

Exploring M-Commerce Vendors' Perspectives in Post-Saudi Vision 2030: A Thematic Analysis

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Abstract—Despite the popularity of mobile commerce (m-commerce) services in developing countries, their adoption in Saudi Arabia has been limited. Vision 2030, launched in 2016, has triggered substantial transformations in the country, prompting the need to examine its impact on the adoption of m-commerce. This paper investigates the vendors' perspective in regard to the adoption of m-commerce in Saudi Arabia. Through a thematic analysis of semi-structured interviews with ten Saudi vendors, the study explores the vendors' views on the status of m-commerce in the country and their intentions to adopt it. The findings suggest that m-commerce services are still immature in Saudi Arabia, primarily due to government regulations and technological infrastructure.

Index Terms—E-commerce, Adoption of m-commerce, Vision 2030, Saudi Arabia

I. INTRODUCTION

THE WIDESPREAD availability of Internet services and mobile phones has enabled users to access computational services from anywhere. The mobile market has grown exponentially, with over 8 billion cellular network subscribers in 2022, and this number is expected to reach 9.1 billion by 2027. Service providers are expanding their networks and service platforms to offer not just connectivity, but also services and applications [1].

M-commerce, short for Mobile Commerce, is a technology that is reliant on the Internet and mobile devices. It uses wireless devices such as smartphones to access information and conduct transactions resulting in the exchange of goods or services. Delivery services offer the convenience of goods being delivered to customers, saving them time and effort compared to in-store shopping [2]. It also allows vendors to provide prompt services to customers regardless of their location while reducing the operating costs that come with traditional in-store commerce [3].

Saudi Arabia has been investing in the Internet infrastructure since it was first introduced in the country in 1993 [4]. This provides a fertile environment for investment in new internet-based technologies such as m-commerce. Furthermore, in 2016, the Saudi government unveiled an ambitious economic reform plan, known as 'Vision 2030', aimed at transitioning the economy from an oil-based to a knowledge-based one

[5]. Information Technology (IT) has been identified as a key enabler of this transformation, given its ability to create a conducive business environment [6, 7]. The success of e-commerce and m-commerce in other countries, which involve trade processes over electronic platforms and mobile devices, has also demonstrated the potential for significant revenue growth [8, 9]. Thus, IT has rightfully received significant attention as a critical component of the Vision 2030 program.

The use of m-commerce technology in Saudi Arabia has been ongoing for approximately a decade, facilitated by advancements in the online sphere. However, despite the availability of technology, the implementation of m-commerce remains hindered by a variety of obstacles, particularly concerns regarding trust and contentment, as well as insufficient proficiency in IT [10, 11]. Although significant investments have been made to promote the use of m-commerce services, limited success has been achieved in many countries, as evidenced by recent research and industry reports [12, 13, 14].

In the literature, numerous studies have examined the factors that influence the adoption of m-commerce in Saudi Arabia. Nevertheless, little attention has been given to the viewpoints of vendors regarding m-commerce adoption e.g.[15, 16, 17]. In addition, most of those studies have been conducted before the launch of Vision 2030, which makes them fall short to capture its impact on m-commerce adoption. Consequently, this study uses thematic analysis to examine the perspectives of vendors in Saudi Arabia regarding the adoption of m-commerce. Thematic analysis is a useful tool for exploring the beliefs and experiences of vendors who currently use or are interested in using m-commerce for their businesses. The aim of this analysis is threefold: (1) to identify patterns and themes in the data gathered from interviews, revealing deeper meanings and insights that may not be immediately apparent, (2) to provide a detailed description of participants' experiences, gaining a nuanced understanding of their attitudes and practices, and (3) to inform policy and practice by providing perspectives and experiences that policymakers can use to develop policies and environments that support the adoption of m-commerce.

The remainder of this paper is organised as the following. Section 2 reviews the existing literature on the adoption

of m-commerce in Saudi Arabia. Section 3 describes the methodology used in this study. Section 4 presents the results and discussion of the thematic analysis of the semi-structured interviews with vendors. Section 5 provides further discussion of the findings. Finally, Section 6 concludes the paper.

II. RELATED WORKS

Several studies have investigated the factors that affect the adoption of m-commerce in Saudi Arabia. AlSuwaidan and Mirza [15] investigates the preferences of users in terms of product information display and page navigation in m-commerce mobile applications. The study targets current users of m-commerce with a high focus on female users. The study identifies the preferred options based on the percentage for each option and outlines a prototype of a user interface of a mobile application that features the identified mostly preferred options of product information display and page navigation options. However, the study falls short in addressing the factors that influence the adoption of m-commerce and limits its focus to identifying user preferences.

Algethmi [16] focuses on the airline industry in Saudi Arabia and identifies perceived usefulness, mobility, and compatibility as the main predictors of behavioural intention to use mobile services. The study's main limitation is its focus on the airline industry, which questions the generalisability of its findings.

Turki et al. [17] focuses on the acceptance of mobile ticketing services in Saudi airports and identifies mobility, compatibility, usefulness, and social influence as the main factors affecting adoption attitudes. The study's main limitation is its focus on airline ticketing services, which makes the conclusions limited to that type of m-commerce service.

AbdulMohsin Sulaiman [18] investigates the factors that affect the use of mobile social network services (MSNS) for m-commerce and identifies personal innovation, cost, performance expectancy, and effort expectancy as the main factors affecting the intention to adopt MSNS for m-commerce. However, the study focuses solely on the customer perspective and does not investigate the vendor perspective.

Makki and Chang [19, 20] investigates the impact of mobile usage and social media penetration on the use of e-commerce in Saudi Arabia. The study finds that Saudis, especially females, spend significant time on social media and mobile phones, which provides considerable potential for companies that adopt e-commerce to widen their business by reaching potential customers through social media. The study, however, limits its focus to social media for m-commerce and provides limited information on the framework that was used for defining the factors, which limits its replicability.

