

## An Integrated Model of Factors Contributing to Customer Loyalty in the Mobile Services Industry

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**Abstract:** Mobile service providers are accelerating the trend toward greater customer loyalty, yet, there is still a lack of research conducted in this context, especially, in Jordan. This study aims to fulfill this evident research gap by empirically examining the effects of service quality, price and innovation on customer loyalty in one integrated model. Using a self-administered survey, data was collected using a convenience sample of 342 students at Jordanian Universities. SEM analysis reveals that with the exception of service innovation, service quality and price have a significant influence on perceived value. Perceived value also had a positive influence on satisfaction and in turn, satisfaction predicted user's loyalty. The study has major practical implications for service businesses as it uniquely identifies variables that affect customer loyalty of such businesses in Jordan as well as the mediating effects in these relationships. Understanding these relationships will help lead to effective customer loyalty management.

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## INTRODUCTION

Today, businesses are under pressure to develop the quality of their products with the focus on costs reduction to meet the demands of customers and remain profitable within a highly competitive environment<sup>[1, 2]</sup>. Telecommunications companies were among the first companies to face significant challenges such as strong competition because of the ever-changing business environment<sup>[3, 4]</sup>. This strong competition drives mobile service providers to introduce new services, offers and packages to gain new customers and to achieve high level of customer loyalty<sup>[5-8]</sup>. In Jordan, the number of mobile

phone users is fast growing. According to The Jordan Times<sup>[9]</sup>, it reached 9 million 88.59% of the population) at the end of the third quarter of 2018. Thus, telecommunications companies in Jordan consider university students to be very important customers. As the mobile phone market is a rapidly growing sector, companies have given a green light to their marketing strategist, analysts and directors to find out new means to get new customers and keep current ones. As a result, companies had to adopt effective marketing programs designed to improve their service quality, offers, price and improve their networks<sup>[10]</sup>. While a number of previous studies have investigated the effect of different marketing

strategies used by these companies on customer loyalty, yet more research that evaluates the effect of these strategies from customer's perspectives is needed<sup>[11, 12]</sup>. This study intends to fill this gap by exploring the factors that affect customer's loyalty for mobile phone services namely; service quality, price and innovation from the perspective of Jordanian university students. The study aspires to improve understanding of those factors, so as to help mobile service providers offer better services to satisfy their current clients and attain new ones.

A number of previous studies such as Hussain<sup>[13]</sup> addressed that Jordanian universities' students are facing many obstacles while using mobile phone services which may ultimately affect customer loyalty negatively. The most important factors that may affect customer loyalty to a mobile service provider are price, quality of service and innovation. For instance, service quality focuses on quantifying the gap between service expectations and perceptions. Investigating service quality dimensions in the mobile sector may help identify particular service under performances and opportunities. The need for targeting service price to attract and retain loyal customers is also of concern according to Dhurup.

Furthermore, innovation is considered one of the most interesting areas for research due to the large variety of innovation that is being used<sup>[14]</sup> in addition to its unexpected reflection on customer preference and intention<sup>[15]</sup>. Jordanian mobile service providers extensively use advanced innovative technology but the impact of its appliance is not deeply studied.

Researchers point out that customers may possess diverse reasons to use certain services and thus their perceived values might differ. Therefore, measuring customer perceived value is crucial to assess current and anticipating future services<sup>[16]</sup> which in return affects customer satisfaction and ultimately customer loyalty<sup>[17]</sup>. Although, the previously mentioned factors are important, examining the impact of all together on customer's loyalty remains limited. For some time, there has been an increase of researchers concentrating on investigating factors affecting customer loyalty in relation to other antecedents such as trust, commitment and communication. However, the association between customers perceived values, satisfaction and loyalty as important outcomes of the main factors (mobile phone services) have not been monitored and improved<sup>[11]</sup>. Accordingly, the present study aims to empirically examine in one integrated model the underlying variables of main factors (including service quality, price and service innovation) customers perceived, satisfaction and loyalty from student's perspectives at Jordanian universities.

Jordanian university students were chosen for three reasons. First, they had sufficient experience with mobile

phones and this will help in establishing reliable perceptions regarding the service. Second, recent studies such as Hussain<sup>[13]</sup> revealed that the Jordanian universities students are facing many obstacles while using mobile phone services which could be attributed to mobile services and its software. Finally, student's perception about mobile phone services in Jordan is vital in the process of communication and education.

