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An intervariable approach to customer satisfaction and loyalty in the internet service market

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Abstract

Purpose – The purpose of this paper is to examine a multidimensional model of customer perceived value (CPV), customer satisfaction (CS) and loyalty from internet subscribers' perspectives.
Design/methodology/approach – In total, 1,297 out of 2,000 online surveys were valid for the analysis. Confirmatory factor analyses were performed to assess the research constructs' unidimensionality, validity and composite reliability. Structural path analysis was used to test the hypothesized relationships of the research model.
Findings – CPV positively affects functional and technical satisfaction as well as cognitive loyalty. Functional satisfaction positively affects technical satisfaction and attitudinal loyalty. Attitudinal loyalty positively affects cognitive and behavioral loyalty, and the latter positively affects cognitive loyalty. In total, 53 percent of variation in cognitive loyalty was caused by behavioral, attitudinal loyalty and perceived value path.
Research limitations/implications – Future research could investigate other outcomes of CS dimensions, such as customer lifetime value, customer retention, profitability, return on investment and market share, and their effects on customer loyalty (CL). Future research can also examine the effect of other dimensions of perceived customer value on CS and loyalty dimensions simultaneously. Other future research areas are also outlined.
Practical implications – CPV acts as a cornerstone to developing a successful multidimensional program of CL through functional and technical satisfactions. Marketing directors need to focus on building CL schemes and strategies that should take into consideration the long-term and short-term loyalty.
Originality/value – Theoretically, using an intervariable perspective, this paper has responded to important calls for conducting research on the chain of perceived value, CS and loyalty chain. Practically, this paper is the first empirical research devoted to developing an intervariable approach to the chain of perceived value, CS and loyalty in the internet service market.

Keywords Perceived value, Internet, Attitudinal loyalty, Behavioural loyalty, Cognitive loyalty, Functional satisfaction, Intervariable approach, Technical satisfaction

Paper type Research paper

Introduction

The Information and Communications Technology (ICT) sector continues to be a key enabler of economic and social development, bridging the digital divide and fostering an inclusive digital economy. The fixed broadband market in the Middle East is slowly beginning to gain footage among the more progressive markets, with regional penetration of 64.5 and 3.9 percent of global internet users (Internet World Stats, 2017). Asymmetric digital subscriber line has been the most popular access method in many markets, but strides in fiber-optic deployment and penetration have been achieved in countries such as the United Arab Emirates, Turkey and Jordan. The ICT sector has witnessed significant growth over the years and is a pillar of the Jordanian economy, employing only 1 percent of the population but contributing about 14 percent of national GDP (Jordan Telecommunications Regulatory Commission, 2016). By 2015 IT revenues had grown to more than US$600m, while the telecom sector's total revenues reached more than US$1.35bn. In the Broadband

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Internet Subscriber Index for 2015, Jordan ranked 85 out of 139 countries advancing six points on the index compared with year 2014 (Ministry of Information and Communication Technology, 2016).

A recent study conducted by the Jordanian Department of Statistics (2015) found that there is "general satisfaction" with service providers in the ITC sector in both urban and rural areas of the country, with 91.8 percent of internet subscribers intending to continue their transactions and relationship with their current internet service providers (ISPs), with a satisfaction average of 2.9 out of 5 on a five-point Likert-type scale. These results comprise significant evidence that internet customers could be "silently" dissatisfied, given the high intention to continue with current providers but middling satisfaction, due to three reasons: first, they tend to continue their transaction with the current ISPs because they do not perceive any differentiation between the internet services offered by different providers; second, customer satisfaction (CS) with internet providers is relatively low at 2.9 out of 5; and third, CS was measured as "general" satisfaction, without considering specific dimensions such as technical and functional satisfaction. Consequently, examining drivers of CS and loyalty is vital to investigate in the internet service market, in order to provide market stakeholders with key insights related to CS and loyalty.

Therefore, in order to be successful in this maturing and highly competitive market, the strategic focus of ISPs should shift from customer acquisition toward retention by reducing customer switching and defection and building loyalty over the long-term in order to protect against new entrants. Customer perceived value (CPV), CS and customer loyalty (CL) have become vital issues for modern businesses that seek to achieve prime goals of growth and survival in such a competitive environment. Over the past two decades, consumer behavior literature has established major insights into the links between quality, value and satisfaction. The later addition of CL to this conceptual matrix provided a general understanding of the close theoretical and methodological relationships between these views. As a key strategic goal, CL is a major driver of profitability and is positively linked to business performance (Reichheld, 1996; Oliver, 1997; Gupta and Zeithaml, 2006).

The conceptualization of CL has progressed from a two-dimensional model, comprising behavioral and attitudinal loyalty (Day, 1969), to a three-dimensional framework including cognitive, affective and conative loyalty (Dick and Basu, 1994). Oliver (1997) argued that CL includes three components: cognitive, affective and behavioral intentions, later broadened to include cognitive, affective, conative and action (behavioral) loyalty (Oliver, 1999). However, some more recent research has returned to Day's (1969) argument, with Jones and Taylor (2007) arguing that service loyalty is a two-dimensional construct, comprising attitudinal and behavioral loyalty. Deliberations in marketing theory and practice have also found a significant relationship between CS and CL. In addition to that, research confirms that CPV is an antecedent of CS (e.g. Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016).

Previous empirical research reveals that various studies attempted to explain the linkages between CPV, CS and CL and found mixed results. There are clashing debates related to their linkages, sequential order (Cronin *et al.*, 2000) and overall relationship (Boksberger and Melsen, 2011). Those clashing debates on the linkages between CPV, CS and CL as well as theoretical gaps identified in literature spurred the current study to join this debate, offering theoretical and practical contributions. First, from a theoretical contribution standpoint, various studies (e.g. Chakraborty and Sengupta, 2013; Kaura *et al.*, 2015; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016) have recommended examining the relationships between CPV and CS, as well as investigating the relationship between CS and CL in different business contexts and industries (e.g. Santouridis and Trivellas, 2010; Abu-ELSamen *et al.*, 2011; Chakraborty and Sengupta, 2013; Kaura *et al.*, 2015; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016).

Another stream of research (e.g. Santouridis and Trivellas, 2010) has also recommended examining the relationships between CS and dimensions of CL, as well as examining the relationship between CL dimensions themselves (e.g. Jones and Taylor, 2007; McMullan and Gilmore, 2008; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016).

Therefore, to fill these theoretical gaps, an intervariable perspective was devised in order to develop and test a multidimensional model of CPV-CS-CL linkages for the ISPs sector in Jordan. Further, this research extends the seminal work of Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura (2016), Gallarza, Ruiz-Molina and Gil-Saura (2016), and responds to calls to broaden the CPV-CS-CL chain into another industry and research context. The relationship between extrinsic aspects of overall CPV, the two-dimensional construct of CS (technical and functional) (Abu-ELSamen *et al.*, 2011; Akroush and Abu-ELSamen, 2012), and the three-dimensional construct of loyalty (attitudinal, behavioral and cognitive) (Oliver, 1999; Jones *et al.*, 2000; Lee and Cunningham, 2001) were investigated in an intervariable model simultaneously.

In terms of practical contributions, the internet penetration rate is growing rapidly in Jordan, with subscriptions reaching 32 percent in 2015. Research is vitally needed in order to understand consumer behavior and attitude in this emerging digital context. The latest figures show that there were eight million internet users by the end of 2016, with a penetration rate of 87 percent of the population (Jordan Telecommunications Regulatory Commission, 2016). In such an intensely competitive industry, retaining customers and building long-term relationships with them is a strategic necessity for the ISPs' survival and growth. Consequently, through the intervariable approach, understanding the linkages between CPV-CS-CL is an essential requirement for ISPs' survival and sustainable growth. Further, a conflicting body of research exists in terms of the satisfaction-loyalty relationship (e.g. Rundle-Thiele, 2005; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016), which warrants a further investigation from a practical viewpoint. Hence, this research seeks to investigate the antecedents of the three-dimensional construct of CL through developing and testing a multidimensional model of CPV-CS-CL in the internet industry in Jordan.

Accordingly, based on the gaps identified in CPV, CS and CL literatures and the internet industry, the objectives of this research are to: examine the effect of CPV on CS and loyalty dimensions; examine the effect of CS dimensions on CL dimensions; identify the most influential dimensions of CS on loyalty dimensions; and provide CEOs and marketing managers with empirical findings related to drivers of CL in the internet service market.