Al-Hadban et al. [21] conducted a review of a number of studies that investigated the factors that affect the adoption of m-commerce. The study identifies a list of factors that can be investigated in further research including usefulness, ease of use, and trust, among others. However, the study does not collect data to statistically investigate the influence of those factors on the adoption of m-commerce.

Alkhunaizan and Love [22] investigates the factors that influence Saudis' intention to use m-commerce and identifies perceived usefulness as the prime factor affecting the intention to use m-commerce. The study's main limitation is that it does not investigate other potential factors that could influence the adoption and use of m-commerce. Additionally, the study reveals two surprising results, namely that trust has no impact on the adoption of m-commerce, and that Saudis find m-commerce services more expensive than traditional services.

Overall, these studies provide valuable insights into the factors that influence the adoption of Saudi m-commerce. However, they are not comprehensive enough due to the following limitations. Firstly, the scope of the existing research is limited as most of the works were published prior to 2016, before launching vision 2030. Therefore, many of these studies fail to account for the impact of the vision on m-commerce. This is problematic because as changes emerge due to the implementation of Vision 2030, outdated research may become unreliable and inaccurate, leading to unreliable conclusions. Secondly, most of the studies on m-commerce have focused on specific groups, such as travellers, and social media users. This makes them fall short to provide a comprehensive view of the adoption of m-commerce in general regardless of the business sector it is used in. Thirdly, the above studies mainly investigated customers' perspectives in regard to the adoption of m-commerce in Saudi Arabia. As a result, there is little attention paid to providers' perspectives on the adoption of m-commerce. While these limitations are not necessarily flaws, they do raise concerns about the adequacy of research on m-commerce in general, and the reliability of the conclusions drawn from these studies. Therefore, there is still a need for further research that addresses these limitations.

III. METHODOLOGY

This study conducted semi-structured interviews as the primary data collection method to explore vendor perspectives on m-commerce adoption in Saudi Arabia [23]. Ten firms from different cities, including Riyadh, Jeddah, AlKharj, and Abha, participated in the interviews via Skype during June/July 2020. Given that Arabic is the native language in Saudi Arabia, the interview questions were translated into Arabic, and responses were later translated back into English to adhere to institutional standards.

Each participant received written information about the study's purpose and provided informed consent. The interviews, which lasted an average of 120 minutes, were divided into two parts. In the first part, basic information about the companies, such as expertise, size, number of branches, employees, type of business, and average number of customers, was collected to gain an understanding of their context and financial status. The second part of the interviews involved posing nineteen questions to gather insights into the companies' perspectives on various aspects related to m-commerce adoption. These aspects focused on factors that could influence both user and vendor decisions. To analyze the collected data and present the study's findings, an inductive approach was

employed, specifically using the thematic analysis method. This method allowed for the identification of patterns and themes, which will be elaborated on in subsequent sections of the research paper. The study aims to shed light on the viewpoints of vendors regarding m-commerce adoption, offering valuable insights into the factors that may drive or hinder the widespread acceptance of m-commerce in Saudi Arabia.

IV. OVERVIEW OF DATA ANALYSIS

As shown in Table I, ten representatives of various companies from various private sectors were interviewed, including those operating in telecommunications services, the retail sector, the wholesale sector, the education sector, and the logistics sector.

To gain insights into m-commerce perspectives, it's vital to explore views from different managerial levels, including corporate headquarters, sales, advertising, marketing, and IT. These representatives handle customer issues related to mobile purchases, providing valuable knowledge. All interviewed participants had worked at their respective companies for at least one year, demonstrating a strong familiarity with customer transaction concerns. By interviewing a diverse group of representatives, a comprehensive assessment of m-commerce adoption in Saudi Arabia, from vendors' viewpoint, was achieved.

A. Type of Company

The selected companies were of different types of business. However, all have the potential for using m-commerce. This potential is guaranteed based on our observation of similar types of businesses that exist in other countries and use m-commerce [24]. Table I lists the sector types of each of the interviewed participants.

B. Company Size Categorisation

The size of the companies was categorised into three groups based on the number of employees, branches, and sales volume: Small, Medium, and Large. In addition to gathering information on the average age of clients, frequency of purchases, and having a website. Surprisingly, the findings indicated that just six of the firms have websites, and four do not, although they have a high number of customers (for instance, **AKD** has over 100,000 customers).

C. Knowledge and Qualifications

The majority of the interviewees confirmed that knowledge about m-commerce and its enabling technologies is a crucial factor that stimulates the adoption of m-commerce. This applies to both customers and providers, in their opinion. However, a minority of the interviewees hold a degree/diploma that is relevant to m-commerce or information technologies. Specifically, three out of the ten interviewees (**SOA**, **YAS** and **JFP**) mentioned that they hold a BSc or an MSc in information technologies.

It is observed here that the companies of those three interviewees leverage kind of electronic means for their business.

However, that cannot be considered an m-commerce-based business. They use the internet mainly for advertising and marketing rather than for selling goods. On the other hand, it has been observed that participants who don't have sufficient knowledge about technology do not use it, even though there is room for it to improve the business. In this context, one business owner (**AKD**) commented: *"Let's be straightforward: m-commerce is widely misunderstood inside Saudi society. The majority of wholesale providers [of dates] do not understand the true meaning of the word electronic commerce and, as a result, avoid using it. As with any technology, ignorance breeds fear, which breeds reluctance to utilise the technology."*

The interviewee (**RAS**) explained, *"I believe the lack of knowledge and lack of confidence are connected. When there is a lack of understanding of technology, faith in that technology decreases."* These findings are consistent with the findings of a customer's perspective study [25] which confirmed that higher levels of IT skills, education, and technology awareness will lead to an increase in citizens' intention to adopt m-commerce because they are more likely to be more accustomed to IT technologies in general.