This study will add to knowledge in this area of research because only few studies exist in Jordan in dealing with the satisfaction and loyalty of customers, especially, within the context of Jordanian university students. Theoretically, our research will enlarge the relevant theory by identifying how in one single model the supposed factors of service quality, price and service innovation will affect the loyalty of mobile phone service's customers through other important outcomes including perceived value and satisfaction. Practically, the telecommunications sector is considered as one of the most influential sectors in the local economy of Jordan. With this in mind, this study will provide managers and leaders of these companies with important findings and recommendations in regards to how students at Jordanian universities perceive their services and whether these services affect their loyalty. This is of importance because it helps them later on design more efficient services and marketing strategies if they want to maintain their customers and keep them loyal as loyal customers are considered profitable five times more profitable than acquiring new ones<sup>[18]</sup>.

## **Literature review**

**Service quality:** Service quality is essential for organizations that aim to provide unique and differentiated services in a today's competitive and rapidly changing environment<sup>[19]</sup>. Companies are always concerned with improving their services to meet the needs of their customers and sustain competitiveness in the market place. Asubonteng *et al.*<sup>[20]</sup> define service quality as the difference between the expectations of customers for service performance prior to encountering the service and their observations and perceptions of services actually received. Most previous studies on service quality have focused on the dimensions proposed by Parasuraman *et al.*<sup>[21]</sup>; namely, reliability, assurance, tangibility, responsiveness and empathy. For instance, Engdaw<sup>[22]</sup> has examined service quality of the public services in Dubai using these dimensions. In addition, Gumussoy and Koseoglu assert the importance of those dimensions and measured them to determine their effect on hotel's customer satisfaction. Given this significance, these dimensions were also measured in the relevant context of mobile service industry<sup>[23-25]</sup>.

In this study, service quality was defined using the abovementioned five dimensions of tangibles, reliability, responsiveness, assurance and empathy. These dimensions help enhance customer perceptions of service quality and help organizations enhance their competitive advantages<sup>[26]</sup>. Further, using these dimensions allow researchers to apprehend the relationships between service quality and perceived value their impact on customer satisfaction and loyalty<sup>[11]</sup>.

**Price:** Heyman and Mellers<sup>[27]</sup> maintain that pricing is the sum of money paid for a product or service and often influences customer-buying decisions. Hassan *et al.*<sup>[28]</sup> propose that price is the monetary rate for a client to purchase services or products. Therefore, customers purchasing decisions are price dependant, particularly in the mobile phone sector<sup>[29]</sup>. Sweeney *et al.*<sup>[30]</sup> state that customers are highly motivated by the service price. That is customers perceive the price value of different alternatives as a basic determinant of their purchasing decision. As such customers may choose their mobile phone service provider based on the perceived value for money<sup>[31]</sup>. They might also alter their service providers because of price related issues such as if the price is considered as very high or because the pricing practice is deemed to be misleading<sup>[32]</sup>.

**Service innovation:** Innovative technologies in cellular networks and telecommunication are the major controllers of mobile business. Mobile service providers have grasped prospects associated with this technological insurgency. The term “innovation” could refer to the foundation or the development of new products or service, so as to of improved efficiency of those products to build up a valuable customer experience<sup>[33]</sup>. According to Kungu *et al.*<sup>[34]</sup>, innovation is the practice whereby new thoughts and concepts are converted into sustainable value-creating outcomes.

Recently, Kiani *et al.*<sup>[14]</sup> maintain that innovation has three main dimensions that are new service ideas, new service process and new technological systems that are proven to be useful in describing the diversity of service innovations. These dimensions can be employed as performance indicators regarding service innovations and also suitable as performance measurement variables. Bearing this in mind, there is still a need to better understand the role of innovation as an important antecedent construct of service success<sup>[14, 35]</sup>.

**Perceived value:** Zeithaml<sup>[36]</sup> described perceived value as the consumer’s the whole evaluation of the benefit of a product grounded on views of what is obtained and what is given. Zeithaml<sup>[37]</sup> further explains the concept by

terming customer perceived value as the proportion between total customer value which includes economic, functional and psychological benefits and total customer costs which include monetary, time, energy and psychic costs. Dodds *et al.*<sup>[38]</sup> described perceived value based on cost-benefit of an offering and the perceived alternatives. Woodruff<sup>[39]</sup> argues that a perceived value occurs through the purchasing process of customers, one-time purchase or repurchases. According to Dey *et al.*<sup>[11]</sup>, the role of perceived value and which elements it comprises are necessary to be investigated, particularly in the context of mobile service.