Theoretical background

The chain of CPV-CS-CL is a significant line of research in services marketing and management, with a major focus on understanding drivers of consumer behavior and formulating effective marketing strategies that lead to achieving sound financial performance. With a few exceptions, there is scant conceptual and empirical research that has empirically examined CS as a multidimensional construct and tested its impacts on CL dimensions (Abu-ElSamen *et al.*, 2011; Akroush and Abu-ELSamen, 2012; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). Furthermore, previous research on CL has agreed that it is a multidimensional construct, but the number of CL dimensions is still debatable among scholars (Day, 1969; Oliver, 1999; Uncles *et al.*, 2003; Lam *et al.*, 2004; Jones and Taylor, 2007; Walsh *et al.*, 2008).

Based on a thorough literature review, we posit that CS and CL are multidimensional and interdependent constructs. The interactions and interconnectedness between the dimensions of the CPV-CS-CL chain can create causal ambiguity, thus restricting competitors from imitation and further increasing the firm competitiveness and boosting financial performance. Following the intervariable approach, we propose a multidimensional and interdependent conceptual model that links CPV with CS and CL dimensions simultaneously. Consequently, since

debate among scholars on the chain of CPV-CS-CL is far from complete, we join this stream of research through investigating CS dimensions and their interrelationships as well as examining their effect on CL dimensions simultaneously.

Customer perceived value

CPV is a fundamental marketing and branding concept rooted in equity theory. This concept is an interactive, relativistic preference and experience (Holbrook, 2005). The idea of CPV is considered an unwavering paradigm to foretell buying behavior (Anderson and Srinivasan, 2003). Therefore, the way customers perceive value increases their willingness to buy and decreases their search intentions for alternatives, which in turn engenders a long-term relationship with sellers. Lin (2003) found that CPV (saving money, convenience, time saving, prompt delivery, warranty and free home delivery) is an important contributor to CS, and it has to be considered in concurrence with basic and relational service quality dimensions when designing and delivering e-commerce solutions in the UK. Tam (2004) argued that CPV has a greater influence on post-purchase behavior than on CS, and when CPV is integrated with CS and perceived service quality, it explained and predicted post-purchase behavior in a better way.

Pura (2005) argued that commitment and behavioral intentions to use the service are strongly influenced by conditional value, commitment and, to some extent, monetary value. Gallarza and Gil-Saura (2006) confirmed the existence of a quality-value-satisfaction-loyalty chain, and showed that extrinsic dimensions of value such as efficiency and quality are related to loyalty behavior, and intrinsic ones such as social value and play are related to satisfaction. Johnson *et al.* (2006) stipulated that loyalty intentions are a function of CPV early in the product life cycle. Moreover, the cognitive perceptions of overall value drive loyalty intentions early in the diffusion process. Turel and Serenko (2006) found that perceived quality and CPV are the key factors affecting an individual's satisfaction, which in turn influences the extent of loyalty in the Canadian mobile service market. In the same vein, Gounaris *et al.* (2007) argued that CPV consisted of five dimensions: product value, procedural value, personnel value, emotional value and perceived sacrifice. These five dimensions, except personal value, have an important impact on CS. In addition to that, CS was found to have a positive relationship with premium loyalty, and the development of premium loyalty relates to repurchase intention, positive word of mouth and cross-buying.

In an attempt to capture an inter-perspective on value measurement, Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura (2016) proposed a four-item typology of intrinsic values: entertainment, aesthetics, ethics and spirituality. The results showed that entertainment, aesthetics and spirituality are positive antecedents of perceived value, and the value-satisfaction-loyalty chain was fully confirmed with strong linkages. In addition, Gan and Wang (2017) established that value (utilitarian, hedonic and social) has significant and positive impacts on satisfaction and purchase intention, while Gallarza, Ruiz-Molina and Gil-Saura (2016) revealed how the value dimensions product quality and emotional value have positive effects on both cognitive and affective satisfactions. Further, they found a strong relationship between cognitive and affective satisfaction and loyalty.

The study of Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura (2016) is one of the very few empirical studies that has conceptualized and measured CS using the cognitive and affective dimensions. In line with this pioneering contribution, the present study adopts an intervariable approach (linking CPV with CS dimensions and CS with CL dimensions), to extend the relationships between customers' perceived value, satisfaction, and loyalty using structural equation modeling (SEM).

Customer satisfaction

CS is of fundamental concern to marketing literature, but despite scholars' endeavors to measure and explain CS, there is still no consensus regarding its definition and measurement.

The majority of definitions affirm that CS is a response to an evaluation process, regardless of the type of response (Oliver, 1993, 1997), which could be cognitive, affective or overall evaluation. Two conceptualizations of CS dominate related literature: transaction-specific satisfaction, where satisfaction is premised on customers' evaluation of their experience with (and reactions to) a particular product transaction or service encounter (Oliver, 1993;1999; Olsen and Johnson, 2003); and cumulative satisfaction, pertaining to customers' overall evaluation of a product or service provider to date (Johnson and Fornell, 1991; Gilbert *et al.*, 2004). In addition to that, Walsh *et al.* (2008) indicated that satisfaction with service elements is mirrored in the pleasure combined with service fulfillments, which refers to the varying aspects of the service delivery processes such as employees' responsiveness, friendliness and the speediness of providing services to customers.

Earlier research described CS primarily as a cognitive phenomenon in terms of the expectations-disconfirmation paradigm, whereby customers' beliefs regarding the level of service performance created their expectations (Oliver, 1993). This cumulative construct is viewed as an attitude-like judgment following a series of purchases or consumer-product interactions. Other CS approaches were also introduced such as the performance-only, technical and functional dichotomy, service quality vs service satisfaction and attribute-importance approaches (Gilbert *et al.*, 2004). Based on these conceptualizations of CS and service quality literatures, Akroush and Abu-ElSamen (2012) proposed and tested three types of satisfaction: overall, functional and technical. In addition, Lin and Wang (2015) integrated the quality-satisfaction-loyalty paradigm and the extrinsic cue-quality-risk-value chain. Their findings indicated that both positive and negative electronic word-of-mouth significantly influence perceived e-service quality and perceived risk, which in turn significantly affect perceived value, CS and CL via the mediation of perceived e-service quality and risk. Recently, Gan and Wang (2017) reaffirmed the relationship between CPV, CS and intention to purchase in the social commerce context.

Literature on CS reveals that most scholars use only one of these approaches to conceptualize and measure CS as a unidimensional construct in different industries. Meanwhile, very few studies have conceptualized and measured CS as a multidimensional construct (Abu-ELSamen *et al.*, 2011; Akroush and Abu-ELSamen, 2012; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). Consequently, consistent with the intervariable approach and based on the current study objectives, we conceptualize and measure CS as a two-dimensional construct, consisting of transaction-specific (functional satisfaction) and cumulative satisfaction (technical satisfaction). These dimensions are used in the subsequent sections with the following operational definitions (Gilbert *et al.*, 2004):

- functional customer satisfaction, transaction-specific satisfaction, is the service encounter satisfaction that reflects consumer's satisfaction with the service providers' functional capabilities to provide the service; and
- technical customer satisfaction (TCS), cumulative satisfaction, is the service attributes satisfaction, which reflects consumer's satisfaction with the service providers' technical capabilities to provide the service to the consumers.

Customer loyalty

Ever since Day (1969) introduced the two-dimensional construct of attitudinal and behavioral loyalty half a century ago, many alterations have been suggested to this paradigm. Loyalty can be defined as a deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, which causes repetitive same-brand or same-brand set purchasing, despite any situational influences and marketing efforts that might cause switching behavior (Walsh *et al.*, 2008). Oliver (1999) presented four

mounting brand-loyalty stages as follows: cognitive loyalty (customers are loyal to a brand based on their information about that brand); affective loyalty (customer liking or positive attitudes toward a brand); conative loyalty/behavioral intention (a deeply held commitment to buy-a "good intention"); and action loyalty (customers transfer intentions into actions).

Jones *et al.* (2000) explored "cognitive loyalty," and argued that one aspect of cognitive loyalty is switching/repurchase intentions, which has elevated the argument beyond satisfaction, toward behavioral analysis for segmentation and prediction purposes. Uncles *et al.* (2003) proposed three constructs of loyalty: as an attitude; as a revealed behavior; and as a buying behavior. Lam *et al.* (2004) reveal that CL has two dimensions, recommendation and patronage, which are positively related to and affected by CS. Therefore, satisfied customers appear to be willing to repeat preferring a certain service provider and recommend it to other customers, supporting Oliver's (1999) argument.

Others found that, due to the moderating role of switching barriers, loyalty (in the context of mobile services) is not a unified construct but rather one with at least two distinct dimensions – repurchase likelihood and price tolerance (Turel and Serenko, 2006). Oliver (1999) earlier posited that cognitive loyalty is another form of loyalty defined as a conscious assessment of a brand and its attributes (Lee and Cunningham, 2001) or a conscious assessment of the advantages and incentives of repurchasing a product or service. Meanwhile, Jones and Taylor (2007) found that CL is a two-dimensional construct, attitudinal/cognitive and behavioral, in several service industries.