D. Age

The study explored the Age factor by considering both the average age of the company employees and the average age of the company clients to investigate any correlations with the intention to adopt m-commerce. Out of the ten companies interviewed, seven had an average employee age between 25 and 35, while three had an average age above 45 years. Companies adopting electronic means for their business were predominantly found to have an average employee age between 25 and 35, whereas those not leveraging m-commerce had a majority of employees above 45. Interviewees attributed this trend to a lack of expertise and resistance to change among older employees.

(**RCF**) commented: *"We provide a Loyalty Card, in order to get a cup of coffee for free, the client needs to collect 10 stamps, most of those who benefit from it are those under 30."*

In this context, it can be concluded that the adoption of m-commerce from the perspective of the business providers relates to the average age of the business staff. It can be observed that the younger the age to more m-commerce-related services are provided.

E. Business Conducted on The Internet

The interviewed companies primarily used electronic means for marketing their products. Some companies, such as **TCR**, **YAS**, **SOA**, **RCF**, and **AEP**, utilized social media and websites to advertise and engage with customers.

(**TCR**) reported that *"70% of our customers are on the Internet although we don't have official sales on the site."* (**YAS**) and (**SOA**) reported that they rely highly on electronic means to reach their customers for more than 90% of their business. A spokesman for (**YAS**) remarked, *"Our job requires us to maintain regular contact with academic institutions and universities abroad, We do not offer."* The representative of

TABLE I
INTERVIEWEE CODES FOR REPRESENTATIVES OF COMPANIES

Code of Company	Company size	Branches	Employees	Sector type	Position
(SOA)	Small	1	3	Beauty Products Retail	IT Manager
(AEP)	Small	2	8	Perfumes and Incenses Retail	Director
(JFP)	Small	1	2	New and Used Mobiles Retail	IT Manager
(MAC)	Small	1	3	Women's Accessories Retail	Marketing Manager
(RAS)	Medium	6	50	Primary and Secondary schools	Director
(YAS)	Medium	3	45	Study Abroad Consultant	Marketing Manager
(AKD)	Medium	3	30	Dates Retail	Owner
(RCF)	Large	12	550	Coffee Shops	Marketing Manager
(TCR)	Large	5	180	Cars Retail	Sales Manager
(BPR)	Large	22	330	Pizza and Pasta Restaurant	Director

(RCF) informed that “We rely on e-commerce by 30% because we present offers and competitions on the internet”

On the other side, we see that (MAC), for example, founded his company in 2014, which is before (YAS) and (SOA), but he has no dependency on m-commerce. A possible explanation is the lack of understanding of m-commerce technologies and the limited adoption of m-commerce (and electronic services in general) by their competitors in the surrounding area. Another possibility is the tendency of avoiding costs that may be associated with deploying m-commerce services. In this context, MAC representative informed that “The profit margin in our sector is low, adding online services will increase the cost, hence increasing the final price for the consumer, and the majority of our customers are seeking the lowest price.”

F. Type of Delivery Services

Although the Saudi market offers four types of delivery services, including *Third-party*, *Proprietary* services, *Customer collection* collection, and *National postal system*, it is noteworthy that the interviewees only mentioned three of these options. Surprisingly, the national postal system was not mentioned, likely due to concerns regarding its unreliability and insufficient performance.

1) *Third-party delivery services*: There are companies that provide delivery services in the country. They can be either domestic companies such as MRSOOL, HungerStation, and Jahez or international services such as DHL. Domestic services are considered to be popular in Saudi Arabia because they are relatively efficient and successful. Additionally, their prices are reasonable and do not exceed 50 Riyals. In some areas, customers can expect delivery within a maximum of three hours. While these services are considered a significant advancement in the realm of e-commerce in Saudi Arabia, they are limited by the requirement that both the buyer and seller must be situated in the same city, particularly in major metropolitan areas such as Riyadh or Jeddah. This restriction presents a drawback that may limit the widespread adoption of these services in other areas of the country.

2) *Proprietary Delivery Services*: In Saudi Arabia, large enterprises offer a delivery service in which they handle the delivery of their products directly to customers, instead of relying on third-party companies. However, this type of service is not typically provided by medium and small businesses.

This is mainly due to the feasibility issue, as the cost of setting up and maintaining a delivery service is often considered prohibitively expensive for smaller companies. For example, AEP conveyed to us that they *don't offer this service, but it is available in major enterprises like Arabian Oud. Having a large number of consumers using the service reduces individual costs and increases revenue. However, if the number of consumers decreases, prices may rise.*”

3) *Customer collection*: An alternative method of product delivery is by enabling customers to collect their purchases directly from the point of sale or a designated pickup location. The majority of interviewees reported that in-person collection is the dominant way of delivering products to customers. The commonly reported reason is the unreliability of the delivery services that operated in the country, especially in rural areas.

Some participants, such as (JFP), (TCR), (AEP), and (SOA), consider dependable delivery services as a significant challenge. Past efforts to improve service quality have been met with pessimism, leading to a sense of impossibility. For instance, AEP mentioned that “they provide delivery services only within Riyadh, while for areas outside Riyadh, they rely on Zajil company, which often delivers late and incurs a cost of 75 Riyals for the customer” In their questionnaire responses, the interviewees highlighted various difficulties with delivery services, including the following reasons:

- **There is no reliable infrastructure that would enable delivery services.** For example, there is no reliable house numbering system in Saudi Arabia. The current system is inefficient as it gives very long numbers (15 digits) that are not shown on houses. The system is not applied to all houses (especially in small cities and rural areas) and it is not recognised by Internet location services such as Google Maps.
- **The efficiency, reliability, and speed of the National postal system are lacking, resulting in the possibility of parcels being lost or significantly delayed.** For example, the IT Manager of (JFP) said: “As a government sector, the workers of the National Saudi Post know that their employment will not be impacted whether the service they provide is poor or excellent...”. Also, the Director of (BPR) confirmed what had been mentioned before. As he informed, “How can we deal with Saudi Post for our company while we avoid utilising it for personal

purposes? The Saudi Post's charges are expensive, given the unfair level of service."

