THE EFFECT OF USING MOBILE BRANDED APPS ON THE PURCHASE INTENTION IN THE RETAIL INDUSTRY AMONG SAUDI FEMALES

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ABSTRACT: *This paper aims to increase collective awareness of the importance of introducing E-commerce in businesses in Saudi Arabia. The easiest and the trendiest way is using branded mobile apps. The study investigates consumer purchase intentions using smartphone branded applications. More specifically, it studies whether a moderating variable such as brand loyalty and mediating variables such as trust and quality of the app affect the purchase intention. The usability of the app is the independent factor and the purchase intention is the dependent factor. The survey was conducted using an electronic and self-administered questionnaire. 167 questionnaires were answered. The response rate was 95%. The findings were that the usability of branded mobile apps highly affects the purchase intention among Saudi females in Saudi Arabia.*

KEYWORDS: mobile application, brand application, online shopping, e-commerce in Saudi Arabia, purchase intention.

INTRODUCTION

In 2017, any business in Saudi Arabia who doesn't have Internet appearance is considered a failure and left behind. In the last two years the social networking appearance was the trend, but now in 2017 the new trend is having an online store and selling digitally. Many large stores took that steps in the beginning like Jarir bookstore, Extra and even Aldanub is now selling grocery online. Also furniture stores like Alrugaib and dome are now offering online shopping and free shipping to everywhere around Saudi Arabia. Not to mention the international brands that opened online app stores especially to Saudi consumers like next, mamas and papas and many more.

According to statistical portal, revenues from Saudi E-commerce market is expected to reach US$5,471m in 2017. 12.1% annually is the Expected growth rate in revenues, which will lead to a US$8,642m in market Volume. These tempting numbers not only draw the attention of the Saudi government and investors, but also international investors are now eager to have a piece of the pie and share the profits of such huge market. This huge number and many other reasons drove me to choose this area of research as it is not only valuable to the academic field but to business entrepreneurs and investors. The lack of academic studies and literature reviews about the Saudi E-commerce market was the second reason to choose this topic.

According to the Euro monitor report- the digital consumer in Saudi Arabia (march 2017) -, it stated that the Saudi population has shown a tremendous growth in the digital environment field. Also, the Saudi government is responsible for this kind of change because they are starting to implement the 2030 vision and they are succeeding in it. The government is now focusing on the improvement of the infrastructure of digital economy.

The importance of e-commerce continues to grow in retail, providing companies with a tool to improve commercial and marketing strategies.Revenue is expected to show an annual a market volume of US$9,405m in resulting in % of 11.5 (2022-growth rate (CAGR 2017 .2022

Mobile applications –apps- have become an important platform for brands to interact with customers. Initially, mobile applications were software for productivity purposes like: emails, calendar and contacts. Recently, the increasing number of users has urged the need for new categories of apps like: social networks, business and finance. Marketers didn't miss that opportunity and engaged in releasing apps for brands.

Research Problem

The main purpose of this study is to investigate the effect of using branded mobile apps on the purchase intention in the retail industry among Saudi females. Several factors will be studied in this paper: quality of the app and trust are important determinants and they are mediating factors between the usage of branded mobile apps and the purchase intention. Brand loyalty as moderating variable affecting the relationship between trust and purchase intention.

Research Objectives

1-   Improve the collective awareness about the importance of the quality of the app and it's effect on purchase intention.
2-   Develop the infrastructure of E-commerce in Saudi Arabia by giving them guidance on how to use branded apps in the most efficient way to positively increase the purchase intention of customers.
3-   Build a base for future studies on branded mobile apps among Saudi female customers.
4-   Provide certainty to companies hesitant whether to launch a branded mobile app or stick to the regular old fashion way of selling in physical stores.

Research Importance

The study's contribution to knowledge is valuable. As it discusses the part of businesses that was neglected before in Saudi Arabia but now it is a major driver to organizations success or failure and it is becoming one of Saudi's income revenue to many families in Saudi Arabia. The importance of the study lies in the lack of market research in Saudi Arabia and the growing trend in online shopping especially through branded mobile apps. The motto between Saudi entrepreneurs is: take your business online or die.

LITERATURE REVIEW

Usability of Branded Mobile Apps
Branded apps are conceptually defined as software that is downloadable on mobile devices, expresses a brand identity through the name of the app, and shows a brand logo or icon saco and –aldanub –extra –Many local saudi brands such as: jarir .(ellman et al., 2011B) s . zara have issed mobile app–mamas and papas –next – aglobal franshised brands like: ike .online shopping feature an ost of these apps offerM

Quality of the App

Hsiao et al.,(2010) defined perceived web quality as the degree to which a consumer perceives that the web site' s features and characteristics meet his/her needs and requirements. Perceived web quality reflects the functionality and search facilities of an online shopping web site.

