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Hyper-personalized banking in the GCC: A Kuwaiti context with UAE perspectives

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Abstract: Hyper-personalized banking, fueled by AI and data analytics, promises to revolutionize customer experiences. However, its successful implementation in Kuwait faces unique challenges. This research uncovers a crucial tension: Kuwaiti customers desire the benefits of hyper-personalization but demand stringent data privacy and control. We find that while Kuwaiti banks possess the technological capabilities, regulatory clarity and strategic focus are needed to fully leverage this potential. Through in-depth interviews and comparative case studies, we identify critical success factors, including transparent data practices, customer empowerment, and proactive financial guidance. Our findings offer actionable insights for Kuwaiti banks to navigate the complexities of hyper-personalization, build customer trust, and gain a competitive edge in an evolving financial landscape.

Keywords: GCC, Kuwait, UAE, hyper-personalization, banking, data privacy, customer trust, regulations.

1. Introduction

Imagine a banking experience that anticipates your needs, offering real-time financial advice tailored precisely to your financial situation. Hyper-personalized banking is poised to make this a reality, leveraging customer data and advanced analytics to transform the customer experience (McKinsey, 2023; Rane et al., 2023).

While the potential is clear, the path to successful implementation in Kuwait is complex. Our research reveals a fascinating tension: Customers are open to the benefits of hyper-personalization yet harbor significant concerns about data privacy and security. Furthermore, we find that while Kuwaiti banks are technologically capable, regulatory adjustments may be needed to unlock the potential of hyper-personalization fully.

This paper addresses this knowledge gap by providing a comprehensive analysis of hyper-personalized banking in the unique context of Kuwait. We go beyond existing literature to explore customer perspectives, assess industry readiness, and examine the regulatory landscape. Our findings offer actionable insights for banks seeking to enhance customer experiences and foster growth and for policymakers navigating the delicate balance between innovation and data protection.

This research makes several key contributions to understanding hyper-personalized banking in Kuwait. We uncover the specific factors influencing Kuwaiti customers' trust, particularly addressing their data privacy concerns. Furthermore, we assess the technological preparedness of Kuwaiti banks to implement hyper-personalization strategies and critically examine the impact of existing data privacy regulations on such implementation. Finally, by identifying best practices from successful initiatives in comparable GCC markets, we provide tailored recommendations for their adaptation and implementation within the unique Kuwaiti context.

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This research builds upon prior academic studies, and industry reports on hyper-personalized banking but distinguishes itself by focusing on the unique context of Kuwait and offering actionable insights for both the banking industry and policymakers.

2. Literature Review

The financial services industry is undergoing a transformative shift driven by the emergence of hyper-personalization. By leveraging cutting-edge technologies like artificial intelligence and big data, banks can deliver highly individualized experiences that cater to each customer's unique needs and preferences (Alexander, 2024; Rane et al., 2023). However, limited research has explored the potential and challenges of hyper-personalized banking within the specific context of the Kuwaiti market. This literature review aims to address this gap by examining existing academic studies and industry reports to gain insights into the global trends, best practices, and potential challenges associated with hyper-personalization in banking. By understanding how other institutions are implementing these strategies, this review will inform the development of a successful hyper-personalization framework for Kuwaiti banks.

2.1. The Impact of Hyper-Personalization on Customer Experiences

In today's competitive banking landscape, delivering exceptional customer experiences is essential for attracting and retaining customers. Hyper-personalization has emerged as a powerful tool to meet these rising expectations. Research suggests that hyper-personalization can significantly enhance customer satisfaction by tailoring experiences to individual preferences and behaviors. Customers feel understood and valued, creating heightened satisfaction (McKinsey, 2023). Moreover, hyper-personalization streamlines processes by anticipating customer needs. This efficiency saves time and increases convenience, further contributing to customer satisfaction (Morton et al., 2024). Tailoring recommendations, insights, and alerts based on individual data translates into a high degree of relevance and meets customer needs efficiently (Deloitte, 2024).

Beyond satisfaction, hyper-personalization plays a crucial role in fostering loyalty. Personalized interactions help build deeper relationships between banks and customers, creating an emotional bond that strengthens loyalty (Rane et al., 2023). By proactively addressing concerns, exceeding expectations, and providing offers aligned with evolving needs, hyper-personalization can minimize the likelihood of customers seeking alternative banking providers (Das et al., 2024). Highly satisfied customers often become brand advocates, attracting new business through positive word-of-mouth (Coelho & Cachola, 2023).

Hyper-personalization also directly influences customer financial decision-making. By offering personalized guidance and insights, hyper-personalization empowers customers to make informed choices aligned with their financial objectives (Rane, 2023). Real-time alerts about potential savings opportunities, investment risks, or changes in a customer's financial situation enable better financial management and proactive planning (Kotios et al., 2022). Importantly, hyper-personalization can strengthen trust between banks and customers when implemented with transparency and ethical data practices. This heightened trust can positively influence financial behaviors and increase willingness to explore new products and services (AL-Dosari et al., 2024; Rooij, 2022).

Hyper-personalization can transform customer experiences, but achieving sustained success depends on prioritizing data privacy and transparency and avoiding intrusive personalization efforts.

2.2. Technological Foundations and Challenges of Hyper-Personalization

Realizing the full potential of hyper-personalization within the banking sector depends on harnessing a range of cutting-edge technologies. Understanding how these technologies

work together, along with the potential challenges banks face when integrating them, is crucial for successful adoption.

AI and ML lie at the heart of hyper-personalization. These technologies analyze vast amounts of customer data, uncovering patterns, predicting behaviors, and even highlighting needs that customers may not be aware of (Coelho & Cachola, 2023). This powers hyper-personalized experiences, with AI-driven recommendation systems suggesting tailored financial products, offers, and content based on unique customer profiles (McKinsey, 2023). Intelligent chatbots, equipped with natural language processing (NLP) capabilities, provide 24/7 support and personalize interactions while extracting valuable insights from conversations (Kacar, 2023).

Hyper-personalization also relies heavily on data analytics. Banks must have the capacity to collect, store, and process massive volumes of structured and unstructured data from multiple sources. Real-time analytics is essential for timely and relevant personalization, enabling banks to respond immediately based on real-time data streams such as a customer's website activity (Coelho & Cachola, 2023; Waupsh, 2022).

Cybersecurity is very important in hyper-personalization strategies. Banks handle susceptible customer information, necessitating robust measures to safeguard data and prevent breaches (AL-Dosari et al., 2024). Additionally, securing the AI systems themselves is critically important, as these models can be vulnerable to manipulation or attacks (Ghelani et al., 2022).

Banks face several challenges when integrating these technologies. Poor data quality or siloed data sources can undermine personalization efforts (Karkošková, 2023). The tech talent gap also poses a hurdle, as banks might struggle to attract and retain skilled data scientists, AI engineers, and cybersecurity experts (St-Onge et al., 2022). Outdated legacy IT systems can present compatibility issues with modern tools, requiring potentially significant investments in modernization (Mithra et al., 2023). Building ethical, transparent, and trustworthy personalization systems means focusing on algorithmic fairness, preventing biases, and employing explainable AI (Cao, 2021; Kordzadeh & Ghasemaghaei, 2022).

2.2.1. AI Techniques in Hyper-Personalization

The successful implementation of hyper-personalization hinges on effectively utilizing various AI techniques, each playing a crucial role in understanding customer behavior, predicting future needs, and delivering tailored experiences.

A. Recommendation Systems

At the heart of hyper-personalized banking lie recommendation systems, which leverage AI to suggest products, services, and content that align with individual customer preferences and needs. These systems primarily employ two core techniques:

- Collaborative Filtering: This approach analyzes past behavior and preferences of similar customers to make recommendations. For instance, if several customers with similar financial profiles have shown interest in a particular investment product, the system might recommend that product to other customers within the same segment. The strength of collaborative filtering lies in its ability to uncover hidden patterns and preferences that might not be immediately apparent through explicit customer data. However, it can face challenges with the "cold start" problem, where it struggles to make accurate recommendations for new customers with limited historical data (Ghiye et al., 2023; Zanke et al., 2024).
- Content-Based Filtering: This technique focuses on the attributes or characteristics of the products or services themselves. The system can recommend contextually relevant items by analyzing the content of financial products and comparing it to a customer's past behavior and expressed preferences. For example, if a customer frequently uses their debit card for travel-related expenses, the system might recommend travel insurance or a

credit card with travel rewards. While content-based filtering excels at providing relevant recommendations even for new customers, it can sometimes lead to "filter bubbles," where customers are only exposed to products or services similar to their past choices, limiting discovery and potentially reinforcing existing biases (Zanke et al., 2024; Zhang, 2024).