- **There are some private delivery companies that can be more reliable.** These include international companies such as DHL and national private companies such as Mrsool and Jahez. The international companies cover more areas but they are more expensive and have longer delivery times. The national private companies are faster but they are still expensive and do not cover small cities or rural areas. The **SOA** representative provided their thoughts on this. *"Sometimes we advertise deals, and those deals will only be valid in the city of Riyadh. ... the difficulty lies with clients who reside in other cities."*
- **Unwanted products cannot be returned by customers,** as the return postage fees can be costlier than the product price.
- **Providing a delivery service by the company itself,** is not feasible as it increases staff costs and is subject to complicated governmental requirements.

V. THEMATIC DATA ANALYSIS

In this section, we utilised thematic analysis to examine the interview data, aiming to identify recurring themes that reflect Saudi firms' perspectives on m-commerce adoption [26]. Through this method, we identified 15 distinct themes representing patterns and significant insights within the data. These themes offer valuable insights into the attitudes and beliefs of Saudi firms towards m-commerce, shedding light on the challenges and opportunities related to its implementation. The thematic analysis method involved the following main steps [27]:

- i. Familiarisation: Researchers explored the data to gain a preliminary understanding and form initial ideas about its description.
- ii. Generating Initial Codes: Codes were created to describe interesting aspects of the data. This process organised the collected data into groups.
- iii. Searching for Themes: The codes were transformed into themes that characterised the findings. This step required active interpretation of the data, and the process was iterative, refining the themes until a final list was identified.

A. Clients Do Not Trust M-commerce

This theme focuses on aspects related to the concerns of vendors regarding the customers' trust in m-commerce. The majority of the interviewees conveyed that their customers do not really trust m-commerce. For example, the representative of **MAC** shared with us that *"my clients' trust in m-commerce is almost non-existent, I can say some people in the age between 25 and 30 do trust m-commerce but generally customers do not."* Another example is **JFP** who responded that *"To a big extent, there is no trust in m-commerce. The percentage cannot exceed 40% as there is no party to protect them."*

The reasons for the lack of trust in m-commerce –from the perspective of vendors– can be summarised as follows:

- **Level of Education.** Some views relate trust to the level of education. Vendors think that educated people have more trust in m-commerce and similar technologies. For example, **AEP** mentioned that *"education is essential for trust and it is also prestige to understand [m-commerce]"* and **MAC** mentions that some customers trust m-commerce *"because they are educated"*.
- **Lack of Protection.** Some views relate trust to the protection provided to vendors and customers. They think that there is a lack of protection for vendors and customer rights in Saudi Arabia, e.g. if the product has been lost while in transit. This causes them to prefer in-store shopping. For example, **JFP** mentioned that for payment-on-delivery sales *"..there is no party to protect users, for example, delivery companies deliver to a named person, and if they did not deliver I lose the product, and its price"*.
- **Unreliability of Delivery Services.** As mentioned above, some interviewees mention that customers find the delivery services in the country to be unreliable. That means to them that the products they purchase may get lost during delivery, which makes them not trust the service. For example, when asked if they think customers trust m-commerce, **AKD** mentioned that *"I don't think so ... I personally made online orders that did not arrive"*.
- **Payment Service.** The type of payment service affects customers' trust in m-commerce, as inferred from some views. Interestingly, customers would trust payment-on-delivery services rather than online or over-the-phone payment services. This made **RCF** think that the *"the best way to promote m-commerce is to provide payment-on-delivery services"*.

On the other hand, few opinions find that customers trust (at least partially) m-commerce especially if 'excellent' services are provided by vendors and when vendors have a good reputation. The latter made **BPR** think that *"advertising through famous people promotes customers trust"*.

B. M-commerce Needs Higher Expertise

This particular theme centers around the concerns expressed by vendors regarding the level of expertise required to successfully adopt m-commerce. Generally speaking, this analysis found that the questioned vendors believe that they do not have sufficient expertise for providing m-commerce services. **AEP** reported that lack of expertise *"adversely affects us as following up with customers on social media and checking bank transfers are time-consuming ..."*. Similarly, **RCF** reported that they need staff who are specialised in e-commerce to manage and promote web content and enable the vendor website to be listed first in search engine search results.

Few vendors think that they have sufficient expertise in m-commerce technologies, though they are using it only for marketing. More interestingly, one of the vendors, specifically **RAC**, emphasises the importance of knowledge and experience for m-commerce and mentioned that **RAC** promote their staff technical skills through periodic training courses.

C. M-commerce Needs Better Infrastructure

The focus of this theme is on the availability of enabling technologies of m-commerce and how they shape the vendors' perspective towards m-commerce and their intention to use it.

According to most vendors, the primary technology that facilitates m-commerce is Internet speed. Fast Internet connectivity allows customers to conveniently browse through product websites. While the majority of interviewees indicated that the speed of the Internet is satisfactory in major cities, it is considered unreliable in other parts of the country. For example, **RAC** indicated that *"The internet is so good in the Saudi cities and so bad in rural services"*.

In addition to the first point, vendors have emphasized the inefficiency of transportation services, resulting in a prolonged delivery process for their products [28]. In this regard, **SOA** commented that *"... the transport services are inefficient."* A possible explanation for this perceived inefficiency may be the lack of adequate railway services to transport goods. However, the special attention that is being given by the Saudi government to the railway sector in the country – through increasing funding to expand the railway network – promises improvements in goods transport [29], which would impact the adoption of m-commerce.