Based on the previous study, the same concept is applied to the quality of online shopping apps. Previous studies (Al-Maghrabi and Dennis, 2011; Bai et al., 2008; Liao et al., 2006) have shown that the higher the perception of a consumer about the quality of an online shopping web site, the higher is his/her perceptions about the benefits that can be gratified by using the web site. The same concept applies to branded mobile applications.

Trust

Trust is defined as the consumer's willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller (Jarvenpaa and Tractinsky, 1999). Researchers studied the effect of trust on online shopping (Mutaz et al., 2015) and perceived web quality was found to be a direct predictor of trust and their relationship is positive. "If consumers perceive a web site as high quality and user-friendly, they are more likely to trust it, will perceive it as more useful and will be more willing to depend on that vendor (Hampton-Sosa and Koufaris, 2005; McKnight et al., 2002b)" (Al-Maghrabi and Dennis, 2011).The latest government update regarding E-commerce in Saudi Arabia is the issuing of www.maroof.sa, which is an initiative to support work from home families to further adapt E-commerce and facilitate online payments. The second reason to start this initiative is to increase trust among buyers and sellers through regulating the financial transactions. It's a free service that allows you to rate and comment on buyers and sellers to build a trusted database in the future.

Brand Loyalty

Brand loyalty have been studied in the literature with consumer satisfaction and found that the relationship is not simple or straightforward (Bloemer and Kasper, 1995). Also, brand loyalty has been studied with trust and the results suggest that overall satisfaction is an oderating effect of customer involvement antecedent of brand trust, and that there exists a m brand trust relationship-on the overall satisfaction (Delgado-Ballester and Luis Munuera-Alemán, 2001). Brand loyalty has been studied as a dependent variable (Nam et al., 2011). The brand loyalty is defined as "the consumer's intention to visit or willingness to recommend the app." (Nam et al., 2011)

Purchase Intention

Purchase intentions are personal action tendencies relating to the brand (Bagozzi et al. 1979; Ostrom 1969). Intentions differ from attitudes. Whereas attitudes are summary evaluations, intentions represent "the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior" (Eagly and Chaiken, 1993). A precise definition of purchase intention is: Purchase intentions are an individual's conscious plan to make an effort to purchase a brand ((Spears and Singh, 2004.

Research Model

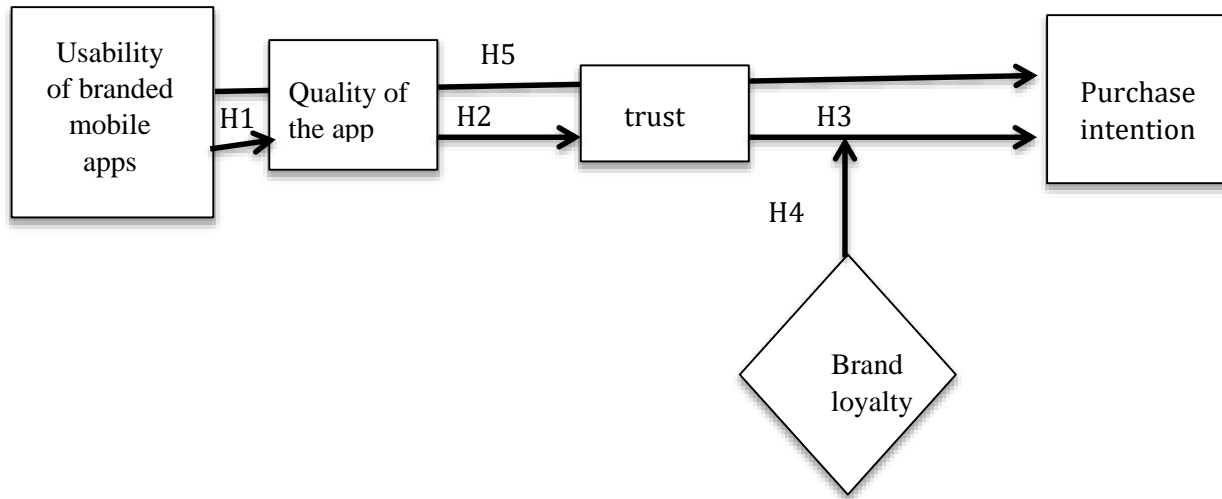The study will be based on the following developed model:

Figure 1: research model

Research Hypotheses

H1: There is a significant positive effect of usability of branded mobile apps on the quality of app.