B. Predictive Analytics

Predictive analytics leverages machine learning models to forecast future customer behavior and needs. Banks can proactively address customer concerns, offer timely solutions, and identify potential risks or opportunities. Key applications include:

- Churn Prediction: By analyzing historical customer data and identifying patterns associated with customer attrition, machine learning models can predict which customers are most likely to switch to a competitor. This allows banks to implement targeted retention strategies, such as personalized offers or proactive outreach, to prevent customer churn (Pathak et al., 2024; Tran & Nguyen, 2023).
- Propensity to Buy: These models predict a customer's likelihood to purchase specific products or services based on their past behavior, demographics, and other relevant factors. This enables banks to tailor their marketing efforts and offer the right products to customers at the right time, increasing conversion rates and maximizing cross-selling opportunities (Chatterjee et al., 2024; Jadli et al., 2023).

The effectiveness of predictive analytics hinges on the quality and relevance of the features used to train the models. Feature engineering, the process of selecting, transforming, and creating relevant features from raw data, is crucial in building accurate and robust predictive models. Additionally, careful selection and evaluation are essential to ensure that the chosen models generalize well to new data and avoid overfitting.

C. Natural Language Processing (NLP)

NLP enables machines to understand and interpret human language, facilitating more natural and personalized interactions between customers and banks. Key applications include:

- Chatbots and Virtual Assistants: NLP-powered and virtual assistants can understand customer queries, provide relevant information, and even complete simple transactions. By analyzing the context and intent of customer inquiries, these AI tools can offer personalized responses and recommendations, enhancing the overall customer experience (Kolasani, 2023; Luz & Jonathan, 2024).
- Sentiment Analysis: NLP can be used to analyze customer feedback and social media conversations to gauge sentiment and identify potential areas for improvement. This allows banks to proactively address customer concerns and tailor their services to meet evolving needs (Khan et al., 2023).

While NLP has made significant strides, understanding the nuances of human language, including sarcasm, irony, and cultural context, remains a challenge. Maintaining context throughout a conversation and ensuring accurate interpretation of complex queries are also ongoing research and development areas.

2.3. Data Privacy, Regulation, and Customer Trust

The success of hyper-personalization strategies rests on a delicate balance. Banks must leverage customer data to enhance experiences while simultaneously fostering strong customer trust by ensuring privacy and adhering to regulations. Research highlights widespread concerns about data privacy among consumers, even though they recognize the potential benefits of hyper-personalization (Ke & Sudhir, 2023; Rane, 2023). Factors like transparency about data use, customer control over their data, and the perceived value gained from personalization significantly influence a customer's willingness to share data (Fehrenbach & Herrando, 2021; Kaabachi et al., 2022). Notably, attitudes around privacy

and data sharing can vary based on cultural context, necessitating adaptable personalization approaches (Lee et al., 2023).

The regulatory landscape surrounding data privacy is rapidly evolving. Regulations like the EU's General Data Protection Regulation (GDPR) and similar laws emerging worldwide strengthen data privacy and emphasize customer rights (Deloitte, 2022). Banks that proactively prioritize privacy-centric practices can gain a competitive edge as consumers become increasingly discerning about how their data is used (IBM, 2021). However, the regulatory landscape remains complex and varies across regions, posing compliance challenges for banks with global operations (Deloitte, 2023).

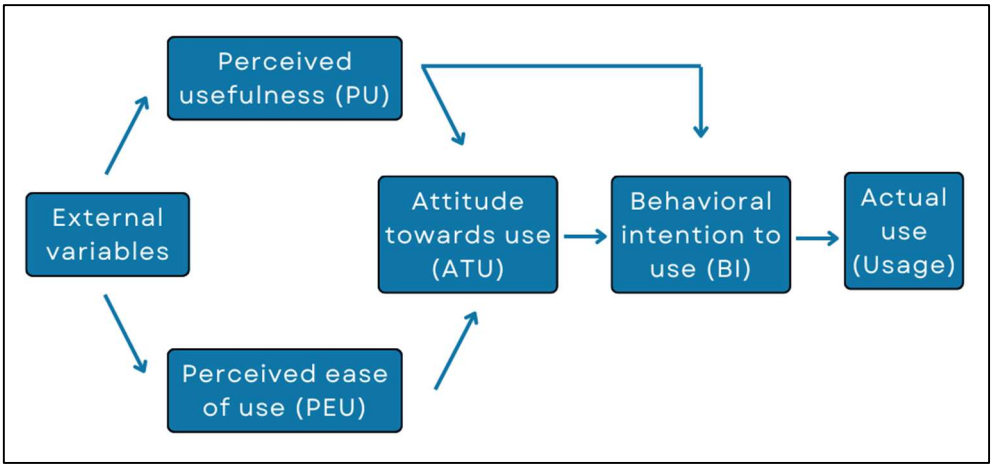
Building trust is paramount for banks embracing hyper-personalization. Clear communication about how customer data is collected, used, and protected lays the groundwork (AL-Dosari et al., 2024; Rooij, 2022). Furthermore, empowering customers with easy-to-use mechanisms to manage data preferences and opt-outs fosters trust and a sense of agency (Babina, 2024; Zeitlin & Rangoni, 2023). Continuous education efforts to inform customers about the benefits of hyper-personalization, how their data is used responsibly, and the security measures in place can increase trust and alleviate concerns (Valdez Mendia & Flores-Cuautle, 2022).

The interplay of data privacy, evolving regulations, and customer trust requires continuous investigation, especially in under-researched markets, to inform successful hyper-personalization strategies.

2.4. Understanding the Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989) and expanded upon by Davis et al. (1992), provides a robust framework for understanding and predicting user adoption of new technologies (Tran et al., 2023). At its core, TAM posits that an individual's beliefs, attitudes, and intentions are the primary drivers of technology acceptance. By applying TAM when introducing an innovative technology, researchers can gain insights into its potential future usage. The original TAM focused on four critical internal variables influencing actual technology use: perceived ease of use (PEU), perceived usefulness (PU), attitude toward use (ATU), and behavioral intention to use (BI). Additionally, TAM incorporates external variables, such as specific technological attributes, which influence the innovation's perceived ease of use and usefulness (Figure 1).

Figure 1. The original technology acceptance model (TAM) (Davis et al., 1989; Kowalska-Pyzalska, 2024).



Examining hyper-personalization within the banking sector through the lens of TAM highlights several key factors likely to influence customer acceptance. Customers will be more likely to engage with hyper-personalization if they perceive it as offering tangible

benefits, such as highly relevant product recommendations, time savings due to streamlined processes, or proactive financial guidance. Intuitive interfaces, clear explanations of how personalization functions and easy-to-manage privacy settings are crucial for enhancing Perceived Ease of Use (PEU). Overly complex or intrusive personalization efforts can negatively impact PEU and hinder adoption (Almourad, 2021). TAM extensions like (TAM2) often incorporate perceived security and trust as essential factors (Uche et al., 2021). For customers to embrace hyper-personalization, they must believe that their data is handled responsibly and transparently.

While TAM provides a valuable framework, its applicability to hyper-personalized banking within the Kuwaiti context warrants specific considerations. Cultural attitudes towards data sharing, the evolving digital literacy of Kuwaiti banking customers, and the specific technological capabilities of Kuwaiti banks may necessitate adaptations or extensions to the traditional TAM model. This research explores these potential nuances, thereby contributing to a deeper understanding of the factors influencing hyper-personalization acceptance within Kuwait. Interviews will investigate how customers perceive the security, privacy, usefulness, and ease of use of potential hyper-personalized banking applications.

2.5. Kuwaiti Banking Sector Overview

The Kuwaiti banking sector boasts strong financial performance, healthy liquidity, and a well-capitalized position. Operating under the supervision of the Central Bank of Kuwait (CBK), the sector benefits from its proactive role in fostering stability and modernization (Oxford Business Group, 2022). The market features conventional and Islamic banks, with significant players like the National Bank of Kuwait (NBK) and Kuwait Finance House (KFH) holding significant market share. International banks also operate within the Kuwait Banking Association. Despite the impact of COVID-19, the outlook for Kuwait's banking sector remains positive. Factors like government infrastructure projects, increasing consumer spending power, and a growing young population point toward future growth potential. Fitch Ratings recently affirmed Kuwait's sovereign credit rating at AA- with a stable outlook (Fitch Ratings, 2024).

Kuwaiti banks have made significant strides in digital transformation efforts in recent years. This includes substantial investments in mobile banking, online portals, and contactless payment solutions (Bioumy, 2024). While adoption levels may vary across banks, there is a growing interest in leveraging AI, machine learning, and data analytics for diverse applications like risk assessment, fraud detection, and personalized customer experiences (Alabdullah & Tawfeeq, 2023). To accelerate innovation, some Kuwaiti banks are strategically collaborating with fintech companies, especially in areas like payment solutions and digital onboarding (Markaz, 2022; Zawya, 2024).

While Kuwaiti banks embrace technological advancements, further research is warranted to understand the level of digital banking adoption and openness to hyper-personalization among Kuwaiti customers. It is also essential to closely monitor the evolving legal landscape, as the passage of a comprehensive data protection law could necessitate adjustments to how banks handle customer data. Investigating individual Kuwaiti banks' specific technological capabilities and digital strategies would provide valuable insights into the competitive landscape.