**Customer satisfaction:** Oliver describes satisfaction as the abilities of service provider to meet customer’s expectations. In this sense, if perceived services are lower than customer’s expectations, the customer is possibly to be dissatisfied<sup>[40]</sup>. Further, Fornell *et al.*<sup>[41]</sup> see customer satisfaction as an overall evaluation of a product or service provider by the customer. They further maintain that customer satisfaction is “an overall post-purchase evaluation”. To meet its corporate goals, organizations seek to achieve customer satisfaction and loyalty<sup>[42]</sup>. In congruence, we expect customer satisfaction to have a positive impact on customer loyalty.

**Customer loyalty:** Customer loyalty is a crucial factor to the success of any business. Dick and Basu<sup>[43]</sup> conceptualize loyalty as the intensity of the association between an individual’s relative attitudes towards something whether it is a brand, service, etc. and repeat investment. Loyalty has two main dimensions that are attitudinal and behavioral. On the one hand, attitudinal loyalty specifies a customer’s higher-order or long-term and psychological commitment to endure a relationship with a service provider<sup>[44]</sup>. Behavioral loyalty on the other hand is defined as a recurring investment<sup>[45]</sup>. Studies investigating customer loyalty often identify both the attitudinal and behavioral measures in assessing customer loyalty<sup>[36, 46]</sup>.

Having loyal customers has been one of the major concerns of firms success as they are considered a significant source of advantage to them because of their regular spending and word of mouth endorsements to other consumers<sup>[12]</sup>.

## **Theoretical framework**

**Service quality and customer perceived value:** The positive correlation between service quality and consumer’s perceived value has been widely supported by previous research. For instance, Woodruff<sup>[39]</sup> points out that providing the client a product or service that has greater value is assumed as the greatest way to gain a

competitive advantage. Izogo<sup>[24]</sup> argued that telecommunication companies might profit from their customer's loyalty by increasing the reliability of the service quality dimensions. Thus, when customers value a product or a service they rely on evaluating the product's quality, the service quality and the price paid for these products and services. As such if companies need to gain profits, they should seek to enhance and improve their service's quality frequently which will encourage the perceived value. The positive relationship between service quality and perceived value was also supported in mobile services studies<sup>[11, 12, 25, 47, 48]</sup> of these studies indicate that the larger the degree of service quality is the larger customer's perception of value would be.

**Price and customer perceived value:** Price might be one of the important factors considered vital for customer's perceived value which in turn affects satisfaction. Zeithaml<sup>[36]</sup> illustrate that one of the basic components of customer value is price. They show that clients identify value through what the customer wants from a product or service, low price, quality/price correlation and what the customer gives up in relation to what he or she gets. Similarly, Beneke *et al.*<sup>[32]</sup> argue that customers value products depending mainly on price. As such firms always seek to set the best prices for their services to satisfy the financial needs of their customers<sup>[30]</sup>.

As price is a major role that affects customer's decisions, Kollmann<sup>[49]</sup> indicates that price is an important determinant of customer's decisions to buy the services of a mobile communications service provider. In this regard, Lu and Shiu<sup>[50]</sup> state that price is the cost component of value for a customer to buy services. With regard to mobile phones providers, competitors mainly depend on pricing to prevent their clients from shifting to another service provider, so, pricing competition is strong. According to Kollmann<sup>[49]</sup>, price plays a major part for mobile phone service providers. In accord, Blechar *et al.*<sup>[31]</sup> state that because of the significance of cost and service charges, consumers choose to a firm that offer slower priced services. Beneke *et al.*<sup>[32]</sup> also suggest that telecom firms should keep offering to higher value in an effort to approach new users and circumvent the possibility of customers moving to competitor.

**Service innovation and the perceived value:** Jairam<sup>[51]</sup> and Iddrisu<sup>[52]</sup> found a positive impact between innovation and perceived value. Service innovation is fundamental to any company or organization as it helps attracting customers and assists them to be leading in any industry. In this context, Naveed *et al.*<sup>[53]</sup> noticed that companies must consider the competitor's products and

their own abilities when they introduce an innovative product. In this regard, companies' resources should be utilized positively when they start working on innovation of products.