Vendors are worried about cyber security as they believe that the internet is not a safe place. They are concerned that their websites and systems could be targeted by cyber attackers, resulting in substantial financial losses. **JFP** commented that *"...there are massive and continuous cyber attacks, and no one would protect a business or reimburse our loss."*

In summary, infrastructure availability significantly influences vendor adoption of m-commerce. Challenges such as unreliable internet in rural areas, inefficient transportation, and cybersecurity concerns affect vendors' perspectives. However, the government's investment in improving transportation and cybersecurity measures may address these challenges. Vendors need to stay informed and adapt to evolving technology to remain competitive.

D. Popular E-commerce Platforms are Better

When asked about whether they prefer to have their own m-commerce application or to use third-party applications (e.g. Amazon and eBay), the majority of the interviewees indicated that they do not currently use an m-commerce application but they would prefer the latter. The vendors use either social media pages or basic websites for marketing their products, as mentioned above. However, the reasons behind their preference towards third-party applications are as follows (as reported by the interviewees):

- **Cyber Security.** Vendors have the impression that third-party applications are more secure than their proprietary applications. This might reflect a lack of trust in the developers' expertise in developing applications for the vendors' online business. For example, the representative of **SOA** reported that *"using famous third-party applications is more convenient and secure..."*

- **Production and Maintenance Cost.** Vendors reported the cost of developing a proprietary application is high as that would include implementation, deployment, maintenance, evolution, and security costs. An example is the response of **SOA** who continued *"...We'll not need to hire technicians for the application development, especially in the presence of excellent third-party applications that don't need high skills to manage."*
- **Popularity.** Many third-party e-commerce platforms, such as Amazon and E-bay, enable vendors to create online shops for m-commerce in an easy way that does not need a high level of experience. More importantly, these platforms are considerably popular. Almost all m-commerce and e-commerce users are familiar with these platforms. Opening an e-shop on such a popular platform would increase the reachability of business to customers. This advantage motivates vendors to prefer third-party applications over proprietary ones as the latter need time and expenses to popularise. In this sense, the representative of **MAC** said *"I prefer third-party applications over proprietary ones as people will not know the latter."*

However, though the above reason potentially explains the vendors' preference for using third-party applications, some of the mentioned reasons apply to both third-party and proprietary applications e.g. popularity. Though m-commerce users are indeed familiar with Amazon and E-bay, they will not be familiar with the online shop of a specific vendor unless the shop becomes popular. This is associated with advertising costs to make the e-shop popular, which is similar to what they try to avoid with proprietary applications.

On another note, one interviewee **RCF** mentioned that they have their own website and they are not keen on using third-party applications. The main reason for that is the control they wanted over the style of the applications and the features it supports, which enables them to be different from other vendors' websites or applications. They mentioned that *"We've got the application that was fully designed by us as we do not want to be a copy of other companies."*

E. Native Language Support

The support of the Arabic language in m-commerce platforms is no doubt crucial for m-commerce in Saudi Arabia. The reason is obviously that Arabic is the native and official language in the country. This support is necessary for many reasons. Firstly, it makes it easier for the main targeted customers – who are native Arabic speakers – to understand the product specifications and sales policies. This would help them find m-commerce applications easy and convenient to use. It would also make them trust the m-commerce application as they understand its contents. Secondly, Arabs prefer applications that have interfaces built in the Arabic language [30]. Easiness, as mentioned above, could be behind this attitude, however, cultural reasons might also exist. Thirdly, there is a legal requirement from the Saudi Ministry of Commerce and Investment that mandates shop owners use Arabic in all of their business operations, including customer invoices and

restaurant menus [31]. This imposes requirements on vendors to use platforms that support the Arabic language, not only for user interfaces but also for document generation, e.g. invoices.

In this context, all of the interviewees agreed on the importance of supporting the Arabic language. The **MAC** marketing manager conveyed that *“m-commerce is simple for all customers if Arabic language support is provided though it is crucial to have a global language such as English accessible to other [non-Arab] clients.* Also, (**YAS**) commented that *“the Arabic Language is of utmost importance to have as it is the official language. Our website’s support for Arabic was a major factor in attracting new customers.* In conclusion, the interviewees are linking cultural factors and Arabic language support to the ease of use and trust of m-commerce, which contributes to the intention to use m-commerce.

F. High-level Product Specification

An interesting observation from the interviewees’ responses reveals their lack of interest in providing detailed specifications about their products on their websites or social media pages. They rely on the specifications that are provided by the producers, i.e. that are written on the product itself. Therefore, usually, m-commerce users would find high-level descriptions of the products rather than detailed specifications. This high-level description could include phrases like *“approved by the government”* in order to increase customers’ trust in the product. In this context, the owner of the perfume shop (**AEP**) believes that *“the website should offer broad specifications not detailed, notably the name of the product should be related to what it is manufactured from. Orchid perfume, a perfume derived from the orchid flower, is a good example of this. This is a major factor in determining whether or not to purchase.* When it comes to technological goods, (**JFP**) claims that he doesn’t think it’s necessary to mention their specifications since *“...it is made by well-known companies like Apple or because he can find them on several websites. Displaying the equipment and colour choices accessible to customers, as well as offering promotions and discounts, is more important.”*

These findings contradict the user expectations as reported by relevant research studies [32, 33, 34]. They reported that detailed product specifications and images are critical factors that customers consider when making a purchase decision online. The specifications provide customers with detailed information about a product, including its features, functions, and technical specifications. This information helps customers make informed decisions about a product’s suitability for their needs, reducing the likelihood of returns and increasing customer satisfaction. This could be a reason that explains the limited interest in m-commerce for many businesses in the country, which is an interesting finding that would draw the vendor’s attention to the importance of publishing product specifications online.

G. Lack of Data Protection

Business consumers, e.g. customer using m-commerce, provide vendors with their personal data each time they purchase a

product or access a service. The provided personal data include credit card details, names, contact numbers and addresses, among others. Customers provide these details for the sake of completing the purchase process and they expect vendors will preserve their privacy and keep their data secure and inaccessible by unauthorised users including other vendors. This is indeed a crucial requirement that is increasingly necessary for the development of m-commerce services [35].