2.6. Research Gaps

Several potential knowledge gaps directly impact hyper-personalization studies within the Kuwaiti banking sector. A crucial area is understanding Kuwaiti banking customers' perceptions and preferences regarding hyper-personalization. Limited research likely exists on their comfort with data sharing, desired types of personalization, and potential privacy concerns, knowledge essential for successful implementation. Additionally, understanding the technological readiness of Kuwaiti banks is necessary. While general trends might be

available, there might be limited data on individual banks' AI capabilities, data analytics infrastructure, and cybersecurity preparedness, all vital for effective and secure hyper-personalization.

3. The methodological framework and research design

This study adopts a qualitative research approach with a phenomenological emphasis to gain a nuanced understanding of hyper-personalization within the Kuwaiti banking context. Qualitative methods are particularly well-suited for this investigation for several reasons. Firstly, hyper-personalization in banking is heavily influenced by customer attitudes, trust in technology, and evolving expectations for tailored experiences. Qualitative research allows for an in-depth exploration of these nuanced human factors, which are difficult to quantify through purely numerical data. Secondly, as Kuwait's banking landscape and regulatory environment are still developing, qualitative methods allow for capturing rich insights into banks' unique challenges and opportunities in adopting hyper-personalization strategies within this context. Finally, qualitative research facilitates a flexible and open-ended exploration of how hyper-personalization is perceived and implemented differently by various stakeholders within Kuwaiti banking, helping move beyond preconceived notions and allowing for unexpected themes and insights to emerge.

3.1. Phenomenological Emphasis

This study employs a phenomenological emphasis within the broader qualitative approach. Phenomenology is concerned with understanding the lived experiences of individuals and how they make sense of the world around them (Cilesiz, 2011; Neubauer et al., 2019). This aligns directly with the study's objectives. A phenomenological approach is crucial for uncovering how Kuwaiti banking customers experience and interpret hyper-personalization, their feelings of comfort or hesitation regarding data sharing, their perceived benefits or drawbacks of tailored banking services, and their overall expectations regarding personalization. Additionally, applying phenomenology to interviews with key decision-makers or technology specialists within Kuwaiti banks can illuminate their lived experiences with the challenges, successes, and strategic considerations they face when implementing hyper-personalization initiatives. This in-depth exploration of lived experiences will provide a rich foundation for understanding the complexities of hyper-personalization within the Kuwaiti context (Neubauer et al., 2019; Pringle et al., 2011).

3.2. Target Population and Sampling Methods

This research investigates hyper-personalization within Kuwait's banking sector by focusing on two main groups: Kuwaiti banking customers and banking professionals involved in technology, strategy, or initiatives related to personalization. To obtain rich qualitative data, the study will use non-probability sampling. Purposive sampling will ensure a diverse participant pool, considering factors like age, gender, technological proficiency, and banking affiliations for customers. Professionals will be selected based on their role and involvement in personalization initiatives within banks of varying sizes. Snowball sampling may be used to find additional banking professionals. The target sample size is approximately 15 customer interviews and ten professional interviews, with data collection continuing until thematic saturation is reached. This approach captures a broad spectrum of perspectives on hyper-personalization within Kuwaiti banking.

3.3. Research design

This study employs a mixed-methods approach to data collection, combining in-depth interviews with comparative case studies to provide a multifaceted understanding of hyper-personalization within the Kuwaiti banking context.

3.3.1. Ethical considerations

This research prioritizes the highest ethical standards throughout its design and execution. Informed consent will be obtained from all participants, emphasizing the study's purpose, voluntary participation, potential benefits and risks, data confidentiality, and the right to withdraw. Confidentiality and data protection are paramount; participant identities will be anonymized, data stored securely, and access restricted to authorized personnel. To ensure responsible data collection, analysis, and reporting, the researcher will maintain a reflexive approach, critically examining potential biases through journaling and peer consultation. This commitment to ethical research practices aligns with the study's scientific rigor and aims to uphold respect for all participants.

3.3.2. Data Collection Methods

In-depth interviews. The in-depth interviews will employ a semi-structured format for Kuwaiti banking customers and professionals (including executives, technology specialists, and those directly involved with personalization initiatives). This format provides a framework to guide discussion around critical topics while retaining flexibility. This flexibility allows for exploring emerging themes and individual experiences, providing a richer understanding of perspectives on hyper-personalization within the Kuwaiti banking context.

The interview process is designed to gather insights from two key groups: customers and banking professionals. Interviews with customers seek to reveal their attitudes towards data sharing, their comfort levels with personalization, and their overall expectations regarding hyper-personalized banking experiences. Meanwhile, interviews with banking professionals will explore their perspectives on technological capabilities, the challenges of implementing hyper-personalization strategies, and the regulatory considerations they must navigate.

The study will employ purposive sampling to ensure a diverse range of customer participants based on their demographics, the bank services they use, and varying levels of technology adoption. For banking professionals, purposive and snowball sampling may be used. This hybrid approach will help identify critical individuals directly responsible for implementing or overseeing hyper-personalization initiatives, with snowball sampling potentially leading to referrals of additional relevant experts. The target number of interviews is approximately 15 with customers and 10 with banking professionals. This aims to achieve thematic saturation, where no new themes emerge from the interviews while remaining manageable for data analysis.

Before commencing the entire data collection phase, the interview guides for both customer and banking professional interviews will undergo pilot testing with a small number (2-3) of participants representative of the target groups. During pilot testing, feedback will be carefully gathered on the clarity of questions, potential sensitivities, and the overall flow of the interview. This iterative process will help identify any awkward phrasing, ambiguous questions, or areas where additional probing might be needed. Pilot testing will refine the interview guides, enhancing their ability to capture rich insights about hyper-personalization perceptions.

Comparative case study. The study will carefully select two successful cases of hyper-personalization implemented by international banks operating in markets similar to Kuwait, particularly in the GCC. The selection criteria will prioritize banks with industry recognition, documented metrics demonstrating the success of their initiatives, and the availability of reliable information about their strategies.

The analysis will rely on publicly available information sources like banks' websites, press releases, financial reports, and industry reports. These sources will provide valuable insights into the selected banks' hyper-personalization strategies, potentially including details on their technology implementations, data usage, and customer engagement techniques.

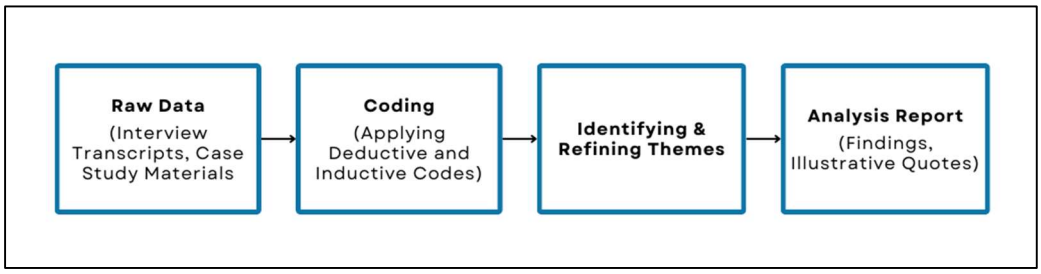
The case study analysis will delve into several key areas: the technological infrastructure underpinning the banks' personalization efforts, their data use practices, the customer engagement strategies they employ, how they successfully navigate regulatory environments, and any reported challenges or lessons learned throughout their hyper-personalization journeys.

These case studies aim to identify transferable insights, best practices, and potential pitfalls that Kuwaiti banks can learn from and apply to their hyper-personalization initiatives. This knowledge will provide a valuable foundation for Kuwaiti banks as they seek to create tailored and meaningful banking experiences for their customers.

3.4. Data Analysis

This study will employ thematic analysis to systematically identify patterns and extract meaning from interview transcripts and case study materials (Figure 2). Its flexibility aligns well with the study's qualitative and phenomenological approach. Thematic analysis will be conducted with the assistance of NVivo software, facilitating the coding, organization, and identification of themes within the interview transcripts and case study materials.

Figure 2. Thematic Analysis Process in this Study



The coding process will leverage a combination of deductive codes (based on existing literature and the study's research questions) and inductive codes (arising organically from the interviews). The researcher will use a qualitative data analysis software tool to streamline code application across the textual dataset. The software will enable efficient analysis of code relationships, patterns, and clusters, aiding the emergence of central themes within the data.

The identified themes will undergo a rigorous review process. They will be assessed to ensure they accurately and holistically represent the data. This might involve combining themes, splitting them for clarity, or redefining their scope for better focus. Each finalized theme will be given a clear and concise name that captures its core meaning. Additionally, well-defined definitions will be created for each theme, ensuring consistency and clarity in the subsequent analysis.

3.5. Research Questions

This study aims to address the following overarching research questions to gain a comprehensive understanding of hyper-personalization within the Kuwaiti banking sector:

3.5.1. Customer-Focused Questions

The questions in this section were influenced by the Technology Acceptance Model (TAM), with RQ1 addressing perceived security and privacy and RQ2 focusing on perceived usefulness and ease of use.

