking and financial services; legal obligations in seeking remedies when there is a discriminatory treatment in digital banking services and a proactive step towards a robust safety cushion to protect the consumer rights and minimizing the risks involved in cybersecurity. The findings are in contrary to a number of studies that advocated for sustainability of green mobility for the purpose of reducing carbon emissions and increasing renewable energy (Almatar, 2023). It is also contrary to a number of studies that canvassed for adoption of electric vehicles in adding to economic value (Kumar and Alok, 2020; Mashhoodi et al., 2021). It is also contrary to the study that emphatically stressed on climate change in connection with urban road networking in Saudi Arabia (Almatar, 2022; Almatar, 2023a, 2023b).

Currently, Saudi Arabia is focusing on sustainable urban planning strategies like urban greening, public transportation, and green building projects to combat climate change. However, there is a need to increase the per capita availability of GSs, improve urban infrastructure resilience, and raise awareness about climate change impacts and energy choices (Abubakar and Dano, 2020). Additionally, strategies such as establishing urban green parks, planting trees, and implementing public transit projects are crucial for mitigating the urban heat island effect and enhancing sustainability in Saudi cities (Aina et al., 2019). Furthermore, the country is categorized into different climatic regions to assist in economic planning and adaptation strategies, with each region exhibiting unique climatic features (Addas and Maghrabi, 2021). Additionally, there is a focus on logistics policy to enhance freight transport efficiency and reduce fuel consumption and emissions. The Riyadh Metro project aims to alleviate traffic congestion by providing an alternative mode of transport, with studies showing that factors like travel time and cost influence commuters' mode choice (Abubakar and Dano, 2020; Almatar, 2023a, 2023b). Efforts towards sustainable transportation in Riyadh include projects like metro and bus networks, electric vehicle charging stations, and policy targets to minimize pollution and road accidents as literature contends (Almatar, 2023c). In Saudi Arabia, Jeddah's Transportation Master Plan emphasizes a comprehensive approach to transform the transportation network into a multimodal system, including a "complete streets" strategy for livability. Integrated land use and transport planning policies in Jeddah, Saudi Arabia, lack coordination, leading to ineffective handling of urban growth challenges, necessitating proactive integrated strategies for sustainable development. Transport planning policies in Saudi Arabia,

particularly in Tabuk City, prioritize sustainable strategies like promoting clean environment, altering travel behavior, and shifting to sustainable transport modes based on the AHP framework (Almatar, 2022, 2023b).

## **8. Contributions, implications and limitations of the study**

This section elucidates on the contributions, implications and limitations of this research to various stakeholders in the context of Saudi Arabia. While the research demonstrates novelty, as consumer protection in digital contexts is widely studied, the specific focus on Saudi Arabia's legal framework provides a unique regional perspective. The exploration of recent regulations and their implications for stakeholders adds an original element to the existing body of knowledge. It is reiterated that the legal framework comprises a set of measures aiming at strengthening consumers' rights and protection. The findings of the study further buttressed that the legal framework enacted by the government of Saudi Arabia that governs consumer protection in digital banking has been a driving force behind the environment of trust and transparency in the digital financial services market. This sets off a series of implications one of which is that the analysis of this study can inform and provide a useful direction to the policy making process and guidance on the regulation and formulation of policies for the protection of consumers in the banking sector in Saudi Arabia. More importantly, considering relevant points of research, such as to those in positions of power, regulators, financial industry players, and the public.

Moreso, these findings have much bearing for those financial market participants working in Saudi Arabia in the course of solving the thorny issue of compliance with regulatory requirements and use virtuous practices in digital banking. The research elucidates the significant regulations, prerequisites, and particulars established within the legal framework. This results in enhanced regulatory compliance for financial institutions, reduced likelihood of regulatory noncompliance, and heightened trustworthiness of digital banking services. Additionally, financial institutions can use the findings of this study to strengthen their sharing and transparency policies, improve their communication with customers, and instill in their organizations a culture of prioritizing customer requirements.

Furthermore, consumer advocacy groups, civil society organizations, and academics who work to safeguard and advance the rights and interests of consumers online will find the study's findings to be of critical importance. Advocate groups want stricter rules, changes to current laws, and more information for consumers about their rights, responsibilities, and other options when it comes to digital banking. The main goal of the study is to back up these calls. With this in mind, more people need to know about the legal protections that have been put in place to keep customers safe.