According to the interviewees’ feedback, vendors were found to handle consumers’ data in an undesirable manner. They mentioned multiple instances where customer data was not adequately protected and was either shared with other vendors or traded as part of business deals. This indicates that the privacy of customer data is not given due consideration by these vendors. For example, in response to the data protection question the representative of **SOA** said *“we exchange customer data with other companies, though this is wrong.”* The representative of **AEP** responded *“I do not know if there is a data protection policy in the country, we pass our customers’ data to other businesses if they agreed to do the same.”* Also, the representative of **JFP** said *“There is no privacy policy implemented. In fact, you can buy a package of numbers from telecommunication companies. You can also specify the ages and locations of the customers.”*

To sum up, the results from the investigation on data protection demonstrate that vendors violate data protection regulations, and there is inadequate enforcement of those regulations in the country. These findings align with the outcomes of the customer-focused survey, indicating that Saudi m-commerce users lack trust in m-commerce vendors’ ability to protect their personal information from misuse [25]. Therefore, it can be inferred that the misuse of data by vendors is the underlying reason for the relatively low level of trust in m-commerce in the country.

H. Lack of Protective Regulations

Most interviewees share the belief that the Saudi government enforces strict limitations on vendors only, while refraining from imposing any restrictions on consumers. thereby hindering the widespread adoption of m-commerce. According to their perspective, the regulatory environment overwhelmingly favors customers over vendors, offering little protection to the latter in the event of customer misconduct. To support this finding, I quote the response of the representative of (**AKD**): *“Although the regulations are generally effective, they tend to favor customers over vendors. As a result, when customers make unfounded complaints, vendors may face reputational damage without any recourse to defend themselves.”*

Government regulations have come under criticism for their perceived role in causing instability that makes it challenging for vendors to devise clear strategies, such as adopting new technologies. One significant factor contributing to this instability is Saudization, the Saudi nationalization scheme, which requires Saudi companies to employ at least 30% Saudi nationals in their workforce. However, research has shown that many Saudi nationals prefer working in governmental

institutions, leading to high rates of turnover in the private sector [36]. As a result, private companies are often forced to hire employees who may leave at the first opportunity to work in the public sector, leading to a high level of labor turnover and difficulty in establishing a stable workforce. This situation has been clarified by the representative of **RAS** in his response: *“Despite the fact that we could recruit a teacher with better credentials and cheaper wages from other Arab nations, the government has forced us to employ Saudi instructors. In many cases, a teacher quits after a year of service because they have been hired by the government, ... We’ve suffered great damage.”*

This finding could support previous findings in the literature. For example, as reported in [37], the regulations set by the Ministry of Commerce and Industry in Saudi Arabia are not clear in the way they protect customers against vendors and local against international business.

Overall, the above suggests that government policies in Saudi Arabia may be contributing to challenges in the adoption of m-commerce services for the country’s business landscape.

I. Expensive Governmental Fees

The significant drop in oil prices in the last few years has had a profound impact on the Saudi Arabian economy. As a result, the government has been forced to take measures to diversify its revenue sources and reduce its reliance on oil exports. One of these measures has been to impose new taxes and fines on products and services in the country, in an effort to boost government revenues and reduce the budget deficit [38].

However, these new taxes and fines have had a negative impact on the adoption of m-commerce in the country, as noted by the interviewees. The additional costs imposed by the government have made it more expensive for vendors to offer their products and services through m-commerce platforms. As a result, many vendors have been hesitant to invest in m-commerce, as the additional costs associated with the new taxes and fines have eroded their profit margins. This impact can be summarised into the following.

- **The adoption of m-commerce services requires vendors to register a national address for their companies**, the fees for this registration are annual and are expensive as perceived by the vendors. For example, the representative of **AEP** informed that *“We are required to pay SAR1000 annually just for a national address though they do not provide any service, it is just a national code.”*
- **The government imposes expensive custom duty on imported goods**, which in the end raises costs on customers. The custom duty applies on all goods even retail sales. This affects online trading even giant online sellers such as Amazon. The increase in product costs does not give m-commerce an advantage compared to in-store shopping, especially since Saudi Arabia is not an industrial country, meaning that most of the products are imported. It makes the expectation that online shopping is cheaper than in-store – as vendors will not need much of the costs for running physical stores– not valid. In

this context, the representative of **AEP** confirmed that *“... Amazon prices are higher in Saudi Arabia than other countries due to the high customs duty...”*.

- **Vendors are required to bear the costs of undelivered items**, according to the regulations set by the Ministry of Commerce. This means that if a vendor dispatches an item to a delivery company for delivery to the customer and the item is lost, the vendor must refund the customer. This regulation has been a source of frustration for many vendors, as it places the burden of responsibility for lost items on them, even if the item is lost during the delivery process. Furthermore, when a customer raises a complaint about a product, the Ministry of Commerce tends to side with the customer. This often results in vendors having to refund the customer, even if the product was received in good condition. Vendors view this as a type of penalty that is imposed on them if the customer is dissatisfied with the product, even if the issue was not caused by the vendor. For example, the representative of **YAS** pointed out that *“the regulations are very tough and fines are high. The Ministry of Commerce always supports the customer and never cares about vendors.”*

In summary, it can be concluded from the above that the governmental regulations that relate to fees and taxes impose challenges on vendors and do not encourage them to adopt m-commerce in Saudi Arabia.

J. Easier to Target Female Customers

The culture of Saudi Arabia exhibits distinct features, such as a strong emphasis on privacy, particularly when it comes to women, which sets it apart from other cultures. Though the country is gradually changing and becoming more open in the light of Vision 2030, the culture is still conservative towards women. Compared to Saudi men, Saudi women still do not conduct substantial work outside the house. Even though Saudi Arabia’s government legalised women to drive in June 2018, the country’s culture is still putting many lifestyle limits on Saudi women [39]. This includes, for instance, that Saudi women are not encouraged to work. Figures showed that the unemployment rate for Saudi women was about 24% in 2020 compared to only 7% for men [40].