RQ1: What factors would increase Kuwaiti customers' trust in hyper-personalized banking services, especially regarding data privacy?

RQ2: In what ways do Kuwaiti customers believe hyper-personalized banking could improve their satisfaction and increase their loyalty toward their bank?

3.5.2. Sector-Focused Questions

RQ3: What is Kuwaiti banks' current technological readiness level for implementing hyper-personalization?

RQ4: How do existing Kuwaiti data privacy regulations impact the potential implementation of hyper-personalized banking services?

3.5.3. Comparative Case Studies Question

RQ5: What are the most effective strategies employed by banks in the GCC to implement hyper-personalized banking services, and how can these best practices be leveraged to address areas for improvement and enhance customer experiences in Kuwaiti banks?

3.6. Assumptions

This study operates under several vital assumptions that shape its scope and the interpretation of the findings. Firstly, it is assumed that participants will be willing to share their experiences and perspectives on hyper-personalization honestly and to a reasonable degree of depth. While measures will be taken to build connections and create a safe interview environment, the researcher acknowledges that some aspects of experiences may remain unspoken. Secondly, the research assumes that a certain level of technological infrastructure (data collection systems, analytics capabilities) exists within the Kuwaiti banks being studied. While interviews will explore these capabilities, it is not feasible within the project's scope to conduct a full technical audit of each bank. Finally, while the sampling strategy aims for diversity, it is assumed that the participants may not fully represent all demographics and banking experiences within Kuwait. The findings will be interpreted in light of this potential limitation.

3.7. Limitations

Like all studies, this research has certain limitations that should be acknowledged. Firstly, while the study aims to uncover core themes related to hyper-personalization within Kuwait, the findings may not be directly generalizable to other GCC countries due to potential variations in regulatory environments and levels of technological development in their banking sectors. Secondly, the fields of hyper-personalization and data privacy are rapidly changing. New technologies or regulatory shifts occurring during the research period might influence the outcomes or necessitate adjustments to the analysis. Finally, while reflexivity will be employed to minimize the impact, the researcher's own experiences and preconceptions may subtly influence the collection and interpretation of data. Measures such as peer consultation will be used to mitigate this potential bias.

4. Findings and Analysis

A total of 25 interviews were conducted. These included 15 interviews with customer participants representing diverse demographics (ages, genders, technological proficiency, and banking affiliations) and 10 with banking professional participants (executives, technology specialists, and those directly involved with personalization initiatives).

Thematic analysis of these interviews revealed rich insights into the potential for hyper-personalization within the Kuwaiti banking sector. This thematic analysis was carried out with the assistance of NVivo software. Certain age groups have differing perspectives on hyper-personalization. For instance, younger generations tend to be more open to hyper-personalization than older people (Table 1).

Table 1. Participants profiles

Participants ID	Nationality	Education	Age	Gender	Banking Affiliations	Openness to Hyper - personalization
Participant 1	Kuwaiti	Graduate	26	Male	Islamic	Yes
Participant 2	Kuwaiti	Graduate	36	Female	Conventional	No
Participant 3	Kuwaiti	Graduate	25	Female	Conventional	Yes
Participant 4	Kuwaiti	Graduate	24	Male	Conventional	Yes
Participant 5	Kuwaiti	Graduate	34	Female	Islamic	Yes
Participant 6	Kuwaiti	Graduate	49	Male	Conventional	No
Participant 7	Kuwaiti	Graduate	27	Male	Islamic	Yes
Participant 8	Kuwaiti	Graduate	29	Male	Islamic	Yes
Participant 9	Kuwaiti	Graduate	44	Female	Islamic	No
Participant 10	Kuwaiti	Graduate	25	Female	Conventional	Yes
Participant 11	Kuwaiti	Graduate	38	Female	Conventional	Yes
Participant 12	Kuwaiti	Graduate	27	Female	Conventional	Yes
Participant 13	Kuwaiti	Graduate	24	Male	Islamic	Yes
Participant 14	Kuwaiti	Graduate	37	Male	Conventional	No
Participant 15	Kuwaiti	Graduate	23	Male	Conventional	Yes

It is important to acknowledge that certain themes and sub-themes emerged from the responses of a small subset of participants. While these perspectives offer valuable insights, they may not be representative of the entire sample. Given the qualitative nature of this study and its focus on thematic saturation rather than statistical generalization (as described in section 3.3), these findings should be interpreted with this limitation in mind.

4.1. Customer Perspectives on Hyper-Personalization

This section explores the attitudes, concerns, and expectations of Kuwaiti banking customers regarding hyper-personalization. The analysis reveals key themes that emerged from the interview data. These themes provide insight into how customers perceive the potential benefits and risks of hyper-personalization and what factors influence their willingness to share personal data with banks. Additionally, this section highlights customer preferences regarding types of personalized services and their overall expectations for tailored banking experiences tailored to their preferences and behaviors.

4.1.1. Theme 1. Data Privacy and Trust

This theme centers on the complex and nuanced perceptions Kuwaiti banking customers hold regarding the collection, use, and security of their personal data by banks. Customers expressed varying levels of comfort depending on the specific data involved,

with particular concerns, especially among some female customers from conservative backgrounds. Beyond core privacy concerns, participants emphasized the importance of banks demonstrating transparency in data use, offering customers control or opt-out options for data sharing, and implementing robust security measures to prioritize customer interests.

Kuwaiti customers' trust levels are influenced by cultural norms surrounding privacy, past experiences with data breaches stories, and the evolving regulatory landscape. These concerns about data privacy and trust significantly impact customers' willingness to share data and their overall openness to engaging with hyper-personalized services. Thus, this theme analysis revealed several sub-themes:

A. Concerns about Data Use and Sharing.

A significant concern expressed by participants was the potential for their personal information to be shared with third-party companies or used for purposes beyond their initial expectations. Some customers stated:

"I'm just not sure where my data goes once the bank has it, and that makes me uneasy" (Participant 2, 3, 7)

This sentiment was echoed by many participants who emphasized a desire for greater transparency about how their data is used and shared by their banks.

"I want to be sure my bank is doing everything possible to protect my money and identity" (Participant 14)

This participant expresses a fundamental need for trust in their bank's safeguarding of highly sensitive financial and personal information. They want reassurance that security measures are in place to minimize risks.

B. The Importance of Control

Customers repeatedly stressed the need for clear and accessible options to control what data is collected and how it is used. One participant explained:

"It's not about never sharing anything, but I want to be the one making the choice, not the bank" (Participant 5)

This desire for control suggests that offering personalized opt-out settings and easy-to-understand privacy policies could be powerful ways for banks to build customer trust.

4.1.1.1. Literature Connections

Kuwaiti participants echoed global concerns about data sharing and transparency. They expressed worries about their data being used beyond its initial purpose, the potential for sharing with third parties, and a strong desire to maintain control over their information. These concerns align with findings in established studies and industry reports, such as those by Accenture (2021) and McKinsey (2023). McKinsey's recent survey (2023) revealed that 85% of consumers consider a company's privacy policies before purchasing. To build customer trust, especially regarding personalization, banks must proactively address these privacy concerns.

The Technology Acceptance Model (TAM), mentioned in Section 2.5, posits that "Perceived Usefulness" and "Perceived Ease of Use" drive technology adoption. While Kuwaiti customers recognized the potential benefits of hyper-personalization, their willingness to share data was strongly tied to a need for clear, fine-grained control over their data. This suggests a potential need for personalization interfaces prioritizing customer agency, even if slightly more complex than a purely streamlined experience.

The Kuwaiti customers' emphasis on transparency and control as preconditions for trust strongly aligns with broader privacy literature (Alexander, 2024; Rane et al., 2023). This finding underscores that responsible data practices are not merely a matter of compliance but crucial for fostering a sense of customer empowerment, which appears particularly valued within the Kuwaiti context. Banks seeking to build hyper-

personalization strategies must go beyond simply disclosing their data usage and actively implement user-centric controls and clear opt-out mechanisms to address these sophisticated customer expectations.

The Kuwaiti context presents unique considerations for banks implementing hyper-personalization. Cultural sensitivities around privacy, particularly among some female participants from conservative backgrounds, highlight the importance of sensitivity in data collection practices. Banks should explicitly acknowledge these norms in their communications and be exceptionally transparent about the purpose behind collecting each data type, emphasizing the benefits to the customer. (Arora et al., 2023). Additionally, the impact of well-publicized regional data breaches on customer trust indicates heightened security concerns among Kuwaiti customers. Banks can proactively address this by emphasizing their robust security measures, relevant certifications, and clear incident response plans.

4.1.2. Theme 2. Desired Benefits and Expectations

This theme centers on how Kuwaiti banking customers believe hyper-personalized services could positively transform their banking experiences, increase their satisfaction, and, ultimately, strengthen their loyalty to their banks.

Customers anticipate hyper-personalization to deliver practical advantages. These include saving time by streamlining processes, improving financial management through tailored insights, and generally making their banking interactions more convenient. Beyond practical gains, customers envision hyper-personalization as a way to feel more valued and understood by their banks. They hope this will not only enhance their overall satisfaction but potentially reduce anxieties or stresses associated with financial tasks.