In an emerging market, Akroush *et al.* (2011) found that CL is affected by CS, customer trust, perceived switching costs and perceived service quality in the context of the Jordanian mobile telecommunications market, stipulating that satisfaction had the highest effect over CL in that market. On a second note, Fraering and Minor (2013) indicated that satisfaction, and the four phases of loyalty (cognitive, affective, conative, and action) are positively related to fortitude (the intimate relationship between a consumer and a product) and sense of community (the relationship between the consumer and fellow users). In the same vein, Liao *et al.* (2014) postulated that both satisfaction and switching cost are positively related to intentional loyalty (i.e. WOM and repurchase intention), and that the relationship of satisfaction with intentional loyalty outweighs that of switching cost in the context of e-tailing.

Tseng *et al.* (2017) also verified that value (functional, social, and self-expressive) is positively related to CL in mobile instant messaging. Wu and Li (2018) developed an integrated model to explore the effects of marketing-mix components on CL through CPV in social commerce, finding that customer value positively influences CL, consistent with the findings of Yang and Peterson (2004), showing that perceived value is an important driver of CL in electronic commerce.

It seems that there is no consensus in CL literature on CL dimensions due to different definitions, conceptualizations and measurements introduced and adopted by different scholars. Therefore, consistent with the intervariable approach, our study proposes that CL is a three-dimensional construct consisting of attitudinal, behavioral, and cognitive loyalty. Attitudinal loyalty is a psychological process resulting in repeatedly preferring one object (whether it is a product, a brand, or a retailer, etc.) to other substitutive ones, or as the desire to continue a relationship with a provider. Behavioral loyalty can be manifested in repurchasing from the same service provider, lower switching intentions, and making all purchases in a certain category from a specific service provider (Jones *et al.*, 2000). Cognitive loyalty is defined as a conscious assessment of a brand attributes (Oliver, 1999) or a conscious evaluation of the rewards and benefits associated with re-patronage (Lee and Cunningham, 2001), leading to considering the offerings of particular service providers to be inherently superior to those of others (Oliver, 1999).

Research model

A strong stream of previous literature has found that CL is a function of CS and CPV in various business contexts. Marketing literature indicates that CPV is an antecedent to CS (Lin, 2003; Pura, 2005; Gounaris *et al.*, 2007; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). CS is investigated as a reflection of service quality (Johnson and Fornell, 1991; Gilbert *et al.*, 2004; Walsh *et al.*, 2008) and is found as a key driver of CL. With regard to CPV-CS-CL chain, previous conceptual and empirical studies indicate that few empirical studies have been devoted to examine the chain of CPV-CS-CL in which CS and CL constructs are measured multidimensionally and their effects are investigated simultaneously (Gounaris *et al.*, 2007; Jones and Taylor, 2007; Akroush *et al.*, 2011; Akroush and Abu-ElSamen, 2012; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). In the same vein, previous research (e.g. Lin, 2003; Yang and Peterson, 2004; Lam *et al.*, 2004; Pura, 2005; Turel and Serenko, 2006; Gounaris *et al.*, 2007; Jones and Taylor, 2007; Walsh *et al.*, 2008; Kaura *et al.*, 2015; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016) has recommended conducting more empirical research on CPV-CS-CL chain in various industries and business contexts.

From a practical perspective, businesses are now focusing on specific dimensions of CPV, CS and CL, rather that the generic concepts themselves. In other words, retaining customers and building long-term relationships with them requires a strategic focus on specific satisfaction dimensions (i.e. technical satisfaction) and particular loyalty dimensions (i.e. cognitive loyalty) to stay competitive, including in terms of optimized resources allocation and utilization, especially in highly competitive markets and mature industries. Consequently, based on the intervariable approach, our main thesis is that cognitive loyalty is the outcome of CPV and attitudinal and behavioral loyalty. Furthermore, functional and technical satisfaction are antecedents of building attitudinal and behavioral loyalty, wherein they have complex interactions. In addition, technical satisfaction has a major role to play in building attitudinal loyalty, which is a major driver of behavioral loyalty. Figure 1 shows the proposed model and the intervariable relationships upon which the hypotheses are based (as presented in the next section).

Hypotheses development

The service management literature stipulates that CS is the result of a customer's perception of the value received in a transaction or relationship (Heskett and Schlesinger, 1994).

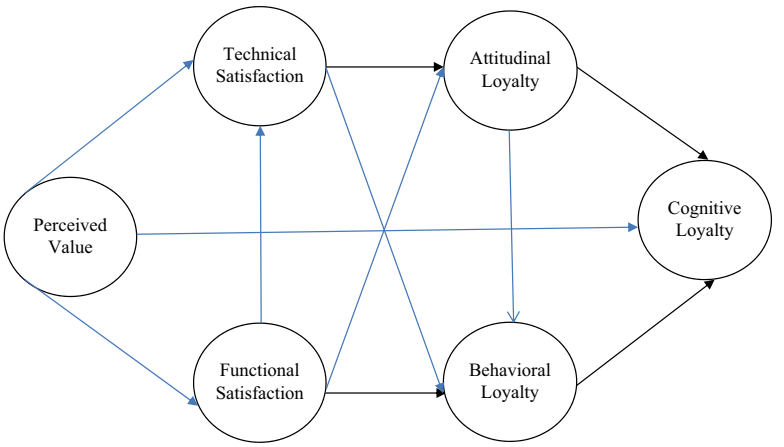


Figure 1.
The proposed research model

Zeithaml (1988) defined perceived value as consumers' overall evaluations of the benefit of a product or service, based on their assessment of what is received and what is given. Boksberger and Melsen (2011, p. 24) stated that there is, "despite this continuous debate, no consistent evidence is given for the operationalisation of perceived value and its interdependence on other marketing constructs." Therefore, debate amongst various scholars continues to investigate if value dimensions (quality, price, social value and others) have a direct and/or indirect effects on CS and/or CL (Gallarza and Gil-Saura, 2006; Brodie *et al.*, 2009), and which value dimensions best predict them (Gallarza and Gil-Saura, 2006; Sánchez-Fernández *et al.*, 2009; Gan and Wang, 2017).

Strong empirical research indicates that CPV is significantly linked to CS and CS can be expressed as a function of CPV (Lin, 2003; Yang and Peterson, 2004; Jin *et al.*, 2015; Gan and Wang, 2017). The majority of previous research examining the linkages between CPV and CS conceptualized and operationalized the latter as a unidimensional construct. The current study postulates that investigating the linkages between functional and technical CPV and CS dimensions provides a deeper understanding of the CPV impacts on CS, as CS can be conceptualized and operationalized as a two-dimensional construct (Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). Hence, based on the discussed literature, we hypothesize that:

H1. CPV positively affects functional satisfaction.

H2. CPV positively affects technical satisfaction.

Theoretically, CPV is a cognition-based construct that captures any benefit-sacrifice discrepancy (Oliver, 1993). The positive influence of CPV on loyalty toward the service provider has been reported in literature (e.g. Zins, 2001; Lewis and Soureli, 2006; Wu and Li, 2018). Customers are eager to devote their loyalty to products, services or organizations that are capable of delivering superior value in comparison to others in the market (Reichheld, 1996). Value adjusts behavioral intentions with regard to the service provider if the exchange relationship generates superior value (Yang and Peterson, 2004; Wu and Li, 2018). Lin and Kuo (2013) concluded that the association between loyalty intention and shopping experiences conforms to an S-shaped growth curve, whereby customers' intentions to stay with a certain provider appear to be influenced by the perceived value and satisfaction formed during the most recent transaction.

Bowen and Chen (2001) and Zins (2001) argued that the attitudinal perspective examines loyalty under the cognitive umbrella, and focuses on the psychological status of the individual, such as stated preferences, favorable attitudes, and sense of goodwill toward a particular brand. Based on that argument, Chuah *et al.* (2014) proposed a customer-oriented value model (i.e. encompassing functional, monetary, emotional, customization, and relational value) to predict the various aspects of CL (attitudinal, behavioral and composite) in the mobile internet service setting. This conceptual framework provided valuable insights on how subscribers perceive the value provided to them, and how that perception of value influences their different aspects of loyalty. Therefore, based on CPV and CL literature, we hypothesize that:

H3. CPV positively affects cognitive loyalty.