H2: There is a significant positive effect of quality of the app on Trust.

H3: There is a significant positive effect of trust in the purchase intention.

H4: Brand loyalty moderates the relationships between trust and purchase intention.

H5: Quality and trust moderates the relationship between usability of branded mobile apps and purchase intention.

RESEARCH METHODOLOGY

In this research a questionnaire with 5 scales has been used to measure the variables in the study. The questionnaire is distributed online using Google docs among Saudi females aging from 15-50 years old. 168 questionnaires were answered. The valid and complete questionnaires were 159 with a 95% response rate.

Scales

All items of the scale were translated to Arabic because the study is conducted in Riyadh-Saudi Arabia, which reduces the language barrier, and increases the response rate. Some of the items in the scales were slightly modified to be more fitting to the subject of the study. All measurements were taken using a five-point Likert scale ranging from one ('strongly disagree') to 5 ('strongly agree'). The Quality of the app scale is taken from a banking mobile apps scale, which was developed from a previous E-commerce scale (items .(2011 ,Lin in the usability of the app scale were parahprased in the scale from asking about (1,2,3,5,6,8,9) Christophersen) from It was adopted .sking about online stores in generala single store to a and Konradt, 2011). Trust scale was adopted from(Noh and Lee, 2016). Purchase intention

scale was adopted from (Hsu and Lin, 2016). Brand loyalty scale was adopted from (Kim and ah, 2016).

Data Analysis
Partial least squares (PLS) were chosen for the current study using the software application SmartPLS. It was used in a two-stage approach, measurement and structural model testing.

Measurement model
Examining the reliability, convergent validity and discriminant validity can assess the measurement model. Specifically, reliability -which refers to the internal consistency of measurement- can be assessed by checking if the value of composite reliability (CR) is more than 0.7, the average variance extracted (AVE) is greater than 0.5 and Cronbach's α is greater than 0.6 (Hair et al., 2006). Table 2 shows that the CR values are ranging from 0.84 to 0.94 and the AVE values are ranging from 0.52 to 0.83. These values are higher than the acceptance value 0.70 and 0.50, which indicates good construct reliability. Furthermore, in order to check the convergent validity, loading factor for each item was calculated. All item loadings are larger than 0.6 and the t values indicate that all loadings are significant at 0.05, which indicate that the scale has a good convergent validity.

RESEARCH RESULTS

Bootstrapping method in Smart PLS software was used to test the statistical significance of path coefficients. Figure 2 in the appendix shows the P value for all research variables and the PLS model of the study.

Structural model
The analysis result represents that the factor (Usability of branded mobile apps) has an influence on quality of the app directly (t=10.156, p≤ 0.05), and it explained 35.1% of the usability of branded mobile apps variance. In addition, the factor (quality of the app) has an influence on (trust) with values (=9.054, p≤ 0.05) and its explained 34.4% of the trust variance. Accordingly, H1and H2 is supported. Furthermore, trust has a positive influence on purchase intention with values (t= 4.485, p≤ 0.05) and it explained 60.3 percent of purchase intention variance. Thus, H3 was supported. Moreover, the moderator relation (brand loyalty) between trust and purchase intention are not accepted because the p value is more than 0.05. So H4 is not supported. Finally, the full path model (the impact of usability of branded mobile apps through quality and trust on purchase intention) is accepted with values (t= 3.28, p≤ 0.05). Thus, H5 was supported. Table 1 below summarizes these findings

Table (1) summary of hypothesis testing result

No.	Path (hypothesis)	t	p	Results
1	Usability of branded mobile apps → Quality of the app (direct) **H1**	10.156	***	Supported
2	Quality of the app→ Trust (direct) **H2**	9.054	***	Supported
3	Trust → purchase intention (direct) **H3**	4.485	***	Supported
4	Brand loyalty as moderator between **Trust** and purchase intention **H4**	1.50	0.134	Not Supported
5	Usability of branded mobile app→ purchase intention(indirect through quality and trust- full path) **H5**	3.286	***	Supported

CONCLUSION

The phenomenon of mobile branded apps is trending in Saudi Arabia and thus studying the effect of the apps on the purchase intention is important. The trend of online shopping is emerging in Saudi Arabia, but the brands with online stores (branded mobile apps) are still in its infant stages. Although, this paper proved the positive effect the usability of branded mobile apps has on the purchase intention among Saudi females. Also, it proved the role trust, quality of the app and brand loyalty plays in strengthening the relationship among the dependent (purchase intention) and independent (usability of branded mobile apps) variables in the study. The second hypothesis is coherent with the literature review that states the quality of the app is a direct predictor of trust (Mutaz et al., 2015).