For hyper-personalized services to be successful in the Kuwaiti market, customers have clear expectations. These expectations include essential features or experiences that banks must deliver to build trust and provide genuine value through personalization efforts. Therefore, this theme analysis revealed several sub-themes:

A. Time Saving

These quotes highlight a strong desire for tangible benefits that make banking less of a hassle. The customer prioritizes time savings and streamlining their financial tasks. As they mentioned below:

“I lead a busy life. If my bank could anticipate my regular bill payments and send reminders or streamline how I transfer money, that would be a huge help” (Participant 4, 9)

"Honestly, if the bank knows my typical spending patterns, I'd rather they just automatically transfer money to my savings when there's extra leftover" (Participant 6)

Kuwaiti banks could find success with personalization features that offer automation options or proactive suggestions tailored to the customer's behavior, reducing the manual effort required.

B. Proactive Financial Insights

Hyper-personalization should not just be about offers. Visualizations, tailored budgeting tips, and insights into spending habits could be powerful tools to satisfy the Kuwaiti customer's desire for empowerment. The quotes below illustrate these ideas:

"It would be great if my banking app could alert me about potential savings opportunities or unusual spending patterns. It's like having a smart financial assistant" (Participant 12, 8)

"I want a breakdown of where my money goes, but not just the usual categories. Show me how much I spend at coffee shops versus on necessities, then compare it to others like me” (Participant 15)

The last quote by participant 15 speaks to an emotional benefit. Customers seek to feel more in control of their finances and make better-informed decisions. The "others like me" aspect suggests a desire for context and guidance.

C. Expectations of Transparency and Control

Kuwaiti banks should prioritize making personalization settings easy to find and manage. Transparent, plain-language explanations of how data is used will be vital for building the trust required for adoption.

"It's fine if they suggest things based on what I do, but I need to be able to turn specific things off if I don't want them. And tell me clearly what data they're using" (Participant 10)

The last quote centers on a baseline expectation for any personalization to be genuinely valuable. The emphasis on opting out and understanding data use speaks to a need for a sense of agency.

D. Convenience

Kuwaiti customers are not opposed to data sharing if they see clear benefits. They expect convenience besides transparency and control over data usage in exchange.

"I hate filling out forms every time. If my bank already knows my details, why can't they pre-populate applications or suggest products relevant to my recent purchases?" (Participant 1)

While practical advantages are important, there is a strong interest in hyper-personalization contributing to a positive emotional experience and reducing financial stress.

4.1.2.1. Literature Connections

The Kuwaiti customers' desire for time-saving features, proactive financial insights, and transparent control mechanisms aligns with broader international trends in hyper-personalization. Studies by McKinsey (2022, 2023), Deloitte (2024), and others consistently identify convenience and personalized guidance as primary customer motivators. However, Kuwaiti customers may have distinctly heightened expectations in certain areas. Their emphasis on automating routine tasks and their pronounced need for customized control over how their data is used suggest greater emphasis on maximizing time savings and ensuring agency compared to some other markets.

Furthermore, participant 15's use of the phrase “others like me” reveals an interest among some Kuwaiti customers in having social comparisons for budgeting purposes. This interest offers a fascinating nuance, as this specific desire for benchmarking as a core personalization feature appears relatively novel. Kuwaiti banks might find a competitive edge by integrating such comparisons into their hyper-personalized services. Additionally, the phrase "others like me" suggests a need for social proof. Studies such as Roethke et al. (2020) define social proof as "a psychological, social phenomenon where people tend to conform to the actions of others," while authors like Alenizi (2023) have explored the relevance of social proof in financial contexts.

The Kuwaiti customers' strong emphasis on transparency and control aligns with global discussions around data privacy, but their expressed desire for customized, easy-to-manage opt-out settings goes beyond typical privacy concerns. This suggests that for Kuwaiti banks, exceeding basic privacy standards may be crucial for building trust. The Technology Acceptance Model (TAM) posits that “Perceived Ease of Use” is vital for technology adoption. In the Kuwaiti context, this concept extends beyond interface design to encompass the ease of actively managing personalization and data usage throughout the customer's relationship with the bank.

4.2. Technological Readiness and Regulatory

The Kuwaiti banking sector faces a unique set of challenges and opportunities when it comes to implementing hyper-personalization. This analysis will provide a sector-focused examination of the technological capabilities and regulatory environment within Kuwait, offering insights tailored to the specific needs of its banking industry. For hyper-personalization to succeed within this sector, banks must possess the technological capabilities to collect, analyze, and act upon customer data responsibly. Simultaneously, they need to navigate a regulatory landscape that balances customer privacy protection with the potential benefits of data-driven personalization.

4.2.1. Theme 1. Tech Capabilities

Banking sector professionals expressed a range of perspectives regarding the technological readiness of Kuwaiti banks for hyper-personalization initiatives. While some express enthusiasm, others emphasize the complexities of implementation. As one expert says:

"**From a tech perspective, we see massive potential...the issue is often less about the tech itself and more about integrating it with our existing systems**" **(Participant 17)**

This quote highlights a common theme within the sector. It reveals that core technologies might be available, but the implementation lies in aligning these tools with older systems and ensuring seamless data flow. This suggests that Kuwaiti banks may need to make strategic investments beyond just AI, focusing on infrastructure modernization and data management to realize the full potential of hyper-personalization.

Alongside realistic assessments of challenges, banking professionals also expressed a strong sense of excitement about hyper- personalization's potential to transform customer experiences within Kuwait by saying:

"**The dream is not just targeted ads. It's how your bank understands your financial anxieties and proactively offers solutions tailored just for you**" **(Participant 23)**

This previous statement goes beyond product promotion and reveals a deeper ambition. It suggests that some in the Kuwaiti banking sector see hyper-personalization as a way to build stronger customer relationships, shifting from a transactional focus to a genuine advisory role that supports financial wellness. This aspiration aligns with customer-centric personalization trends seen globally (Deloitte, 2024; McKinsey, 2021).

Interviews with Kuwaiti banking professionals indicate a strong foundation in certain areas, particularly mobile banking, payment innovation, cloud adoption, and open banking. This forward-thinking approach to customer-facing technologies bodes well for introducing hyper-personalization, as it suggests banks are open to innovation and have the infrastructure to support digital experiences.

Data collection and analysis capabilities appear to be a mixed landscape. Professionals expressed confidence in gathering transaction history and core demographic data. This baseline is essential but insufficient for the depth of insight needed for hyper-personalization. Banks should prioritize expanding their collection strategies, potentially including obtaining customer consent for tracking behavior across channels, gathering preference data through surveys or in-app choices, and exploring partnerships for external data enrichment, where permissible.

Interestingly, these efforts can be supported by Kuwait's advanced technological landscape. Kuwait ranks first in the world in the Information and Communication Technology (ICT) Development Index, indicating that it scored the highest total points (98.2) in the ICT Development sub-index according to the International Telecommunication Union (ITU) data for 2023. The ICT Development Index is issued by the UN specialized agency for ICTs, and the index measures several indicators to assess a country's development in the field of ICT. The index typically includes factors such as access, use, and skills (Appendix B).

Additionally, Kuwait ranked 69th globally and 8th among Arab countries in the Government Artificial Intelligence Readiness Index for 2023 (Oxford Insights Research Institute, 2023). The Government Artificial Intelligence Readiness Index (GARI) is a global ranking that measures the readiness of governments to adopt and use artificial intelligence (AI). Kuwait's ranking in the GARI 2023 reflects the country's growing commitment to AI development.

Despite this, the current use of AI within Kuwaiti banks seems focused on areas like fraud detection and risk assessment. While this demonstrates technical aptitude, the interviewees' frequent use of terms like "experimenting" suggests that applying AI directly to hyper-personalization may still be aspirational. Banks will likely need a combination of upskilling internal teams and strategic partnerships with technology providers to build the robust AI systems required for tailored recommendations and proactive insights. Investment in overcoming potential hurdles, such as integrating legacy systems with newer AI platforms, will also be crucial.

Importantly, the current gap in behavioral data collection presents a significant opportunity for Kuwaiti banks. By focusing on ethically and lawfully expanding data strategies to include preferences, behaviors, and goals, banks can unlock the true potential of hyper-personalization to deliver exceptional, differentiated customer experiences. However, the ability to leverage this behavioral data opportunity will depend heavily on navigating the regulatory landscape. Kuwait's evolving regulations present both guidelines for responsible data use and potential restrictions on the types of data that banks can readily collect (regulation impact will discussed in 4.3.2 section).

The CBK's "Bank Customer Protection Guide" and "Cybersecurity Framework" set out rigorous standards for data privacy and protection. Banks can leverage their adherence to these guidelines as a trust-building point with customers, providing clear, accessible explanations of their compliance to maximize the impact. Furthermore, the CBK's recent regulations on open banking, banking-as-a-service, and cloud computing demonstrate the need for the sector to stay proactive amidst evolving technological capabilities.