As mentioned previously, a review of the literature on CS reveals that CS is conceptualized as a unidimensional construct, and the distinctions between dimensions of satisfaction have received little empirical attention in the satisfaction and services research. Moreover, reviews of existing literature provide a mix of theoretical evidence related to the relationship among transaction-specific satisfaction, overall satisfaction and repurchase intentions (Woodruff and Gardial, 1996). Furthermore, prior research has attempted to measure satisfaction either on a transaction specific level or an overall level, but not both; therefore, it

is unclear whether the two types of satisfaction can be set apart from each other (e.g. Gotlieb *et al.*, 1994). From a different perspective, Akroush and Abu-ELSamen (2012) conceptualized CS as a two-dimensional construct, in terms of functional and technical satisfaction. They argued that functional satisfaction (service encounter and functional capabilities) leads to technical satisfaction (service outcomes). This conceptualization is employed in this study to understand the relationship between CS and CL dimensions. Therefore, based on the work of Akroush and Abu-ELSamen (2012), we hypothesize that:

H4. Functional satisfaction positively affects technical satisfaction.

Research has established that CS enhances CL, and CS affects repurchase intentions and results due to positive WOM. Therefore, it is not surprising that a multitude of research has been dedicated to investigating the determinants of satisfaction and how it influences business performance in different industries (e.g. Kandampully and Suhartanto, 2000; Luo and Homburg, 2007). Aydin and Özer (2005) added that CS, trust, and switching cost positively affect CL. Abu-ELSamen *et al.* (2011) found that there is a positive and significant relationship between CS dimensions (overall, functional and technical satisfaction) and CL in the Jordanian mobile service industry. In the same vein, Akroush and Abu-ELSamen (2012) found that CS dimensions positively affected CL, whereby TCS and overall CS dimensions exerted a substantial influence on CL.

Previous research reveals that CS contributes to behavioral loyalty regardless of the different evaluated objects, such as brands, products, services, product categories, stores, destinations and others (Seiders *et al.*, 2005; Kassim and Asiah Abdullah, 2010). These findings echo those of Oliver (1999), who defined loyalty as an intrinsic commitment in a customer to repurchase a preferred product or service on an ongoing basis, regardless of any influencing factors or competitors' actions. Oliver's definition includes both behavioral and attitudinal components of loyalty. Research also supports the fact that attitudinal loyalty and purchase loyalty are related but theoretically separate concepts (Chiou and Droge, 2006; Rauyruen and Miller, 2007).

Satisfaction is considered an important creator and antecedent of attitudinal loyalty (Dick and Basu, 1994; Bennett *et al.*, 2005; Rauyruen and Miller, 2007; Gan and Wang, 2017), and attitudinal loyalty intercedes the relationship between satisfaction and purchase loyalty (Chiou and Droge, 2006), which means that the effect of satisfaction on behavioral loyalty is not a direct one. Consequently, the previous research states that loyalty is a multi-dimensional construct, but there is no agreement on the nature of these dimensions. Many studies have also suggested that CS has a positive effect on both attitudinal and behavioral loyalty (e.g. Kassim and Asiah Abdullah, 2010; Picón *et al.*, 2014; Lin and Wang 2015; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). Based on the discussed literature, we hypothesize that:

H5. Functional satisfaction positively affects attitudinal loyalty.

H6. Functional satisfaction positively affects behavioral loyalty.

H7. Technical satisfaction positively affects attitudinal loyalty.

H8. Technical satisfaction positively affects behavioral loyalty.

Theory suggests that consumers' preferences are mirrored in their behaviors. Ajzen and Fishbein (1977) concluded that attitude and behavior are in harmony in most situations, and that the former predicts future behavior. The majority of loyalty studies assume that repurchase intentions at one particular point are positively associated with purchase behavior at subsequent points in time. Dick and Basu (1994) developed a model of loyalty that integrates both of these approaches, wherein they suggested that loyalty is the result of the interaction between a customer's relative attitudes to a brand and their repeat purchase

behavior for it. Bandyopadhyay and Martell (2007) extended the work of Dick and Basu (1994), suggesting that true loyalty should include a favorable repeat purchase (behavioral) pattern, and a favorable disposition (attitude) toward the brand. Evanschitzky *et al.* (2006) confirmed that attitudinal loyalty can predict repeat purchase intentions as it deals with the process of developing behavioral loyalty, which was corroborated by Suhartanto (2011) and Liao *et al.* (2014). Accordingly, we hypothesize that:

H9. Attitudinal loyalty positively affects behavioral loyalty.

Day (1969) argued that attitudinal loyalty highlights the cognitive basis of loyalty, and separates purchases motivated by a strong attitude (where customers are committed to a brand or company and they make repeat purchases based on a strong internal disposition) from those that are more serendipitous. Oliver (1999) identified cognitive loyalty as customers' belief that a particular product is superior to others, wherefore they choose it repeatedly. This type of loyalty can be manifest in many ways, such as occupying a prominent place in the mind of customers, being their first choice, lack of sensitivity to price fluctuations of the product, or considering the service provider as an extension of one's self (Jones and Taylor, 2007). Real brand loyalty results from a robust commitment to the brand, which engenders repetitive buying behavior for that brand. Those customers who are committed to brands in this way show high degrees of resistance to switching to other brands, displaying a positive brand attitude.

Jones and Taylor (2007) found that CL is a two-dimensional construct involving behavioral and attitudinal/cognitive loyalty. Empirical findings suggest that, regardless of the target, loyalty captures "what the person does" (behavioral loyalty) (Oliver, 1999), and explains the psychological meaning of the relationship with a brand (attitudinal/cognitive loyalty). While Dick and Basu (1994) proposed that cognitive, affective, and conative components are the antecedents of relative attitude, Suhartanto (2011) found that these components are indicators of attitudinal loyalty, which is in agreement with the conceptualization of loyalty conditions proposed by Oliver (1997), which are: the customer believes that the brand is preferable over competitors' brands; the customer favors the brand over the competitors' brands; and the customer has a higher intention to buy the brand over competitors. Thus, based on this debate, we can hypothesize that:

H10. Attitudinal loyalty positively affects cognitive loyalty.

The literature indicates that the effect of brand commitment on repetitive buying behavior is fragile but significant (Fullerton, 2005; Pura, 2005). Cristau (2006) stated that consumers who show affective tendency toward a certain brand become instinctively hooked on this choice. This implies that a strong and durable affective relationship with the brand drives the consumer to a feeling of inseparability toward it. Similarly, Touzani and Temessek (2009) argue that brand attachment has a strong effect on brand commitment in comparison with other factors. Other research outcomes have suggested that there is a positive, significant link between repetitive buying behavior and brand commitment, meaning that brand commitment leads to repetitive buying behavior for this brand (Touzani and Temessek, 2009). Based on this discussion, we hypothesize that:

H11. Behavioral loyalty positively affects cognitive loyalty.

Methodology

Population and sampling

The research population comprises Jordanian internet subscribers with a valid internet subscription at the time of conducting our study. There are 26 licensed telecommunication companies in Jordan, and internet user penetration reached 87 percent by the end of 2016.

The major internet providers are Orange, Zain and Umniah, who collectively command more than 90 percent of the internet market, with approximately 30 percent each (Jordan Telecommunications Regulatory Commission, 2016). As it was not possible to access the three ISPs' databases for sampling purposes, convenience sampling method was used for the data collection process, using an online survey designed for this purpose, which is an efficient and acceptable approach (Carlson and O'Cass, 2010; Hsiao *et al.*, 2010; Lin and Wang, 2015). Sample elements were selected because they are believed to be representatives of the Jordanian internet subscribers, relevant to serve the purpose of our study. In the sampling process, participants were subject to the inclusion criteria, including that they:

- had a valid internet subscription;
- had internet subscription purchase experience;
- had been with the internet provider for at least three years; and
- had experienced internet problems with their providers.

We used social media networks (Facebook and e-mails) through designing and posting an online web survey for internet service subscribers, and snowballing technique, via peer referrals, as described below (Hsiao *et al.*, 2010; Lin and Wang, 2015). A filtering question was included at the beginning of the online survey to determine whether potential participants met the inclusion criteria (Lin and Wang, 2015). If respondents replied positively they were directed to continue with the remaining parts of the online survey questions, otherwise they were not included. The next step was randomly targeting any internet subscriber based on these criteria. This process was carried out through sending e-mails and instant messages to friends, peers, and social groups who further delivered the questionnaire to their peers. The participating internet subscribers' contact details were obtained through social media networks groups and peers. When they were contacted, 2000 internet subscribers agreed to participate in the online survey. Through a survey web link, soft copies of the research questionnaires were posted and administered online and delivered to them. The unit of analysis was "the internet subscriber" who met the four sampling selection criteria.