Kandampully and Duddy<sup>[54]</sup> suggest that for service providers, innovating services in such a way that allows them to aid their customer's needs which augments to their perceived value is what ascertains a firm's competitive advantage. In addition, it is the innovative service packages and creative bundling of existing services features/functions that augment the value of the offering<sup>[14]</sup>.

**Perceived value and customer satisfaction:** Customer perceived value has gained much interest of researchers as many of them examined the relationship between it and customer satisfaction and loyalty. That is perceiving high levels of value will encourage customer to buy more of the same or from the same provider and reduce the possibility to shift to another service provider. In this context, El Adly maintain that customer perceived value positively influences satisfaction and loyalty. It has been argued that customer satisfaction is the outcome of a customer's perceived value and it is a significant indicator of satisfaction<sup>[41]</sup>. Furthermore, Ryu *et al.*<sup>[55]</sup> insists on the impact of perceived value and quality on satisfaction. In mobile services setting, Calvo-Porrall and Nieto-Mengotti<sup>[10]</sup> and Dey *et al.*<sup>[11]</sup> found a positive impact for service quality and perceived value on satisfaction.

**Satisfaction and loyalty:** The linkage between satisfaction and loyalty has been supported by a considerable number of studies which found that customer satisfaction strongly predicts customer loyalty<sup>[56]</sup>. Within mobile service literature, Morgan and Govender<sup>[57]</sup> argue that greater levels of customer satisfaction are likely to result in customer loyalty. Further, Pumim *et al.*<sup>[48]</sup> Lin and Wang<sup>[56]</sup> point out that when customers are satisfied with the services provided to them by mobile network operators, they are likely to be loyal to them. Furthermore, it has been found that a slight increase in satisfaction will significantly improve loyalty<sup>[25]</sup>.

Following the above discussions, the theoretical model for this research was developed (Fig. 1) and the following hypothesis are formulated:

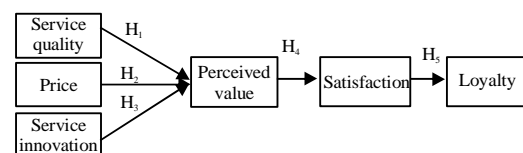


Fig. 1: Theoretical model

- H<sub>1</sub>: service quality will positively influence perceived value of mobile phone services
- H<sub>2</sub>: price will positively influence perceived value of mobile phone services
- H<sub>3</sub>: service innovation will positively influence perceived value of mobile phone services
- H<sub>4</sub>: perceived value will positively influence customer satisfaction of mobile phone services
- H<sub>5</sub>: Customer satisfactions will positively influence customer loyalty of mobile phone services

## MATERIALS AND METHODS

**Sample and data collection:** Data for this study was collected conveniently from mobile service users using self-administered questionnaire method. The focus was on those students who had usage experience with one of the three mobile services providers in Jordan, namely Zain, Orange and Umniah. Students at the biggest three public and private universities in Jordan (including University of Jordan, Al-Balqa Applied University and Applied Science University) were approached to fill out the questionnaires. The questionnaires were distributed in person to students in each university. To increase the response rate, students were given enough time to complete the questionnaires and return them to their specified instructors or the secretary of their departments. In total, 1,000 questionnaires were distributed and 417 were returned. About 23 of these questionnaires were eliminated because of missing data and errors. Ultimately, 394 questionnaires were used for further analysis, resulting in a response rate of 39.4%.

**Instrument development:** The six constructs of the study were examined using multiple items based on 7-point Likert type scale. In total, 42 items were adopted from relevant validated scales. For instance, the 22-item scale by Parasuraman *et al.*<sup>[26]</sup> was employed to measure service quality. Price was measured using three-item scale taken from Lichtenstein *et al.*<sup>[58]</sup>. Service innovation was measured using seven-item scale established by Hertog *et al.*<sup>[35]</sup>. The two-item scale by Dolarslan<sup>[59]</sup> was adapted to assess perceived value whereas the four-item scale developed by Burnham *et al.*<sup>[60]</sup> and Kuo *et al.*<sup>[61]</sup> was adapted to measure satisfaction. Finally, three items were taken from Reichheld<sup>[18]</sup> and Zeithaml *et al.*<sup>[37]</sup> to measure customer loyalty. Following this procedure, a pilot study was carried out with 50 students who had used mobile services in Jordan. As such minor changes in formatting, wording, suitability and clarity were made to improve the instrument's face validity.