Similarly, it cannot be denied that the scopes of this study are also limited to some factors while some other factors important for consumers' protections are not deeply explored. Even though the study could have a significant effect and important direction for future studies to be empirically investigated the variables of this study. Nonetheless, it is important to note that it has certain limitations. One limitation of the study is that there is no much access to relevant papers and data about Saudi Arabia's legal framework for protecting consumers in digital banking sector in the country.

Additionally, there are certain things that could make the analysis in this study less accurate, such as the fact that primary sources, regulatory papers, and company filings are hard to find for the purpose of this study. Because of this limitation, important details about the regulatory structure and the study's findings are left out. The study's results might change in the future if laws, technologies, and the surroundings change. Regulatory frameworks are regularly looked at, evaluated, and changed to make it easier for people to work their way through the fast-paced digital banking industry, which is marked by rising risks, vulnerabilities, and customer demands. It is not possible to use the study to judge legal systems in other countries because it was only about Saudi Arabian regulatory system.

## **9. Summary of major findings**

The following are the major summary based on the analysis of the study:

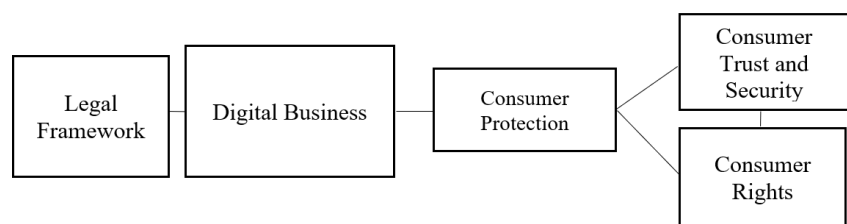
- 1) The study demonstrates that there are various legislations (consumer protection law, sector-specific regulations, consumer education initiatives, alternative dispute resolution and international cooperation) concerning the rights and duties of consumer protection.
- 2) The study elaborates on the paramount importance of legal obligations or formal mechanism in seeking remedies in a situation whereby there is discriminatory treatment in transaction especially when being authorized without the permission of user while utilizing digital banking services.
- 3) The study indicates that regulators in Saudi Arabia have taken a proactive step towards the implementation of a robust safety cushion to protect the consumer rights while ascertaining the trust in the digital banking platforms and minimizing the risks involved in cybersecurity and fraud in achieving consumer trust security in digital banking services.

## **10. Conclusion and suggestions**

The study shows the importance of regulatory frameworks are for protecting customers' rights and building trust in online banking system in the Kingdom of Saudi Arabia. Strong internal controls, responsibility, and openness which have been put in place in the legal system has been explicitly elaborated. The paper has demonstrated that in spite of the advocacy for on line banking system, worries and fears do not go away due to the fact that Internet banking is a constantly changing financial service, users need to regularly look at their situation, make any necessary changes, and follow all laws and rules. Among other important jobs, a person must promote new ideas, handle new risks, and make sure customers are happy. Also, certain challenges such as cyber-security challenges have been explained. Additional research indicates that digital banking plays a crucial role in establishing consumers' trust in the Kingdom of Saudi Arabia (KSA). The limitation of this study is that it is heavily relied on analysis of secondary data and conceptual framework provided should be explored using primary data in order to relevantize it to the real-world context. It is paramount to note that the future studies should expand the scope of this study by utilizing primary data in order to validate the analysis of this study. Nonetheless, the study has provided

substantial direction for future and further studies. Therefore, the following suggestions are made based on the thrust of this paper:

- 1) It is very important to give big groups money so they can take part in comprehensive consumer education activities. Customers need to get the right knowledge and training from this support team in order to use digital banking services well. Users need to know their rights, risks, and support networks in order to build trust and keep themselves safe online.
- 2) To protect people who use online banking, cybersecurity rules and laws need to be carefully monitored, enforced, and looked over. By auditing and keeping an eye on operating procedures and punishing companies and people who don't follow them, wrongdoing in the financial industry can be stopped.
- 3) To protect customers and keep digital banking safe, lawmakers, consumer interest groups, and financial institutions need to work together and share information. When all the relevant groups work together and share their knowledge and resources, stakeholders can make the regulatory system work better and last longer. This possesses the capacity to bolster confidence and trust in digital financial services.
- 4) It is important for regulators to change their rules so that they can include new technologies and protect customers' interests at the same time in order to make customers should have more faith in online banking services after these changes are made.
- 5) Financial goods and services must be open and honest with their customers so that they can make smart choices.
- 6) The future and further studies should empirically investigate the proposed conceptual framework of the study as illustrated in **Figure 2** in order to strengthen the fundamental thesis of the paper.



**Figure 2.** Proposed conceptual framework of the study.

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