Measurement items

To develop an effective survey, the items measuring the research constructs were adapted from prior research in the field of CPV, CS and CL. The items were modified to depict value in a mobile service context, which differs significantly from internet and brick and mortar contexts. Some of the measurement items' wording were slightly tailored to fit the context of this study. CPV was measured using a four-item scale derived from previous studies (Zeithaml, 1988; Oliver, 1993; Tam, 2004; Parasuraman *et al.*, 2005). The items are consistent with the conceptualization of perceived value as a customer trade-off between benefits and costs (Zeithaml, 1988) and focus on customers' higher order evaluations that have been posited to contribute to the perceived value of internet, perceptions of overall price, convenience and control. The respondents were asked to rate perceived value on a five-point Likert-type scale (from 1 "poor" to 5 "excellent").

CS was conceptualized as a two-dimensional construct, comprising functional and technical satisfaction (Abu-ElSamen *et al.*, 2011; Akroush and Abu-ElSamen, 2012). Each dimension was operationalized based on a four-item scale and measured by five-point Likert-type scales ranging from 1 "strongly disagree" to 5 "strongly agree." CL was conceptualized as a three-dimensional construct, including attitudinal, behavioral, and cognitive loyalty (Dick and Basu, 1994; Oliver, 1997, 1999; Walsh *et al.*, 2008).

Attitudinal loyalty was measured using a four-item scale (Dick and Basu, 1994; Oliver, 1997, 1999; Chaudhuri and Holbrook, 2001; Jones and Taylor, 2007); behavioral loyalty was measured using a three-item scale (Oliver, 1997, 1999; Chaudhuri and Holbrook, 2001;

Parasuraman *et al.*, 2005; Jones and Taylor, 2007), using five-point Likert-type scales ranging from 1 "very unlikely" to 5 "very likely"; and cognitive loyalty was measured using a four-item scale (Oliver, 1997, 1999; Jones and Taylor, 2007).

Attitudinal and cognitive loyalty dimensions were measured on five-point Likert-type scales ranging from 1 "strongly disagree" to 5 "strongly agree." All the loyalty scales were worded to address manifestations of loyalty directed toward the internet service company, rather than an individual person who provides the service. A small section was also included in the questionnaire to study the respondents' characteristics. Table I shows the constructs' measurement items.

Survey design and data collection

A self-administered online survey was developed to test the research model and hypotheses. The survey was designed via an iterative process adapted from previous empirical research to generate its measurements and items. Next, the survey instrument was piloted through interviewing a judgmental sample of 35 internet subscribers who had valid internet subscription over the last three years to reveal their ability to understand it and to test its appropriateness for the research purpose. Two marketing academics from reputable Jordanian universities and two internet experts examined the survey for face and content validity purposes. Based on the guidelines recommended by Malhotra (2010), the pilot study was insightful, upon which a number of amendments were carried out on the first draft of the questionnaire, whereby every aspect (e.g. content, wording, design, time needed to answer and layout) was piloted.

The survey was delivered to 2,000 internet subscribers using an online survey where the research objectives were explained to them. Using the online survey approach for data collection is consistent with previous studies investigating online customers' attitudes (e.g. Carlson and O'Cass, 2010; Constantinides *et al.*, 2010; Lin and Wang, 2015). In addition to posting the survey on Facebook, e-mail messages were transmitted to the target sample that described the purpose of the research and invited internet subscribers to participate in the online survey. The hyperlink of the survey questionnaire was posted on the Facebook and social groups for 30 days, inviting internet subscribers to participate in the survey. The respondents were reminded several times via online contacts and e-mails, respectively. Of the delivered online surveys ($n = 2{,}000$), 1,297 completed forms were valid for analysis, a response rate was 64.85 percent.

Although English language is widely spoken in Jordan, our survey was originally constructed in English and then translated into Arabic, based on the backward translation method, and the guidelines provided by Brislin (1976). Two bilingual PhD holders in business who are familiar with the Jordanian business culture translated our survey from English to Arabic. Thereafter, back-translation was employed until the final version was produced in Arabic. Finally, a comparison between the two original language versions (i.e. the initial one and back-translated version) of the instrument was undertaken to check the validity of the translation process. The versions contained non-significant differences which suggested that the translation process was acceptable. Prior to the primary data collection process, both the English and Arabic versions of the instrument were piloted. Finally, both versions were offered to the respondents.

Face validity is evidenced through the pilot work of the research instrument with two internet service managers, as well as two marketing PhD holders from reputable business schools in Jordan, who checked the relevance and appropriateness of the questionnaire to achieve the research objectives. Content validity is evidenced by explaining the methodology used to develop the research questionnaire, which included: examining the previous empirical and theoretical work of perceived value, CS and loyalty; and conducting the pilot study with internet service customers before starting the fieldwork.

Table I.
Confirmatory factor analysis results

Constructs, items and measurements		CFA factor loadings
Perceived value: CR = 0.80; AVE = 0.54		
PV1	The price of the internet service connection you have paid for (how economical the internet service is?)	0.76
PV2	The overall convenience of the internet you have used	0.72
PV3	The performance of the internet service for the money you have paid	0.80
PV4	The overall value you get from this internet service for your money paid and effort invested (sacrifices)	0.78
Functional satisfaction: CR = 0.87; AVE = 0.63		
FS1	Satisfaction with employees' responsiveness in dealing with your requests	0.70
FS2	Satisfaction with employees' competencies and skills in solving your problems	0.82
FS3	Satisfaction with employees' commitment in providing the required support e.g., technical support	0.88
FS4	Satisfaction with easiness and speediness of gaining access to employees when needed	0.81
Technical satisfaction: CR = 0.86; AVE = 0.62		
TS1	Satisfaction with availability and stability of the internet signal most of the time during the internet connection	0.75
TS2	Satisfaction with speed of the internet connection/transmission as promised	0.70
TS3	Satisfaction with the internet downloads capacity and consistency	0.85
TS4	Satisfaction with the internet speediness of recovery after being disconnected or breakdown	0.83
Attitudinal loyalty: CR = 0.85; AVE = 0.60		
AL1	I intend to repurchase internet services from my current internet provider in the future	0.84
AL2	I would rank my current internet provider as number one amongst the other internet providers in the market	0.89
AL3	I would positively recommend my current internet provider to others (e.g. friends, colleagues, relatives) who seek my advice	0.67
AL4	I am likely to pay a little bit more for using my current internet provider	Deleted

(*continued*)

Table I.

Behavioral loyalty: CR = 0.84; AVE = 0.59		
BL1	I will probably use my current internet provider in the future again	0.70
BL2	I will do all of my business with the current internet provider when I need this type of service in the future	0.73
BL3	I will probably subscribe to another internet service provider	0.71
Cognitive loyalty: CR = 0.86; AVE = 0.62		
CL1	I deal exclusively with my current internet provider	0.70
CL2	The current internet provider I use says a lot about who I am	0.87
CL3	I sometimes give my business to another internet provider that provides me with the same type of service	0.71
CL4	The internet subscription price is not an important factor to remain with my current internet provider	Deleted

CFA model goodness of fit indices

Model goodness of fit indices	Model desired level	Baseline CFA model fit indices	Alternative CFA model fit indices
χ^2	$\chi^2, P \geqslant 0.05$	$\chi^2 = 372, p = 0.000$	$\chi^2 = 306, p = 0.000$
Normed fit index	NFI $\geqslant$ 0.90	0.86	0.91
Non-normed fit index	NNFI $\geqslant$ 0.90	0.89	0.92
Comparative fit index	CFI $\geqslant$ 0.90	0.91	0.94
Goodness-of-fit index	GFI $\geqslant$ 0.90	0.86	0.89
Adjusted goodness-of-fit index	AGFI $\geqslant$ 0.80	0.81	0.86
Standardized root mean-square residual	SRMR $\leqslant$ 0.08	0.06	0.05
Root mean square error of approximation	RMSEA $<$ 0.08	0.07	0.07

Profile of respondents

Analysis of the respondents' profile shows that 55.6 percent are males and 44.4 percent are females. More than 81.8 percent of the respondents are young and aged between 20 and 50 years old (26.1 percent are 20–28 years; 43.4 percent are 29–37 years; 12.3 percent are 38–46 years; 13 percent are 47–55 years; and 4.2 percent are more than 56 years). Most are well educated (5.1 percent $\leqslant$ high school; 4.2 percent two years of college; 61.2 percent bachelor's degrees; 28.5 percent graduate degrees). Furthermore, 36.3 percent of the internet subscribers had been with their internet providers for three to five years, and 63.7 percent of them had been subscribers for more than six years. The majority of internet subscribers had monthly income of JD500–1,200 (1.6 percent ‹JD300; 9.3 percent JD300–499; 44.6 percent JD500–799; 12.3 percent JD800–1,199; 16.8 percent > JD1,200). With regard to how many times subscribers had changed their internet providers, 38.1 percent had never changed; 11.5 percent had changed provider once; 21.5 percent twice; 16.1 percent changed thrice; and 12.8 percent more than three times.