4.2.2. Theme 2. Regulation impact

The evolving regulatory landscape surrounding data privacy and protection has a significant impact on how Kuwaiti banking professionals approach hyper-personalization strategies. As one participant elaborate:

"**The CBK guidelines are a good start, but for hyper-personalization features to truly work, we need clearer standards on what data is permissible to collect under specific use cases**" **(Participant 20)**

This statement underscores a desire for more collaboration between CBK and the banking industry. It suggests that banks seek greater clarity and specificity in regulations, which could facilitate innovation while ensuring adherence to privacy principles. This could signal that Kuwaiti banks might respond favorably to the CBK taking a proactive role in guiding the responsible implementation of hyper-personalization practices.

A core theme echoing through customer interviews and banking professionals' insights is the crucial importance of customer control. One banker briefly articulated this, stating:

"**Customers need to feel in control, that's the key**" **(Participant 18)**

This sentiment resonates powerfully with customer interview data. Participants repeatedly expressed a desire for accessible and customized privacy settings, emphasizing the ability to opt in or out of specific types of data sharing.

Kuwaiti banking professionals hold mixed views on the regulatory landscape. Some believe regulations, especially those focused on cybersecurity and data protection, are essential for building customer trust. Others fear that excessive regulation could stifle innovation. However, there is a common desire for balanced regulations that protect customer privacy while allowing for the personalized services that drive innovation.

Almutairi's (2024) paper highlights this need, advocating for legislative action to ensure data privacy.

The CBK's "Bank Customer Protection Guide" remains largely beneficial, providing a solid framework for data privacy practices. However, some interviewees expressed concern about the "cost of compliance" potentially hindering the full implementation of personalization features. The CBK "Cybersecurity Framework" is widely viewed as vital for the sector's reputation, though concerns were voiced about the resources needed to stay up-to-date as cyber threats evolve.

The regulatory landscape is shifting. Law No. 20 of 2014 on Electronic Transactions initially addressed data and privacy protection in its seventh chapter. However, the recent Communication and Information Technology Regulatory Authority (CITRA) Data Privacy Protection Regulations (especially issue No.26/2024) introduce uncertainty for the banking sector. These regulations focus on data privacy and regulating user consent for personal data processing. While not specifically aimed at banks, their provisions could significantly impact banks' hyper-personalization strategies, particularly those relying on data partnerships. The full extent of CITRA's DPPR impact on banks engaging in heavy hyper-personalization remains to be seen.

Looking ahead, banking professionals expressed a desire for more collaboration between the CBK and the industry in shaping future regulations. They believe proactive participation will help ensure that rules facilitate responsible personalization without hindering the adoption of customer-beneficial technologies. Additionally, there's a strong interest in learning from international best practices, especially from markets with a longer history of balancing personalization with privacy. This indicates a forward-thinking approach within the Kuwaiti banking sector, with a desire to adapt regulations proactively rather than merely reacting to them.

4.3. Case Studies and Best Practices

Analyzing case studies of banks that have successfully implemented hyper-personalization initiatives provides a rich source of insights and lessons for others looking to follow this path, particularly when examining banks operating in similar markets. This study will carefully analyze two successful cases of hyper-personalization implementation by international banks operating in markets similar to Kuwait. These markets will share characteristics such as demographics, technological development, regional customer expectations, and evolving regulatory landscapes. This focus will provide a strong basis for transferring insights, given the similarities and the growing adoption of digital banking practices across the GCC.

While leading international banks offer valuable case studies on implementing hyper-personalization strategies, it is essential to recognize that successful hyper-personalization ultimately requires strategies tailored to a bank's specific market, technological capabilities, and unique customer base. This study will carefully analyze two successful cases of hyper-personalization implementation by international banks operating in markets similar to Kuwait regarding demographics, technological development, regional customer expectations, and regulatory frameworks. This analysis will provide actionable insights directly applicable to the Kuwaiti context, supporting the customization of strategies and ultimately driving the success of hyper-personalization initiatives within the GCC's growing digital banking landscape. After analyzing the two cases, a comparison table will be created to highlight each bank's main personalization tactics, technological tools, and reported outcomes (Table 2).

4.3.1. Case Study 1: Emirates NBD (Dubai, UAE)

Emirates NBD is a prominent banking group within the Middle East and North Africa (MENA) region. Based in the UAE, the bank has made significant investments in digital transformation, with hyper-personalization at the forefront of its efforts to enhance customer experiences.

Emirates NBD focuses heavily on advanced data analytics to gain a deep understanding of customer spending patterns, financial goals, and individual preferences. This rich customer insight fuels their personalization initiatives (Poma et al., 2020). The bank utilizes AI-powered recommendation engines to suggest tailored financial products, services and offers aligned with specific customer needs. These recommendations frequently appear within their digital channels (Emirates NBD, 2022; Ojha et al., 2024). Furthermore, Emirates NBD leverages AI and predictive analytics to provide proactive, real-time financial guidance. This includes alerts about potential savings opportunities, reminders for upcoming bill payments, or contextual investment suggestions (Aloulou et al., 2023).

Emirates NBD reports positive outcomes from its hyper-personalization efforts. The bank highlights increased engagement levels on their digital platforms attributed to personalized content and relevant recommendations (Emirates NBD, 2022). Customer satisfaction scores have likely improved due to the convenience and relevance offered by hyper-personalized banking experiences. Additionally, while not always explicitly stated, data-driven targeted offers and personalized product recommendations likely contribute to increased customer acquisition and cross-selling opportunities (McKinsey, 2022).

Emirates NBD ensures its data privacy practices comply with both the UAE's federal law 45 Of 2021 regarding the Protection of Personal Data, and the Central Bank of the UAE's guidelines for the financial sector. The UAE's regulations draw heavily from the European Union's General Data Protection Regulation (GDPR), incorporating key principles like the distinction between personal and sensitive personal data, the roles of data controllers and processors, the importance of consent, data processing guidelines, data protection officer requirements, and individual data rights (UAE Ministry of Justice, 2024).

Emirates NBD prioritizes transparency with a detailed privacy policy on its website. This policy outlines how they collect, use, and protect customer data, ensuring clear communication. The bank also emphasizes a consent-based approach, seeking clear customer consent before data processing and offering choices about how data can be used (Emirates NBD, 2023).

To safeguard customer information, Emirates NBD invests in robust cybersecurity measures. This likely includes the use of encryption, secure data storage, and regular security audits (El Khatib et al., 2022; Shuhaiber et al., 2023). Furthermore, Emirates NBD may actively educate customers on data privacy best practices and how to protect their financial information through campaigns or dedicated resources.

Central to Emirates NBD's hyper-personalization strategy is its "Liv" digital banking platform. This platform targets a younger, tech-savvy demographic, offering highly personalized experiences emphasizing financial wellness and tailored insights (Emirates NBD, 2024). Liv. offers several features designed to personalize the banking experience. Goal-based planning tools help users set financial goals and receive tailored recommendations and budgeting support. The platform analyzes spending habits to provide insights, savings opportunities, and proactive bill reminders. Liv. also incorporates gamification elements like challenges, rewards, and progress tracking, which resonate particularly well with younger users. It offers personalized discounts and offers based on location and spending preferences and even has lifestyle "tribes" that provide curated content for users with specific interests. Finally, an AI-powered chatbot, supplemented by human support when needed, provides real-time personalized assistance (Banerjee et al., 2022; Emirates NBD, 2024).

Emirates NBD took an early adopter approach to personalization and digital banking with the launch of its Liv. platform. This headstart in collecting customer data and iterating on their personalization approach likely offers a competitive advantage. Liv. sets itself apart from traditional banking apps focusing on goal setting, gamification, and lifestyle-oriented features, catering specifically to younger customers (Hanafi et al., 2021; Popelo et al., 2021).

Emirates NBD remains a recognized leader in regional personalization despite growing competition. Liv. has won numerous awards for innovation and customer experience, demonstrating industry recognition of their efforts (Emirates NBD, 2024). Furthermore, Emirates NBD is often cited in industry reports as a benchmark for other Middle Eastern banks aiming to enhance their own personalization strategies (McKinsey, 2024; Zawya, 2023).

4.3.2. Case Study 2: Mashreq Bank (Dubai, UAE)

Mashreq Bank leverages the power of customer segmentation to deliver tailored financial experiences. To achieve this, they begin with data aggregation. Customer information is compiled from sources such as transactions, demographics, website interactions, and app usage. Additionally, external data sources may be integrated with customer consent to enhance the datasets (Al Aina & Faisal, 2024; Flötotto et al., 2023).

Next, AI-powered clustering algorithms analyze this rich data to identify patterns and segment customers based on shared characteristics (El Khatib & Al Falasi, 2021). Potential segments could include high-income earners, frequent travelers, savers, and small business owners. Mashreq Bank likely employs dynamic segmentation to ensure adaptability, where customer groups are updated in real-time based on evolving behaviors (Mashreqbank, 2023).