Research Limitations
This study is conducted on a wide range of apps, which included all retail industry mobile branded apps. The reason behind the broad scope of this study is that branded mobile apps are a new trend in Saudi Arabia. The researcher cannot focus in a specified app category due to the few number of apps. Until writing this paper a new branded mobile app is issued every day. As a result, the researcher couldn't make a precise count of branded mobile apps out there.

Recommendations
Only in the last two years the infrastructure of E-Commerce in Saudi Arabia is developed and allowed brands to issue mobile apps to sell through. The researcher expects this trend to grow further allowing each category of stores to have a wide selection of branded mobile apps. The researcher encourages future studies to be conducted in each specific category of mobile branded apps like: fashion, electronics, supermarkets and so on. This will help to better understand the business environment in Saudi Arabia since there is not enough research is done. Also it will develop the understanding of Saudi E-commerce.

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Acknowledgement

Appendix

1-   Quality of the app scale:

The scale is taken from a banking mobile apps scale which was developed from a previous E-commerce scale(Lin, 2011)

	Statement	1	2	3	4	5
1-	System quality of the mobile branded app quickly loads all the text and graphics					
2-	Mobile branded apps are easy to access in the system capacity perspective					
3-	I could use branded apps at anytime, anywhere I want					

2- Trust scale:
Items were paraphrased in the scale from mobile banking apps to branded mobile apps

	Statement	1	2	3	4	5
1-	Branded mobile apps are trustworthy					
2-	I trust in the benefits of branded mobile apps					
3-	Branded mobile apps keeps customers' best interests in mind					
4-	I trust mobile branded apps					

3- Usability of the app scale:
items (1,2,3,5,6,8,9) were parahprased in the scale from asking about a single store to asking
ut online stores in generalabo

	Statement	1	2	3	4	5
1-	app stores makes online shopping easy					
2-	It is too complicated for me to use online stores					
3-	One can get an overview of the store quickly					
4-	earnThe handling of online stores are easy to l					
5-	A purchase in online stores can be done quickly					
6-	The store offers all features that I want in an online store					
7-	I can use the store in the way I expect					
8-	Overall, I am satisfied with the usability of online app stores					
9-	Online app stores stimulates me to explore it further					

4- Purchase intention scale:

	Statement	1	2	3	4	5
1-	I intend to continue purchasing in-app products and services					
2-	I strongly recommend others to purchase in-app products and services					
3-	I find purchasing in-app products and services to be worthwhile					
4-	I will frequently purchase in-app products and services in the future					

5- Brand loyalty scale:

	Statement	1	2	3	4	5
1-	I would buy the brand in the branded app at the next opportunity I get					
2-	I prefer this brand in the branded app to others					
3-	I will recommend that others purchase this brand in the branded app					

Sample Characteristics
Table (1) Respondent demographics

Category	Item	Frequency	Percentage%
Gender	Male	2	1.3
	Female	157	98.7
Age	Less than 30	92	57.9
	31- 40	48	30.2
	41-50	15	9.4
	More than 50	4	2.5
Education level	Secondary school or less	24	15.1
	Bachelor degree	107	67.3
	Master degree	20	12.6
	PhD degree	8	5.0
Place of residency	Saudi	155	97.5
	Other	4	2.5
Total		159	100%

Table (2) Result of construct assessment

Constructs	Items	Factor loading	Mean	SD	CR	Cronbach's α	AVE
Usability of branded mobile apps	U1	0.726	0.727	4.475	0.888		
	U2	0.775	1.218	2.152			0.529
	U3	0.766	0.929	4.101			
	U4	0.723	0.838	4.266			
	U5	0.802	0.952	4.076		0.837	
	U6	0.730	0.979	3.753			
	U7	0.839	0.931	3.842			
	U8	0.868	0.969	3.943			
	U9	0.824	1.063	3.899			
Quality of the app	QL1	0.790	1.003	3.627	0.844	0.724	0.643
	QL2	0.770	1.071	4.247			
	QL3	0.844	1.049	3.399			
Trust	T1	0.864	0.975	3.791	0.916	0.878	0.731
	T2	0.844	0.975	3.684			
	T3	0.841	1.017	3.342			
	T4	0.871	0.991	3.703			
Purchase intention	P1	0.912	1.174	3.835	0.948	0.926	0.819
	P2	0.922	1.119	3.69			
	P3	0.900	1.04	3.861			
	P4	0.886	1.101	3.854			
Brand loyalty	B1	0.914	1.045	3.639	0.936	0.898	0.831
	B2	0.895	0.966	3.696			
	B3	0.925	0.912	3.658			

Figure (2) Result of PLS