Measurement model

Convergent and discriminant validity, factor loadings, average variance extracted (AVE) and composite reliability (CR) were used to assess the measurement model's validity and reliability. Confirmatory factor analysis (CFA) was used to assess construct validity (Hair *et al.*, 1998). To assess the CFA, goodness of measurement model fit using SEM were followed (Chau, 1997, p. 318; Garver and Mentzer, 1999), as shown in Table I. Therefore, the unidimensionality of CPV, CS and CL constructs was evaluated by CFA using EQS 6.1 software. As shown in Table I, measures of goodness-of-fit were met.

One of the study objectives is to retain the items that have high loadings, to maintain face validity, since the modification indices suggest that some items have more in common with each other than the specified model allows. Therefore, consistent with the extant literature, offending items were sequentially deleted until the standardized loadings and the fit indices revealed that no improvement could be attained through item deletion. In addition, following guidelines outlined by Voss *et al.* (2003), a series of shortened versions of the scale were compared using χ^2 difference test, AGFI, and model Akaike Information Criterion (AIC). Based on the guidelines outlined by Voss *et al.* (2003), the item deletion process stops if the deletion process compromises the construct validity, and when one or two possible results occur: the χ^2 difference test shows no difference; the AGFI does not increase; and model AIC does not improve.

Therefore, the fit indices of the CFA baseline model were ($\chi^2 = 372$; AIC = 2,377; AGFI = 0.86) and the fit indices of the alternative CFA model after deleting two items (AL4 and CL4) were ($\chi^2 = 306$; AIC = 2,069; AGFI = 0.89). Based on the guidelines outlined by Voss *et al.* (2003), the best CFA model is the alternative CFA model, which is used in the subsequent analysis. Two items (AL4 and CL4) were deleted during the CFA analyses, which were from the attitudinal and cognitive loyalty dimensions, respectively. The deletion of these items resulted in a better CFA model. Deleting AL4 seems to be reasonable since the internet service industry is relativity undifferentiated, mature, and customers tend to be price sensitive. In other words, the two loyalty items are related to the internet price, which points out those customers tend to be price-oriented in this industry, and may consider switching to other internet providers if the price increases.

Convergent validity was examined by using the Bentler-Bonett normed fit index (NFI) (Bentler and Bonett, 1990). All of the constructs have NFI values above 0.90. Furthermore, as shown in Table I, indication of the measures' convergent validity is provided by the fact that all factor loadings are significant and that the scales exhibit high levels of internal consistency (Fornell and Larcker, 1981; Gerbing and Anderson, 1988). Also, as shown in Table I, the values of CR and AVE for each construct are all above the threshold values suggested by Bagozzi (1980): 0.70 and 0.50, respectively. Furthermore, the discriminant

validity is established by: the absence of significant cross-loadings that are not represented by the measurement model (i.e. congeneric measures) – the absence of significant cross-loading is also an evidence of constructs unidimensionality (Gerbing and Anderson, 1988); and to establish the evidence for the discriminant validity among the constructs, we compared the shared variance among the constructs with AVE from each construct. The discriminant validity is established between two constructs (if the AVE of each one is higher than the shared variance). Comparing the shared variance and AVE values showed in Tables I and II, where the diagonal values are the AVEs, our results indicated a support for the discriminant validity among the latent variables in our model.

Structural model and hypotheses testing

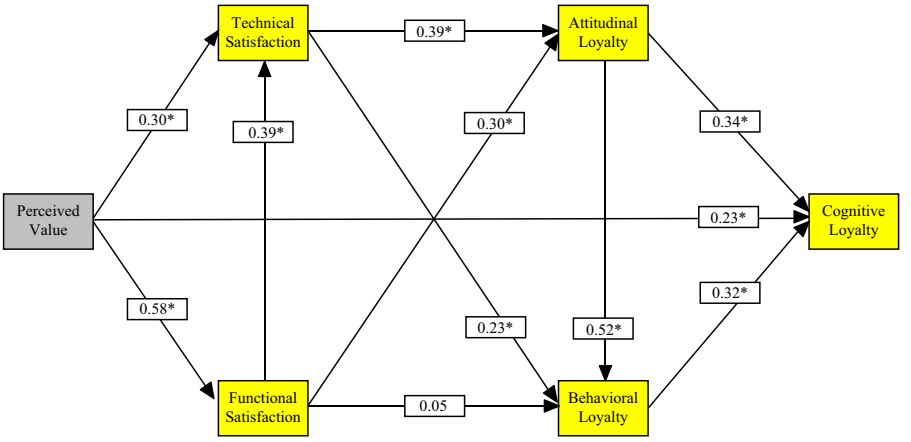
Structural path analysis was used to test the proposed model and hypothesized relationships, as shown in Figure 2. Table III shows the structural path model goodness of fit measures and the structural paths results. As shown in Table III, the goodness-of-fit measures indicate that the model has an excellent fit to the data. The structural findings indicate that all but one of the research hypotheses *H1–H11* are supported (except *H6*).

Perceived value has a positive significant effect on functional satisfaction ($\beta = 0.58$, $t = 11.02$), technical satisfaction ($\beta = 0.30$, $t = 4.86$) and cognitive loyalty ($\beta = 0.23$, $t = 4.68$), respectively, providing support for hypotheses *H1–H3*.

Functional satisfaction has a positive significant effect on technical satisfaction ($\beta = 0.39$, $t = 6.23$) and attitudinal loyalty ($\beta = 0.30$, $t = 4.81$), respectively, providing support for hypotheses *H4–H5*.

Constructs	Mean	SD	1	2	3	4	5	6
1. Perceived value	3.52	0.85	0.54					
2. Functional satisfaction	3.43	0.88	0.31	0.63				
3. Technical satisfaction	3.22	0.91	0.25	0.28	0.62			
4. Attitudinal loyalty	3.29	0.92	0.15	0.24	0.27	0.60		
5. Behavioral loyalty	3.54	0.78	0.14	0.17	0.26	0.37	0.59	
6. Cognitive loyalty	3.31	0.76	0.21	0.16	0.18	0.36	0.35	0.62

Table II.
Shared variance among the research constructs



Note: *Standardised β coefficients are significant at $p < 0.05$

Figure 2.
Empirical model-perceived value and customer loyalty

Table III.
Summary of structural path model results-perceived value and customer loyalty

Sub-Hypotheses	Variables in the paths model	β*	*t*-value**
H1	Customer Perceived Value→Functional Satisfaction	0.58	11.02**
H2	Customer Perceived Value→Technical Satisfaction	0.30	4.86**
H3	Customer Perceived Value→Cognitive Loyalty	0.23	4.68**
H4	Functional Satisfaction→Technical Satisfaction	0.39	6.23**
H5	Functional Satisfaction→Attitudinal Loyalty	0.30	4.81**
H6	Functional Satisfaction→Behavioral Loyalty	0.05	0.83
H7	Technical Satisfaction→Attitudinal Loyalty	0.39	6.36**
H8	Technical Satisfaction→Behavioral Loyalty	0.23	3.90**
H9	Attitudinal Loyalty→Behavioral Loyalty	0.52	8.93**
H10	Attitudinal Loyalty→Cognitive Loyalty	0.34	5.47**
H11	Behavioral Loyalty→Cognitive Loyalty	0.32	5.33**

**Standardised β Coefficients.* ***Significant at $p < 0.05$*

Model goodness of fit indices: desired level	χ^2 $p \geqslant 0.05$	NFI $\geqslant$ 0.90	NNFI$\geqslant$ 0.90	CFI $\geqslant$ 0.90	GFI $\geqslant$ 0.90	AGFI $\geqslant 0.80$	SRMR $\leqslant 0.08$	RMSEA < 0.08
Model indices results	Perfect fit to the data where NFI is 1:00							

Functional satisfaction has a positive but non-significant effect on behavioral loyalty ($\beta = 0.05$, $t = 0.83$), providing no support for hypothesis *H6*.

Technical satisfaction has a positive significant effect on attitudinal loyalty ($\beta = 0.39$, $t = 6.36$) and behavioral loyalty ($\beta = 0.23$, $t = 3.90$), respectively, providing support for hypotheses *H7–H8*.