Given these cultural norms, it can be inferred that Saudi women tend to spend a significant amount of time at home. Therefore, it is imperative for merchants to utilise e-commerce and m-commerce technologies in order to effectively reach them as potential customers. In this regard, **MAC** representative confirms that social media (e.g. Instagram) is one way to reach women customers. They said, *“As they have difficulties visiting shops compared to men, this forces women to primarily focus their purchase choices on photos displayed on social media. They always contact us through WhatsApp to make orders. That’s a great deal.”*

MAC representative informed also that female customers have their specific style of shopping that can be dealt with through social media. They notice that female customers find it prestigious to use technology for shopping. They care more

about quality, presentation, and speed of access rather than price. These can be managed through high-quality professionally taken photos of the products.

In conclusion, the findings unequivocally establish that culture plays a significant role in the adoption of m-commerce in Saudi Arabia, as demonstrated by the perspectives of both vendors and customers

K. It Can Be Useful

The focus of this theme is on the general attitude towards and the perceived usefulness of m-commerce from the vendors' perspective. The majority of vendors pointed out that in general m-commerce can be useful despite the mentioned challenges. Many of them mentioned that they have plans to increase their adoption of m-commerce, however, in various forms.

The obvious trend currently is the use of Internet and mobile technologies for marketing, especially through social media where – as mentioned above – photos of products are displayed on social media pages. However, it can be noticed that even with this attitude towards electronic marketing (as a form of e- or m-commerce), limited utilisation of mobile marketing strategies is adopted. This is evidenced by the observation that though strategies for personalised targeting exist in the literature of mobile marketing, they are not in use, at least by the interviewed vendors. None of them mentioned that they use social media adverts or Google Ads to target customers. These adverts can be very useful as they utilise contextual information – that is provided by the customer's mobile – to deliver to the customer content and products that 'best' matches their interests. This contextual information includes location, time, surrounding environment, shopping companion, and market competition. Research shows that utilising this information for personalised targeting of customers results in a significant increase in sales [41]. Perhaps the little awareness of vendors about these advantages would provide an explanation for their limited adoption of them.

Despite that, vendors find that m-commerce through social media pages help them to popularise their stores and products. In this regard, **BPR** informed that "... *electronic marketing helped us to double our sales,*" while **RCF** revealed that they have plans to increase their adoption on m-commerce by 70% and maintain small shops as contact points for online customers.

Another reason for finding m-commerce useful is the cheap running costs as compared to in-store commerce. The representative of **TCR** informed that they have plans to create an online marketing store for their car sales as that is much cheaper than opening and maintaining car showrooms.

In summary, vendors have a positive attitude towards m-commerce despite facing challenges. Vendors find that m-commerce through social media pages helps them to popularise their stores and products. Additionally, some vendors plan to create online marketing stores for their businesses to increase their adoption of m-commerce.

L. It Makes Competition Harder

Although research suggests that m- and e-commerce can be beneficial for vendors, there is a contrary perspective that applies to small businesses. While these technologies make it easier for vendors to reach their customers and increase their sales, some interviewees have expressed concern that m-commerce will make it harder for small companies to compete, as larger companies will be able to reach wider ranges of customers, even crossing borders. This means that local vendors may struggle to reach customers in the same way that larger companies like Amazon and eBay can. As a result, the representative of **MAC** stated that "*It will be a significant loss if small businesses move to online commerce. They will not be able to compete with big companies, and they should instead rely on customers who prefer in-store shopping.*"

This concern is not unfounded, as research has shown that small businesses face significant challenges in competing with larger, more established companies in the online marketplace. Limited resources, lack of brand recognition, and limited access to financing are among the most common challenges that small businesses face [42]. In addition, larger companies can use their resources to offer discounts, promotions, and free shipping to customers, which can make it harder for small businesses to compete on price.

Despite these challenges, there are still opportunities for small businesses to thrive in the online marketplace. For example, small businesses can use social media platforms to engage with customers and build their brand presence, which can help them to differentiate themselves from larger competitors. Additionally, small businesses can use niche marketing strategies to target specific customer segments and provide a more personalized shopping experience. By leveraging their unique strengths and capabilities, small businesses can carve out a profitable niche in the online marketplace.

M. M-commerce is Coming

The topic at hand pertains to the vendors' anticipation of the extent to which m-commerce will be adopted in Saudi Arabia in the future. The majority of the interviewees think that m-commerce will be widely used in the country, despite the current challenges. The majority acknowledges that the Internet and mobile technologies are playing a crucial role in people's daily life. Thus utilising the services of these technologies for trading in the country is inevitable. As people spend more time on their mobile devices, it will be feasible for vendors to utilise those technologies to attract and interact with customers. This will help vendors make anywhere and anytime sales. Location and time will no longer put constraints on people to carry out their shopping.

According to the majority of vendors interviewed, m-commerce is gradually gaining ground in Saudi Arabia, despite encountering challenges and progressing slowly. They observed an increasing number of businesses adopting some form of m-commerce service. In this context, the representative of **SOA** pointed out that the "*It [m-commerce] has been real in the country and we have to consider and deal with it to*

be successful.” Also, the representative of **YAS** informed that *“The market is becoming electronic to a big extent. Many companies closed their stores and moved to the Internet.”*

In summary, it is possible to conclude that Saudi vendors think m-commerce will be widely used in Saudi Arabia. Even though they are not satisfied with m-commerce in its current state due to the mentioned challenges, they think that they have to deal with it as customers spend a considerable amount of time on their mobile devices and in the Internet world.

VI. DISCUSSION

This section offers an in-depth discussion of the results obtained from our study, highlighting key insights and observations.