## RESULTS AND DISCUSSION

**Sample description:** Table 1 shows a detailed description of the sample. Among the 342 respondents, 68.1% were

Table 1: Sample demographic statistics

Variables/Category	Frequency (N = 342)	Valid (%)
<b>Gender</b>		
Male	109	233
Female	31.9	68.1
<b>Age (years)</b>		
17-21	209	61.1
22-26	76	22.2
27-31	40	11.7
32 and more	17	5
<b>Monthly income</b>		
200 JDs and less	168	49
201-300 JDs	48	14
301-400 JDs	34	9.9
401-500 JDs	23	7
501-600 JDs	14	4
601 JDs and more	55	16.1
<b>Education</b>		
Diploma	10	2.9
Bachelor	260	76
Postgraduate	72	21.1

female and 31.9% were male. The majority of the respondents were between 17-21 years of age (61.1%), 49% of respondents had a monthly income range of JD200 (equal US\$282) and less. As for the educational level, overwhelming majority (76%) of the respondents were enrolled in the Bachelor of Education (76%).

The data of the study was analyzed using a two-step approach<sup>[62]</sup>. The first phase involved the creation of an efficient measurement model and the second phase was concerned with analyzing the structural model.

**Measurement model:** A confirmatory factor analysis was performed for evaluating the measurement model. Service quality was treated as a second order while its main dimensions as first-order constructs with their scale items. The initial fit indices results (GFI = 0.812; AGFI = 0.746; NFI = 0.865) of service quality showed that measurement model does not fit the observed data. Therefore, there was a need to respecify the model by eliminating the most problematic items that either have low factor loading of <0.50 or value that has a higher error term value. The revised version wastested again. As a result, all fit measurers were found within their recommended level (CMIN/DF = 1.045; GFI = 0.951; AGFI = 0.901; NFI = 0.965; CFI = 0.981; RMSEA = 0.031). Further, all the first order factor including the five dimensions was adequately loaded on the second order factor of perceived quality. The measurement model of all constructs was also tested. However, some of the fit indices (GFI = 0.814; AGF = 0.742; RMSEA = 0.085) were found to not be within their cut off values. Thus, there was a need to revise the model. By doing so, the most problematic items were dropped from their targeted constructs and the revised measurement model was tested again and noted to match the observed data adequately as all fit indices occur at their recommended level (CMIN/DF = 1.695 = 0.90; AGFI = 0.871; NFI = 0.909; CFI = 0.961; RMSEA = 0.045).

Table 2: Descriptive information for items

Latent constructs	Scale items	Mean	SD	CFA loadings	Cronbach's $\alpha$
<b>Service quality (Tangibility)</b>					0.94
q1	TG	3.32	1.11	0.711	0.93
q2	TG	3.37	1.05	0.827	
q4	TG	3.82	2.41	0.814	
<b>Reliability</b>					
q5	REL	3.55	2.45	0.714	0.95
q6	REL	3.43	1.17	0.796	
q8	REL	3.30	1.16	0.790	
<b>Responsiveness</b>					
q9	RES	3.36	1.11	0.569	0.94
q11	RES	3.26	1.05	0.777	
q12	RES	3.31	1.04	0.818	
<b>Assurance</b>					
q13	ASS	3.49	1.06	0.742	0.93
q14	ASS	3.43	1.04	0.820	
q17	ASS	3.37	1.98	0.814	
<b>Empathy</b>					
q16	EMP	3.32	1.95	0.822	0.92
q18	EMP	3.37	1.15	0.730	
q20	EMP	3.44	1.35	0.844	
Price					
q21	PRC	3.32	1.04	0.818	0.94
q22	PRC	3.50	1.01	0.860	
q23	PRC	3.49	1.00	0.728	
<b>Innovation</b>					
q24	SINN	3.44	1.01	0.783	0.87
q25	SINN	3.43	1.05	0.820	
q27	SINN	3.40	1.05	0.791	
q28	SINN	3.59	1.00	0.807	
q30	SINN	3.52	1.06	0.800	
q31	SINN	3.43	1.07	0.706	
<b>Perceived value</b>					
Q32	PV	3.27	1.04	0.837	0.95
Q33	PV	3.36	1.12	0.761	
<b>Satisfaction</b>					
Q34	SATIS	3.33	1.05	0.819	0.87
Q36	SATIS	3.36	1.01	0.874	
Q37	SATIS	3.26	1.07	0.845	
<b>Loyalty</b>					
Q38	LOY	3.30	1.08	0.851	0.94
Q39	LOY	3.22	1.12	0.834	
Q40	LOY	3.24	1.12	0.745	