Attitudinal loyalty has a positive significant effect on behavioral loyalty ($\beta = 0.52$, $t = 8.93$) and cognitive loyalty ($\beta = 0.34$, $t = 5.47$), respectively, providing support for hypotheses *H9–H10*.

Finally, behavioral loyalty has a positive significant effect on cognitive loyalty ($\beta = 0.32$, $t = 5.33$), providing support for hypothesis *H11*.

The structural findings indicate that perceived value exerted a stronger effect ($\beta = 0.58$, $t = 11.02$) on functional satisfaction than its effect ($\beta = 0.30$, $t = 4.86$) on technical satisfaction, whereas technical satisfaction exerts a stronger effect ($\beta = 0.39$, $t = 6.36$) on attitudinal loyalty than the effect of functional satisfaction ($\beta = 0.23$, $t = 4.81$) on attitudinal loyalty. Attitudinal loyalty exerted a stronger effect ($\beta = 0.52$, $t = 8.93$) on behavioral loyalty than the effect of each of technical satisfaction ($\beta = 0.23$, $t = 3.90$) and functional satisfaction ($\beta = 0.05$, $t = 0.83$), respectively. Further, among perceived value and loyalty constructs, attitudinal loyalty ($\beta = 0.34$, $t = 5.47$) and behavioral loyalty ($\beta = 0.32$, $t = 5.33$) are the strongest drivers of cognitive loyalty.

Finally, the structural results show that R^2 result of 0.53 indicates that 53 percent of variation in cognitive loyalty was caused by the behavioral loyalty →attitudinal loyalty→perceived value path. Next, the R^2 result of 0.50 indicates that 50 percent of variation in behavioral loyalty was caused by the technical satisfaction→functional satisfaction→perceived value path, while the R^2 result of 0.38 indicates that 38 percent of variation in attitudinal loyalty was caused by the technical satisfaction→functional satisfaction path.

Results discussion

The aim of the research was to test an integrated model of CPV, CS and Cl through the intervariable approach, in which CS and CL were stretched and tested as multidimensional and interdependent constructs. We have examined the effect of CPV on CS and CL dimensions as well as examining the effect of CS dimensions on CL in the internet service market in Jordan. The review of literature showed that CPV is a significant determinant of CS. Its consistent effect on CS highlights the improvement in understanding CS and future

purchase intentions (Cronin *et al.*, 2000; Yang and Peterson, 2004; Lee *et al.*, 2011; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016). The structural results indicated once again the sturdiness of the chain of effects of value–satisfaction–loyalty linkages as the basis of consumer behavior and formulating marketing strategy.

The results of this research indicate that CPV (price, performance, convenience and overall value) put forward the strongest effect on functional satisfaction, and a positive but less significant effect on technical satisfaction. For the purpose of this study, functional satisfaction is conceptualized as the service encounter satisfaction, reflecting service providers' functional capabilities to provide the service (i.e. the employees' responsiveness, competencies and interaction skills), while technical satisfaction entails service attributes satisfaction, reflecting service providers' technical capabilities to provide the service (i.e. satisfaction with the provided customer services outcomes, the company's services prices, reputation and image, and the speediness of providing customer services). Moreover, CPV was also found to have an effect on cognitive loyalty, which is the perceivable qualities and features of a certain brand when seen as more advantageous and desirable than alternatives.

Prominent researchers have suggested that marketers need to understand the cognitive aspects or mechanisms of loyalty, in order to manage it and to comprehend the underlying motivation surrounding purchase behavior (e.g. Day, 1969; Dick and Basu, 1994). These calls have resulted in research attempts to conceptualize and measure brand loyalty. Research on CS, quality and CPV reveal that they are important marketing paradigms, and their relationships with post-purchase behavior have drawn considerable interest and attention from practitioners and academics perspectives alike (Brady and Robertson 1999; Cronin *et al.*, 2000). Heskett and Schlesinger (1994) placed CPV at the center of the service-profit chain, linking employee satisfaction, loyalty, productivity and output quality with CS, CL and profitability. Many researchers agreed that CPV exerts a significant influence on behavioral intentions (Lee *et al.*, 2011; Jin *et al.*, 2015; Lin and Wang, 2015; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016). Other researchers have also demonstrated that high levels of CPV lead to both future purchase intentions and behaviors (e.g. Liao *et al.*, 2014). Our empirical results confirm and support such contentions.

As for the dimensions of CS, it was found that functional satisfaction has a positive significant effect on technical satisfaction. This finding indicates that customer feelings toward the service encounter are considered a vital "building block" for CS, which leads to judging the service quality and determining the customer's behavior toward the service (Cronin *et al.*, 2000). Considering the interrelationship between CS and CL dimensions, empirical research stipulates that CL is an outcome of CS, and customers who experience elevated levels of satisfaction with a service provider are likely to remain with it (Oliver, 1997; Kim *et al.*, 2004; Akroush *et al.*, 2011; Akroush and Abu-ElSamen, 2012; Fraering and Minor, 2013; Liao *et al.*, 2014).

The findings also confirmed that functional satisfaction exerted a positive, significant influence on attitudinal loyalty. Technical satisfaction has a strong influence on both attitudinal and behavioral loyalty. These results indicate that when customers are happy with the attributes of the service and the technical capabilities of its provider they will develop a psychological attachment to it, which might evolve in the form of a long-term and ongoing relationship, whereby customers might show preference, purchase intention, supplier prioritization, or willingness to recommend to others. This kind of a relationship will lead to repetitive purchase behavior that would definitely benefit the organization.

The results also show that attitudinal loyalty strongly influences behavioral loyalty. This finding suggests that the customers' attitude toward a certain ISP, in comparison to other providers, is a major determinant of whether the customer will stay with company or not. This finding confirms Dick and Basu's (1994) conceptualization that relative attitude is likely to provide a strong indication of repeat patronage, suggesting that a positive attitude and repeat purchase were required to define loyalty. They also viewed loyalty as an

attitude-behavior relationship in their framework, and affirmed that CL is perceived as a relative measure of the relationship between an individual's attitude and their repeat patronage. Therefore, attitudinal loyalty is built based on experiences where it has strong ties into customer support.

Every interaction or service encounter should be a chance to reinforce attitudinal loyalty by exceeding expectations, removing roadblocks and delivering delight to the customer, which inevitably leads to a higher frequency of purchase from the service provider. The effect of attitudinal loyalty on behavioral loyalty is unsurprising, and affirms substantial consensus among previous studies (e.g. Bennett and Rundle-Thiele, 2002; Li and Petrick, 2008; Suhartanto, 2011). Attitudinal loyalty and behavioral loyalty were found to be the strongest propellers of cognitive loyalty. Cognition can be based upon previous or second-hand information or recent experience of a brand. This stage of loyalty is simply information based, but superficial (Oliver, 1999; McCain *et al.*, 2005; Suhartanto, 2011). When the service is used routinely, without causing any satisfaction, the extent of loyalty is nothing more than performance, but when the consumer gets satisfaction from using a service, it becomes part of the consumer's experience and takes on emotional or affective manifestations. Hence, our research found that cognitive loyalty is influenced by perceived value, behavioral loyalty and attitudinal loyalty, in ascending order of importance.

Our study has attempted to clarify the controversial issues related to the interrelationships and interconnectedness between CPV and the dimensions of CS and CL constructs. The findings establish that CS is a two-dimensional construct that consists of transaction-specific (functional satisfaction) and cumulative satisfaction (technical satisfaction), corroborating previous studies (Abu-ELSamen *et al.*, 2011; Akroush and Abu-ELSamen, 2012; Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). The present study has also found that loyalty is a three-dimensional construct consisting of three stages, attitudinal, behavioral and cognitive loyalty (Lee and Overby, 2004), rather than four (Oliver, 1997, 1999). However, while supporting the existence of a three-dimensional structure of loyalty, this research does not entirely dismiss the four-stage, multidimensional brand loyalty proposed by Oliver (1999). The rationale is that attitudinal loyalty merges the indicators of cognitive loyalty, affective loyalty and conative loyalty. Therefore, the loyalty identified in this research extends the traditional composite of loyalty conceptualization.

The results show that 53 percent of variation in cognitive loyalty was caused by behavioral loyalty, attitudinal loyalty and perceived value path, which reveals the strategic significance of establishing cognitive loyalty based on CPV and behavioral and attitudinal loyalty. In the same vein, 50 percent of variation in behavioral loyalty was caused by technical satisfaction, functional satisfaction, and perceived value path, which indicates the vital roles of such dimensions on establishing behavioral loyalty. Finally, 38 percent of variation in attitudinal loyalty was caused by the technical satisfaction, functional satisfaction path, which reveals the fundamental role of technical satisfaction (service outcomes) on building attitudinal loyalty in consumers' minds.