The results of this segmentation drive tailored customer experiences. Targeted product recommendations ensure that offers align with a customer's segment-based needs—personalized website and app content surface relevant articles, tools, and calculators. AI-driven next-best-action suggestions enable proactive product and service recommendations. Even chatbot interactions can be enhanced through training on segment-specific data, providing more focused support (Ashfaq & Ayub, 2021; MashreqBank., 2024).

Several types of AI models are likely in use at Mashreq Bank to leverage its vast array of customer data for predictive analytics. Propensity models predict a customer's likelihood to purchase certain products or services (Mkhaiber & Werner, 2021). Churn prediction models identify customers at risk of leaving the bank, enabling proactive retention strategies (Tran & Nguyen, 2023). Behavioral models analyze spending patterns and other actions to forecast future needs or potential actions (Internationalbanker, 2023; Setiawan et al., 2022).

These predictive models drive personalized next-best-offer recommendations. The recommendations go beyond basic demographics, analyzing real-time financial activity. For example, a customer frequently browsing travel booking websites might receive offers for travel credit cards, pre-approved travel loans, and relevant currency exchange alerts (Forbes, 2023; Mdallal et al., 2023). Predictive models also enable proactive financial alerts. This helps prevent unpleasant surprises for customers (Chen, 2023).

Mashreq Bank, like its prominent peer Emirates NBD, prioritizes customer data protection by adhering to the robust privacy standards set by the UAE's federal law 45 of 2021. These regulations ensure transparency in data handling, emphasizing consent-based data processing and outlining robust individual data rights. Mashreq Bank's commitment to this framework fosters trust and aligns with the data privacy best practices. The bank demonstrates transparency by providing a detailed explanation of its policies on its website (Mashreqbank, 2024).

4.3.3. Applying Insights to the Kuwaiti Context

Emirates NBD and Mashreq Bank both operate within the UAE. Their success with hyper-personalization offers valuable lessons for Kuwaiti banks, as the GCC region shares similarities in demographics, culture, economy, technology, customer expectations, and evolving regulations landscape. These shared factors make it easier to apply insights from these case studies in a Kuwaiti banking context.

Table 2. Case Studies Comparison

Bank Name	Main Personalization Tactics	Technological Tools	Reported Outcomes
Emirates NBD	Advanced data analytics for customer insights, AI-powered recommendation engines, AI, and predictive analytics for proactive guidance.	AI, Recommendation engines, Predictive analytics.	Increased engagement on digital platforms, Improved customer satisfaction, Increased customer acquisition and cross-selling.
Mashreq Bank	Customer segmentation with data aggregation, AI-powered clustering, and dynamic segmentation, Targeted product recommendations and personalized content, Predictive analytics for next-best-offer recommendations, and proactive alerts.	AI-powered clustering algorithms, Predictive analytics models (propensity, churn, behavioral), and Customer segmentation tools.	Tailored customer experiences, Improved customer satisfaction and retention, Increased sales and revenue.

Kuwaiti banks can draw inspiration from Mashreq Bank's emphasis on data-driven personalization. Their strategic use of customer segmentation and extensive data sources fuels their predictive analytics capabilities. Kuwait's strong ICT infrastructure, high smartphone penetration, and increasing digital banking usage provide a solid foundation for Kuwaiti banks to adopt similar data collection efforts. However, given the heightened sensitivity around data privacy expressed by Kuwaiti customers, banks should prioritize clearly articulating the tangible benefits of data sharing to secure the necessary levels of customer consent.

Emirates NBD's success with their "Liv." platform highlights the potential for hyper-personalized experiences targeted towards younger, tech-savvy Kuwaitis. Kuwaiti banks would be wise to investigate if a similar demographic exists within their customer base. If so, the "Liv." model offers a blueprint for gamification, lifestyle integration, and tailored banking services that could strongly resonate with this segment.

A core lesson from both case studies, which echoes the findings of the Kuwaiti customer interviews, is the paramount importance of trust-building through transparent data practices. Emirates NBD's detailed privacy policies, emphasis on consent, and robust cybersecurity align directly with the desire for control articulated by Kuwaiti banking customers. Kuwaiti banks can leverage this insight by proactively positioning themselves as champions of responsible data use, exceeding mere regulatory compliance to foster a deep, long-lasting trust within their customer base.

Additionally, the proactive guidance offered by both Emirate NBD and Mashreq Bank through AI-driven alerts and recommendations is an area where Kuwaiti banks could differentiate themselves. This aligns with the desire for convenience and financial insights expressed by Kuwaiti customers. By offering proactive support, Kuwaiti banks have the opportunity to set themselves apart and enhance customer satisfaction.

To deepen this analysis further, it is worth considering how the competitive landscape within Kuwait aligns with what the case studies reveal. Are Kuwaiti customers voicing dissatisfaction with existing banking options, indicating an opening for new players offering hyper-personalized experiences? Additionally, if permissible within Kuwait's regulatory framework, exploring potential external data partnerships similar to Mashreq's approach could be a valuable strategy. Finally, banks should carefully consider the unique nuances of Kuwaiti culture when designing personalization features, ensuring they resonate with local preferences, social norms, and communication channels.

5. Results and Discussion

This study revealed several key insights into the potential for hyper-personalization within Kuwaiti banking. These findings offer a comprehensive perspective, integrating customer expectations, banking professional perspectives, and the evolving technological and regulatory landscape.

The Primacy of Trust and Control. Kuwaiti banking customers are open to the potential benefits of hyper-personalization, including greater convenience, proactive financial insights, and tailored product recommendations. However, their willingness to share personal data is deeply intertwined with expectations of transparency, customized control over data usage, and demonstrably robust cybersecurity. This emphasis aligns with broader trends in data privacy concerns (McKinsey, 2022, 2023; Deloitte, 2024) but appears particularly pronounced within the Kuwaiti context, perhaps influenced by cultural norms around privacy.

Technological Readiness and the Need for Strategic Focus. Kuwaiti banks possess a strong foundation in areas like mobile banking and digital payments. However, interviews with banking professionals revealed a mixed landscape regarding AI expertise and the ability to seamlessly integrate advanced personalization features with legacy systems. This suggests an opportunity for Kuwaiti banks to gain a competitive edge through targeted investments in data analytics, AI capabilities, and modernization initiatives that prioritize the smooth integration of personalization technologies.

Balancing Regulations and Innovation. The CBK's guidelines on data privacy and cybersecurity provide essential ground rules for responsible personalization. However, customers and banking professionals expressed a desire for further collaboration between CBK and the banks to establish clearer data collection and usage standards under specific hyper-personalization use cases. This proactive approach could foster trust and facilitate the adoption of customer-beneficial technologies within a framework that proactively addresses potential risks.

5.1. Recommendations

Informed by the core findings of this study, the following recommendations are proposed to strategically guide Kuwaiti banks in their implementation of hyper-personalization initiatives while prioritizing customer trust and ethical practices:

Pilot Opt-In Personalization Features with a Focus on Transparency. The paramount importance of customer control and clear communication suggests that Kuwaiti banks should consider piloting specific hyper-personalization features on a strictly opt-in basis. This could involve proactive financial alerts, tailored product recommendations, or other features identified as having potential resonance with Kuwaiti customers. Transparent communication regarding data use, customized control settings, and close monitoring of participation rates and user feedback are crucial for this pilot's success. This approach will yield valuable insights into Kuwaiti customer comfort levels with personalization and inform broader implementation strategies.

Establish an Education and Outreach Campaign Focused on Personalization Benefits and Privacy. This study revealed that Kuwaiti banking customers express openness to hyper-personalization but may have concerns or knowledge gaps regarding data privacy and security. To proactively address these concerns, a dedicated education campaign is recommended. This campaign should utilize bank websites, social media, and other relevant channels to provide clear, accessible explanations of hyper-personalization, emphasizing the potential benefits, data security measures, and a commitment to customer privacy choices. The involvement of the CBK or industry associations in this campaign would lend additional credibility and encourage widespread engagement.

Form a Collaborative Working Group on Hyper-Personalization Standards. To facilitate the responsible development of hyper-personalization in Kuwait's banking sector, both customers and professionals call for greater regulatory clarity and

collaboration. A dedicated working group, led by the CBK or an industry association, should be formed with representatives from diverse banks, technology experts, and potentially consumer protection advocates. This group's focus would be to establish best practices for hyper-personalization, including informed consent, transparent data use, and robust security measures tailored to Kuwait's context. Additionally, Kuwait would benefit from a comprehensive data privacy law modeled after the European Union's General Data Protection Regulation (GDPR) to provide a strong foundation for protecting consumer data rights.

5.2. Limitations

While this study provides a valuable foundation for understanding the complexities of hyper-personalization within the Kuwaiti banking sector, certain limitations should be acknowledged.

Despite efforts to recruit a diverse participant pool, specific demographic groups or various income segments may have been underrepresented in the data collection process.

Obtaining in-depth qualitative data directly from Kuwaiti banks proved challenging due to confidentiality concerns. This reliance on customer perspectives and insights from banking professionals could potentially result in an incomplete understanding of the sector's readiness, internal hurdles, and strategic approaches toward hyper-personalization implementation.