A. Delivery services

The interviewees’ comments revealed two other important observations. Firstly, customers have exceptionally high expectations when it comes to delivery speed. Based on the feedback, it seems that a three-day delivery period is perceived as too long by many customers. This expectation is particularly noteworthy in light of Japan’s impressive delivery services, exemplified by Yamato Transport. For instance, Yamato’s innovative TA-Q-BIN delivery technology allows for ultra-fast deliveries, including within a few hours, using automated delivery lockers, and even via drone [43]. Yamato’s success in this area is a testament to the importance of meeting customers’ expectations and providing exceptional service.

Secondly, vendors may be considering delivery fees as an extra cost to customers that may adversely affect customers’ interest in their products. However, customers may accept this extra cost in return for the delivery service. As in the US, e-commerce enterprises may profit from delivery services without charging clients. Premium subscriptions with free delivery are one way. Amazon Prime’s yearly membership includes free one-day delivery. Hence, clients get free delivery while the corporation generates profit from subscription fees [44]. The aforementioned observations offer valuable insights for merchants who wish to improve their m-commerce services and provide a satisfactory customer experience.

B. Perspective on Competition

Section V-L introduces a theme that sheds light on how certain vendors perceive the role of m-commerce in the marketplace in regard to competition. While some believe that m-commerce may pose a threat to competition, another perspective suggests otherwise, as it can help reach a wider customer base. Nevertheless, some research indicates the presence of negative views on the subject. Research studies such as [45, 46] found that m-commerce has the potential to increase market share for businesses by making it easier to reach more customers. This is because the increasing popularity of smartphones and tablets will result in more people using mobile devices to browse the internet, shop online, and make purchases. This will allow businesses to reach customers on their mobile devices. In addition, m-commerce

can also provide businesses with valuable data insights about their customers’ shopping behaviour and preferences, allowing them to better tailor their marketing strategies and product offerings to meet their customers’ needs. One example is the case of TOMS shoes, which are larger ones. For instance, TOMS Shoes is an e-commerce company that sells shoes. The firm was founded in 2006, and its business concept consists of donating one pair of shoes for every pair sold. Despite competition from larger retailers, TOMS has been successful in part due to its commitment to philanthropy. In 2014, the company was valued at over 625 million [47].

C. Study limitations

The findings of this study provide interesting insights that would help understand the vendor’s perspective toward the adoption of m-commerce. This can help researchers, businesses, and policymakers develop a more holistic view of m-commerce adoption and develop more effective strategies to promote its adoption. Expanding the sample size is a potential avenue for future research in this study. However, due to practical considerations such as the time-intensive process of locating and persuading vendors to participate in interviews, a sufficiently large sample size may not be feasible. Alternatively, a survey could be employed to gather quantitative data and achieve the desired sample size. Although the current study concentrates on business-to-consumer relations, it is recommended to consider business-to-business relations in future research. Addressing both aspects could allow for a comprehensive understanding of the m-commerce addition in Saudi Arabia. Furthermore, it is important to include large companies in the study, as the current research is constrained by its emphasis on small and medium-sized enterprises (SMEs). This limitation can have notable implications, particularly regarding the concept of trust, as SMEs may demonstrate unique trust dynamics compared to larger companies with specialised divisions or roles. Overcoming this limitation in future investigations can offer a more comprehensive understanding of expertise levels within the context of m-commerce.

VII. CONCLUSION

This paper presented a thematic analysis of the vendor perspective in regard to the adoption of m-commerce in Saudi Arabia. The data were collected through semi-structured interviews conducted with ten Saudi vendors. The findings suggest that m-commerce services are still in their early stages in Saudi Arabia, and the limited adoption can be attributed to two main factors: government regulations and technological infrastructure. Specifically, data protection regulations are not enforced adequately in the country, and vendors face expensive fines and fees. Furthermore, the country’s infrastructure does not yet provide a reliable delivery service, which is a crucial requirement for m-commerce adoption. Future research should consider a more scalable approach, such as a larger sample size or a different data collection method.

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VIII. INTERVIEW QUESTIONS (ENGLISH VERSION)

Interview Questions	
Interview Guide from a stockholder perspective at private Sector with IT employees and IT directors who are responsible for implementing m-commerce services	
Company questions:	
Company size:	
How many branches:	
How many employees:	
Type of business: (e.g. digital services, tourism, fashion retail, electronic goods wholesale etc.)	
Average customer type: (e.g. age, average spending, buying frequency etc.)	
Approximate size of the customer base:	
1. How familiar are you with m-technologies in general and m-commerce in particular?	
2. How familiar are other businesses, do you think, with m-technologies in general and m-commerce in particular?	
3. Does your company adopt m-commerce?	
4. How do you describe the level of IT skills the company staff have and do their IT skills influenced your intention to use m-commerce?	
5. Does your company provide delivery service, collection service, or both? How do you think these services influence the customer intention to use your m-commerce service?	
6. In your opinion, how does the availability and detailing of product specifications on the m-commerce application affect user intention to use m-commerce service?	
7. Do you prefer to have your own m-commerce application or use third-party systems (e.g. mobile app of e-bay)? Why?	
8. What kind of payment solutions do you accept (credit cards, PayPal, bank orders, Cash on delivery)?	
9. What are security solutions do you use (in-house, off-the-shelf, third-party subscription provision)?	
10. What are your policies on customer data management / protection?	
11. How does the quality of the m-commerce applications affect users experience and their intention to use m-commerce?	
12. To what extent does the government regulations motivate firms to adopt m-commerce?	
13. Would you describe the organisational technical infrastructure that is required for m-commerce?	
14. Do you think customers trust m-commerce services and how can you increase customers trust in it?	
15. To what extent you trust selling products and receiving money through over the internet?	
16. Do you think customers find m-commerce services easy to use and how can you increase customers perceived ease of use in your m-commerce service?	
17. To what extent does m-commerce add value to your business? Why?	
18. What does influence your decision of adopting m-commerce in your business?	
19. Do you have anything to add?	