Contributions

Theoretical

The linkages between CPV-CS-CL can be explained by: using the intervariable approach while examining these linkages; conceptualizing and operationalising CS and CL as multidimensional constructs; and examining the interrelationships and connectedness between their dimensions. Although CPV was conceptualized and operationalized as a unidimensional construct in our study, investigating its effect on the dimensions of CS and CL provides a deeper understanding of its effect on CS and CL dimensions and corroborates previous research findings in an emerging market, Jordan. From a consumer behavior

perspective, it appears theoretically meaningful and practically useful to understand the effect of CPV on specific dimensions of CS and CL rather than conceptualizing them as unidimensional constructs. Unlike much prior research on CS, investigating the proposed relationships and interactions between CS dimensions (functional satisfaction leads to technical satisfaction) expands the theoretical value gained from our study.

We believe that the inclusion of CS and CL dimensions in our model, as outcomes of CPV, has provided a reasonable contribution to consumer behavior research based on new evidence from an emerging market context, Jordan. Our study has also provided a strong empirical support to the notion that CL is a three-dimensional construct, comprising attitudinal, behavioral, and cognitive loyalty (Oliver, 1997, 1999). Since markets are competitive and industries are getting mature on continuous bases, relying on a unidimensional aspect of loyalty is insufficient for service organizations. Our study offers empirical support for the proposed multifaceted, multidimensional model of CL. This support is based on several pieces of empirical evidence.

First, there are positive, strong and significant relationships between the three dimensions of CL, which provides profound support to Oliver's (Oliver, 1997, 1999) thesis Second, the three dimensions of CL are positively and significantly linked with CS dimensions (functional and technical), which provides sound support for the intervariable approach (Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). Such findings open a potential new avenue of research in the area of CPV-CS-CL chain in different market contexts. Hence, unlike the majority of previous research on CL, investigating the proposed relationships and interactions between CL dimensions (attitudinal, behavioral, and cognitive) enhances the theoretical value emerged from our study.

Contemporary thought in marketing recognizes that CPV, CS and CL are critical factors in relational exchanges between consumers and service organizations. Although our findings echo this fundamental thought, we refine and extend the literature in several important ways. By conceptualizing and modeling CPV, CS and CL utilizing the intervariable approach, our study embraces a dynamic view in which the unidimensional constructs of CS and CL do not always retain customers and build long-term relationships with them. By including multiple dimensions of CS and CL, combined with CPV, our empirical model offers excellent insights into CL building process via CPV and CS dimensions.

This refines and extends contemporary understanding of satisfaction-loyalty dynamics to provide theoretical and managerial insights. Moreover, by following the intervariable approach in our study of examining the linkages of CPV-CS-CL, our study does not support the simplistic views that support conceptualizing and operationalising CS and CL as unidimensional constructs in service businesses. Rather, our study supports the notion of adopting the intervariable approach in conceptualizing CS and CL constructs to achieve strategic objectives, especially financial performance and improving market position.

Practical

The empirical findings of the study invite ISPs to adopt CS and CL as multidimensional constructs to sustain their competitive position. Marketing directors need to recognize that perceived CPV is an essential antecedent to develop a successful multidimensional program of CL, through functional and technical satisfactions, to stay competitive the mature internet market. That said, the service encounter satisfaction reflects CS with the ISP's functional capabilities to provide the service toward building technical satisfaction and CL. Meanwhile, TCS reflects CS with the ISP's technical capabilities to provide the service to the consumers (i.e. outcomes) which are essential for building different types of CL.

Furthermore, a bundle of benefits and value for money are the major components of CS which marketing directors should focus on while designing CL strategies. Strong empirical findings indicate that attitudinal loyalty has a greater impact on behavioral loyalty than

technical and functional satisfaction. This is at the heart of consumer psychology theory, which indicates that consumers' attitudes drive their behavior toward a service or product. Therefore, marketing directors need to focus on building attitudinal loyalty, through CPV and CS, which act as building blocks toward behavioral and cognitive loyalty.

Another important marketing implication is that marketing directors are invited to focus on building CL programs and strategies that should take into consideration the long- and short-term loyalty components. That said, CPV and attitudinal loyalty are essential antecedents to developing long-term loyalty programs, focused on building cognitive loyalty. Meanwhile, technical and functional satisfactions, and CPV, have a major contribution toward building behavioral loyalty programs in the short-term, which in turn may lead to attitudinal and cognitive loyalty. However, from consumers' perspectives, it depends on the ability of the ISP to provide consistent CS (e.g. technical satisfaction), which usually successfully leads to repeated behavioral loyalty. A much more fundamental implication is that an integrated paradigm for all the dimensions of CS and CL should be employed toward building CS and CL programs as essential foundations for long-term profitable relationships with customers.

Limitations and future research

Although this research has achieved its objectives, it has some limitations due to trade-offs in the research design. First, CPV was measured as a unidimensional construct, while previous studies reported that it is multidimensional (e.g. Gallarza, Arteaga-Moreno, Del Chiappa and Gil-Saura, 2016; Gallarza, Ruiz-Molina and Gil-Saura, 2016). Future research can measure CPV as a multidimensional construct and test its effects on CS and CL dimensions using the intervariable approach. Second, CL is the only outcome of CS dimensions investigated in our research. Future research could also investigate other outcomes of CS and CL, such as customer lifetime value, customer retention, profitability, return on investment and market share.

A key finding of this study is that improving CS dimensions and CPV are strong enablers toward building attitudinal, behavioral and cognitive CL. A potential area of future research is also to investigate the most influential dimensions of CS and CL on building relationships with customers. Finally, the generalizability of this study to other industries, markets or countries is limited without further validation and testing. Hence, future research is encouraged to conduct comparative studies between developing and developed industries and countries, to test the research model's generalizability using the intervariable approach.

Despite the fact that our study is a preliminary step to answer such questions, the empirical insights obtained indicate several fruitful avenues for further research. Consequently, our study calls for a shift in the kind of questions that CEOs, marketing managers and researchers entertain about the role of CPV-CS-CL chain in service business. Instead of asking if CS and CL constructs are unidimensional or multidimensional, our study offers vital questions that require answers in future research endeavors, such as:

- What are the CPV dimensions that build CS and CL dimensions?
- What are the most influential dimensions of CPV on CS and CL dimensions?
- What are the dimensions of CS and CL that build and sustain long-term relationships with customers?

Conclusion

The classical and simplistic chain of CPV-CS-CL that conceptualizes CS and CL as unidimensional constructs needs to be replaced with the intervariable approach, which views the constructs and dimensions of the chain as interconnected, interdependent, and

acting in a complex manner. The outcomes of the chain of CPV-CS-CL using the intervariable approach encompass a better understanding of consumer behavior, conducive to achieving service businesses' long-term objectives, building profitable relationships with customers and obtaining sound financial performance. Furthermore, the findings of this study encourage researchers to revisit the current paradigm of CPV-CS-CL chain in service organizations in an attempt to clarify and explain the controversial issues related to the linkages and relationships between the chain constructs and dimensions. In other words, the general and unidimensional constructs of CPV, CS and CL are insufficient to assess the outcomes and value of marketing strategies activities for today's service organizations.

The competiveness in the marketplace and maturity of many industries as well as dynamism in changing customers' needs and wants compel service organizations to focus on specific dimensions of CPV (product value, perceived sacrifice, performance, psychological value and convenience), CS (technical and functional satisfaction) and CL (attitudinal, behavioral and cognitive loyalty), which lead to building profitable relationships with customers, preventing consumers' switching behavior and promoting improved firm performance. From a practitioner perspective, every "Moment of Truth" is important, and customers judge their satisfaction with service organizations whenever a transaction takes place during the interaction process between the customer and the service provider. At this stage, the customer realizes the perceived service quality and value.

Therefore, CPV is a fundamental antecedent to develop successful multidimensional CL programs, through functional and technical satisfaction, to stay competitive in the mature ISP arena. Therefore, the service encounter satisfaction reflects CS with the provider's functional capabilities to provide the service en route to building technical satisfaction and the CL. Providing a bundle of benefits and value for money are key ingredients of CS that marketers need to focus on while designing CL strategies. In addition to that, CEOs and managers need to be aware that building CL programs and strategies should take into account the long-term and short-term loyalty components (attitudinal, behavioral and cognitive). Finally, service organizations should strive to build cognitive loyalty, which is an excellent indicator that they have provided value to their customers and satisfied them. Furthermore, cognitive loyalty is another strong indicator of achieving functional and technical satisfaction as well as adopting and implementing successful attitudinal and behavioral CL programs to stay competitive in the market.

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