Kuwaiti banks' technological capabilities and the regulatory environment governing data privacy are continuously evolving. This study offers insights reflective of a specific point in time, highlighting the need for ongoing research to monitor these changes and ensure adaptability.

5.3 Future Research Directions

This study necessitates further investigation in several key areas to achieve a comprehensive understanding of hyper-personalization within the Kuwaiti context:

To gain a truly comprehensive understanding of hyper-personalization within the Kuwaiti banking sector, future research should complement the qualitative insights derived from interviews with quantitative data on a broader scale. This could involve sector-wide surveys of IT specialists, decision-makers, and those involved in personalization projects. Such surveys would provide quantifiable data on technological readiness, the prevalence of specific AI implementations, perceived regulatory hurdles, and prioritization of personalization initiatives among Kuwaiti banks. This mixed-methods approach would offer a more statistically robust picture of the sector's landscape.

Investigating the potential of hyper-personalization to address the distinct needs and preferences of specific demographic groups within Kuwait is essential. Future research could focus on tailoring personalization strategies for young adults, women, or various income segments.

Research exploring the potential for hyper-personalization to promote positive social outcomes within Kuwait is warranted. This could include investigating whether tailored banking experiences can reduce financial stress, enhance financial literacy across age groups, or increase access to financial services for underserved populations.

5.4. Conclusion

This research illuminated the significant potential for hyper-personalization to transform the Kuwaiti banking experience. However, it also underscored that the success of such initiatives is intimately connected to a proactive focus on building deep customer trust. While recognizing the potential benefits of personalization, Kuwaiti customers expressed profound expectations for transparency, control over their data, and robust cybersecurity measures. As Participant 13 stated: "I'm not against sharing some data, but I need to know exactly what they're using it for and be able to change my mind if I want to." By strategically addressing these concerns, prioritizing ethical data practices, and

investing in a customer-centric approach, Kuwaiti banks have a unique opportunity to become regional leaders in the responsible implementation of hyper-personalization.

This study reveals that the path forward requires a collaborative approach. Kuwaiti banks must embrace pilot programs, invest in customer education, and actively engage with the CBK and industry associations to shape clear, proactive standards for personalization within the evolving regulatory landscape. Through this commitment to both customer empowerment and technological innovation, the Kuwaiti banking sector has the potential to create a model for hyper-personalization that places the needs, values, and trust of its customers at the very forefront.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix B. Kuwait ranked highest in the ICT Development sub-index (ITU, 2023) with a score of 98.2.

	Country/Territory	Aggregate Scores (0-100)			IDI 2023 Indicator values (2021)											Normalized Progress Scores (0-100)								
					Universal Connectivity indicators			Meaningful Connectivity indicators								Universal Connectivity indicators			Meaningful Connectivity Indicators					
		ICT Development Index (IDI)	Universal Connectivity Pillar	Meaningful Connectivity Pillar	Individuals using the Internet (%)	Households with Internet access at home (%)	Active mobile-broadband subscriptions per 100 inhabitants	Population covered by at least a 3G mobile network (%)	Population covered by at least a 4G/LTE mobile network (%)	Mobile broadband Internet traffic per subscription (GB)	Fixed broadband Internet traffic per subscription (GB)	Mobile data and voice high-consumption basket price (as % of GNI per capita)	Fixed-broadband Internet basket price (as % of GNI per capita)	Individuals who own a mobile phone (%)	Individuals using the Internet (%)	Households with Internet access at home (%)	Active mobile-broadband subscriptions per 100 inhabitants	3G and 4G/LTE Network Coverage	Mobile broadband Internet traffic per subscription (GB)	Fixed broadband Internet traffic per subscription (GB)	Mobile data and voice high-consumption basket price (as % of GNI per capita)	Fixed-broadband Internet basket price (as % of GNI per capita)	Individuals who own a mobile phone (%)
1	Kuwait	**98.2**	97.0	99.3	99.7	99.4	136.6	100.0	100.0	657.8	8 205.6	0.8	1.6	99.2	100.0	100.0	91.1	100.0	100.0	97.9	100.0	98.1	100.0
2	Singapore	**97.4**	99.4	95.4	96.9	99.3	147.5	100.0	100.0	87.9	N/A	0.3	0.8	98.5	100.0	100.0	98.3	100.0	72.2	N/A	100.0	100.0	100.0
3	Qatar	**97.3**	98.7	96.0	99.7	95.0	144.0	100.0	99.8	140.2	10 484.5	0.4	2.2	99.6	100.0	100.0	96.0	99.9	79.6	100.0	100.0	96.3	100.0
4	Denmark	**96.9**	98.2	95.6	98.9	96.1	141.8	100.0	100.0	176.8	4 132.5	0.5	0.8	96.3	100.0	100.0	94.5	100.0	83.3	90.4	100.0	100.0	100.0
5	Estonia	**96.9**	97.5	96.4	91.0	91.8	180.1	100.0	99.0	222.8	N/A	0.5	1.0	98.2	95.8	96.6	100.0	99.4	87.0	N/A	100.0	100.0	100.0
6	Finland	**96.7**	98.1	95.2	92.8	91.7	157.2	99.9	99.9	398.9	1 013.9	0.7	1.0	98.2	97.7	96.5	100.0	99.9	96.4	75.2	100.0	100.0	100.0
7	United States	**96.6**	99.1	94.1	96.8	92.5	165.8	99.9	99.9	101.5	N/A	0.7	1.0	95.9	100.0	97.4	100.0	99.9	74.5	N/A	100.0	100.0	100.0
8	Bahrain	**96.5**	96.7	96.2	100.0	100.0	135.2	100.0	100.0	294.5	4 773.3	1.4	2.4	100.0	100.0	100.0	90.1	100.0	91.5	92.0	98.2	95.6	100.0
9	Hong Kong	**96.5**	99.1	93.8	93.1	94.4	160.3	99.0	99.0	99.1	3 853.0	0.3	0.5	97.3	98.0	99.4	100.0	99.0	74.1	89.6	100.0	100.0	100.0
10	United Arab Emirates	**96.4**	100.0	92.8	100.0	99.9	241.2	100.0	99.8	52.7	5 183.2	0.9	0.6	100.0	100.0	100.0	100.0	99.9	64.1	92.9	100.0	100.0	100.0
11	Saudi Arabia	**94.9**	93.2	96.5	100.0	99.8	119.5	100.0	100.0	335.5	6 346.5	1.4	3.6	100.0	100.0	100.0	79.7	100.0	93.6	95.1	98.3	92.0	100.0
12	Brunei	**94.8**	95.7	94.0	95.6	91.0	136.8	96.6	96.6	610.0	508.5	0.6	1.1	96.3	100.0	95.8	91.2	96.6	100.0	67.7	100.0	99.8	100.0
13	Iceland	**94.8**	93.2	96.4	99.7	98.4	119.5	100.0	100.0	232.8	4 793.0	0.4	1.5	98.4	100.0	100.0	79.6	100.0	87.7	92.0	100.0	98.6	100.0
14	Poland	**94.6**	95.7	93.4	85.4	92.4	205.8	100.0	100.0	70.0	5 147.1	0.5	1.2	95.5	89.9	97.3	100.0	100.0	68.6	92.8	100.0	99.3	100.0
15	Malaysia	**94.5**	94.5	94.5	96.8	94.9	125.1	95.4	95.4	251.6	3 371.6	1.3	2.3	97.4	100.0	99.9	83.4	95.4	89.0	88.2	98.7	95.9	100.0
16	Australia	**94.0**	93.8	94.2	95.0	97.3	122.2	99.5	99.5	121.3	3 750.3	0.5	1.3	97.3	100.0	100.0	81.4	99.5	77.3	89.4	100.0	99.2	100.0
17	Sweden	**93.9**	93.2	94.6	94.7	90.7	126.6	100.0	100.0	177.3	N/A	0.5	1.1	87.6	99.7	95.5	84.4	100.0	83.4	N/A	100.0	99.8	92.3
18	South Korea	**93.8**	92.7	94.9	97.6	99.9	117.2	99.9	99.9	146.1	3 889.0	0.9	1.1	97.6	100.0	100.0	78.1	99.9	80.3	89.7	100.0	99.7	100.0
19	Latvia	**93.8**	90.2	97.5	91.2	91.1	117.9	99.0	95.0	461.8	4 409.9	1.0	1.5	96.6	96.0	95.9	78.6	96.6	98.7	91.1	100.0	98.4	100.0
20	Netherlands	**93.5**	96.5	90.5	92.1	96.0	138.7	99.0	99.0	51.8	N/A	0.5	1.4	87.4	96.9	100.0	92.5	99.0	63.8	N/A	100.0	98.7	92.0
21	Macau	**93.3**	95.9	90.7	88.5	89.9	185.7	99.8	99.7	42.4	N/A	0.2	0.5	94.2	93.1	94.7	100.0	99.7	60.6	N/A	100.0	100.0	99.2

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