Significance level for factor loading &lt;0.01

Table 3: Constructs reliability and validity

Latent constructs	CR	AVE	SINN	PRICE	PV	SATIS	LOY	Quality
SINN	0.906	0.617	0.785					
PRICE	0.845	0.646	0.625	0.804				
PV	0.780	0.640	0.598	0.593	0.800			
SATIS	0.883	0.716	0.661	0.582	0.598	0.846		
LOY	0.852	0.658	0.647	0.608	0.589	0.654	0.811	
Quality	0.899	0.692	0.698	0.666	0.634	0.637	0.688	0.832

Diagonal values are squared roots of AVE; off-diagonal values are the estimates of inter-correlation between the latent constructs

Consequently, assessing convergent validity, discriminant validity and reliability of the constructs and items was performed. To assess convergent validity, the outer loadings were considered. Table 2 shows that all the factor loadings were above the suggested 0.50 threshold and significantly loaded on their specified factors<sup>[63]</sup>. Convergent validity was also supported by having the average variance extracted for all constructs in this study above the suggested level of 0.50 (Table 3). To measure

discriminant validity, we compared the square root of the AVE values with latent constructs correlations as recommended by Fornell and Larcker<sup>[63]</sup>. From Table 3, it can be concluded that the square root of all AVE values was higher than the associations with other constructs (ranging from 0.61-0.71). This finding provides evidence on discriminant validity. As for the reliability, we analyzed Cronbach's alpha and Composite Reliabilities (CR) for all constructs. As

Table 4: Structural parameter estimates

Hypothesized path	Standardized coefficients	SE	CR	p-values	Supported (Yes/No)
H <sub>1</sub> .SQUAL→PV	0.538	0.161	3.341	***	Yes
H <sub>2</sub> .PRICE→PV	0.188	0.079	2.374	0.018	Yes
H <sub>3</sub> .SINN→PV	0.200	0.115	1.740	0.082	No
H <sub>4</sub> .PV→SATIS	0.746	0.099	7.519	***	Yes
H <sub>5</sub> .SATIS→LOY	0.515	0.088	5.824	***	Yes

CR = Critical Ratio; \*p value\_0.05

presented in Table 2 and 3, all constructs were deemed reliable as they exceed the recommended level of 0.70 and 0.50<sup>[64]</sup>.

**Testing the structural model:** Given an adequate measurement model, the findings of a structural equation analysis indicate that our proposed model fits the data adequately (CMIN/DF = 1.7075=0.90; AGFI = 0.875; NFI = 0.901; CFI = 0.951; RMSEA = 0.048). Further, a significant portion of variance was extracted in the dependent factors: loyalty (0.84); satisfaction (0.67) and perceived value (0.56). This, in return, confirms the current research model's predictive validity. As for the path coefficient analyses, the results shown in Table 4 suggest that except the path between SINN and PV ( $\gamma = 0.200$ ,  $p < 0.082$ ), all were approved to have a significant regression weight value. Therefore, H<sub>1</sub>, H<sub>2</sub>, H<sub>4</sub>, H<sub>5</sub> were accepted while H<sub>3</sub> was rejected. The highest coefficient value was for the path between PV and SATIS ( $\gamma = 0.746$ ,  $p < 0.000$ ) followed by the path between SQUAL and PV ( $\gamma = 0.538.000$ ) and then for the path between SATIS and LOY ( $\gamma = 0.515$ ,  $p < 0.000$ ). The proposed path between PRICE and PV was also supported to be significant with the lowest value ( $\gamma = 0.515$ ,  $p < 0.000$ ).

## CONCLUSION

The aim of this study was to establish a broader understanding of the approach that makes mobile users become loyal to a particular service provider in Jordan. This study was among the first to extend the knowledge by adding in one comprehensive framework, novel constructs that influence customer loyalty in the mobile service industry and analyzed the effect of service quality, price and service innovations on user's loyalty via. perceived value and satisfaction. Examining this framework from the perception of young users in Jordan such as students is supplementary contribution that this study has made to the literature of mobile services.

The findings of our study show that among the antecedents of perceived value, only service quality and price were deemed to positively influence perceived value. The positive influence of service quality on perceived value in this study provides additional support for previous findings by Chopdar and Sivakumar<sup>[47]</sup>, Dey *et al.*<sup>[11]</sup>, Pumim *et al.*<sup>[48]</sup> and Rizomyliotis *et al.*<sup>[12]</sup> and implies that the higher level of perceived service quality is provided, the more value customers receive in

the service. Likewise, price was shown to be a predictor of perceived value. This finding confirms the results by Kollmann<sup>[49]</sup> and Lu and Shiu<sup>[50]</sup>, suggesting that the customer value product depending mainly on price. Mobile service users usually view the price of service is fair when the price of that service is lower than other competitor's price. Contrary to this finding, service innovation deemed to have no positive effect on perceived value, contradicting the previous research by Beneke *et al.*<sup>[32]</sup>, Iddrisu<sup>[52]</sup> and Jairam<sup>[51]</sup>. The lack of support for this relationship in this study is not completely surprising. That is young mobile users may not pay attention to service innovation as is the case for the quality of service and price. This might be because students have limited income and cannot afford to pay more for the new innovated services as this type of services usually cost them more than others.

On the other hand, mobile user's satisfaction was observed to be affected by perceived value. This finding supports previous works whereas perceived value was seen to be a predictor of satisfaction<sup>[11, 41, 55]</sup>. This finding illustrates that user's perceived value of mobile services influenced their level of satisfaction as they evaluate the value they perceive based on the benefits they gain compared to the costs they pay for mobile services<sup>[10]</sup>.

Additionally, user's satisfaction was evidently shown to have a significant positive relationship with user's loyalty. This finding is consistent with past works in mobile phone services whereby user's satisfaction is significantly influenced their loyalty<sup>[25, 48, 56]</sup>. The finding suggests that satisfied mobile users would make a recommendation and intend to reuse mobile services again. In other words, a greater level of customer satisfaction will lead to higher loyalty among customers of mobile phones and the reverse is true.

This research has a number of valuable practical implications for mobile service providers. First, in order to stay competitive, mobile service providers need to consider the significance of service quality provided to users. They have to adopt service-oriented strategies that take into account the key dimensions. Not only this, the way that these elements are delivered and the way it is perceived by mobile users must also be assessed continuously by service providers to meet quality requirements and fulfill user's expectations. With this in mind, they should focus on how to make a balance between service quality development and prices as our results demonstrate that they are more powerful than

service innovation at least for young users. Furthermore, service providers are asked to keep comparing their offers with the offers of other competitors providing similar services. This would suggest them to provide more attractive prices if they to increase their competitiveness. Second, the notion of value can be seen from a “customer trip” viewpoint. This perspective represents the steps of the entire customer experience and goes from pre-purchase, through purchase, to post-purchase. Along this trip, mobile service providers need to keep monitoring the value provided to users from time to time because of service quality and price. As such, they have to maintain a high degree of perceived value if they want to enhance the level of user’s satisfaction.

Finally, the user’s loyalty to mobile service provider increased when they were satisfied with both the quality and price of the provided services. This implies that service providers will not be able to convince users to use their service again and recommend it to others without fulfilling their expectations and achieving their satisfaction.

### **LIMITATION**

In spite of its significance, this study has few limitations. Firstly, the convenience sampling method technique used may limit the possibility to generalize the results due to the subjective nature in choosing the sample results. The study’s sample is also limited to three Jordanian universities. Moreover, in this study the variables (service quality, price, innovation, the perceived value and satisfaction) were used to predict customer’s loyalty of mobile services, however, there are other variables such as switching cost and network quality might be included. Thus, these other variables may also affect to determine brand loyalty.

Further research is recommended using different age groups with different employment status and in different organizational settings to allow us to generalize the results to the wider community. In addition, researchers and practitioners alike will benefit from investigating the relationship of other variables such as the emotional and social values and their impact on the perceived value and satisfaction. It would also be useful to adopt the same model for other services context such as hospitals and hotels.

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