

The concept of brand co-creation has its importance among firms in general and brand management departments in particular. The notion of co-creation from customer's perspective has been given little attention within the extant literature of branding and marketing. The fast changings in marketing arena has brought customers to the forefront of any activity. Also, the role customers play in providing the firms with information and ideas has increased their importance. Vargo and Lusch (2004) emphasized such role by putting customers at the heart of the equation when it comes to brand co-creation. More importantly, customers active co-creation would determine the success of brands among competitors (Ind and Coates, 2013). A new trend of brand management is to incorporate co-creation mechanism to support firms in enhancing their competitive advantages (Ramaswamy and Ozcan, 2014). Theoretical discussion of co-creation has been expanding, however, a small

percentage of such discussion was given to the topic of branding in the marketing domain (Galvagno and Dalli, 2014). Enhancing competitive advantage through brand co-creation is an indicator to the success of brand management, which consequently will lead to improving firms' performance (Merz et al., 2009). Showing the influence of co-creation on brands' performance becomes a critical to the whole business (France et al., 2018). Thus, there is a need, theoretically and empirically, to understand co-creation and how can it be managed in the domain of brand management (France et al., 2018).

Paradoxically, the research of co-creation has increased under the theory and processes of co-creation concept. However, the customer, who considered the center of such processes, is neglected in such research (France et al., 2018). In addition, brand loyalty as an outcome of co-creation behavior have not been given much attention in the whole process of customers co-creation. This research provides a framework for the antecedents and consequences of the customer co-creation behavior. Antecedents, consequences, and the co-creation behavior all were investigated from the customer's perspective in this research. This research intends to empirically investigate the effect of customer's brand engagement, brand self congruity, and brand involvement on co-creation and the effect of co-creation on brand value and brand loyalty. Fulfilling such task would define the nature of brand co-creation's antecedents and outcomes. The objectives of this research are to identify, conceptually, and test, empirically, the antecedents and consequences of customers brand co-creation. The research will start by reviewing the literature of brand co-creation and its relationship with each antecedent and outcome, then the hypotheses related to each relationship will be developed. The study theoretical framework will be depicted to show the relationships between different variables. Then the method, measures, and sample used in this study will be presented. Finally, the results, discussion, theoretical and practical implications, limitations, and conclusion will be provided.

2. Literature Review & Hypotheses Development

2.1 Customer Brand Co-creation

The concept of customer co-creation has been emerged as a practical domain that enhances the participatory culture in society (Gulbrandsen and Just, 2011). Co-creating customers look for the opportunity to add a contribution to the environment around them. Simultaneously, firms seek the insights of customers in relation to products improvements (Ind et al, 2013). The modern face of co-creation is resulted from three aspects: 1. digital communications that started to take place from 1990s till present time have enabled customers to connect to others on online networks, share ideas, recommend improvements, and modify products (Muniz and O'guinn, 2001). 2. from the perspective of organizations, they recognized the importance of bringing in the consumers to participate in creating brands (products and services), which would enhance firms' effectiveness and reduce the risk of not meeting customers' needs (Prahalad and Ramaswamy, 2000). 3. the emergence of the concept "exchange of intangible" which involves a relationship between the customer and the organization that is based on a collaborative work to co-create value (Vargo and Lusch, 2004). Hence, organizations benefit from customer co-creation as they listen to customers' complaints, customers' recommendations, and their opinions regarding brands' performance (Ind et al, 2013). Moreover, when customers co-create effectively, they may be a useful source of particular skills and competencies, and their contributions might tremendously enhance the firm's whole performance (Amabile, 1998).

The meaning of co-creation has been widely seen from managerial perspective and the approach to brands was focusing on the organization itself with the neglect of communicative process between firms and customers (Kärreman and Rylander, 2008). Moving away from product-dominant-logic to service dominant-logic (Vargo and Lusch, 2004) has helped in the existence of co-creation concept, and that is explicit when brands evolve based on collaborative work rather than the single view organizations have when developing brands (Merz et al., 2009). Similarly, Grönroos (2011) pointed out that co-creation is initiated from the usage of the brand (product or service). Because customers co-create the value of the brand when it is used, this usage is considered a participation in brand improvement (Grönroos, 2011). Organizations adopting this view would become closer to its customers, listen to them, and adopt the ideas developed by them. Consequently, the reward customers require is an intrinsic value of contributing in something that is worthwhile to them (Ind and Coates, 2013).

The concept of co-creation has no consensus in meaning and has been defined by several scholars from different perspectives (Prahalad and Ramaswamy, 2004a; France et al. 2015). For instance, Prahalad and Ramaswamy, (2004a) defined co-creation as “the creation of value processes that resulted from a collaboration between both customers and manufacturers”. This definition lacks the aspects of customers’ perspectives and provides a general view of the co-creation concepts. However, France et al. (2015) offered a conceptualization of customer brand co-creation which views this concept from customers’ own point of view. They proposed that “Customer brand co-creation behaviors are the customer-led interactions between the customer and the brand” (France et al. 2015). This definition is adopted in this study as it views the concept of brand co-creation from customer’s perspective.

Prahalad and Ramaswamy (2004b) proposed a building blocks of brand co-creation between the firm and the consumer. This building block highlights four components that should be taken into consideration when initiating a co-creation process. First, dialogue; which is an essence in every interaction process between any two parties. The company and its consumers should have dialogue to be able to co-create value of the brand. Second, access; because having a dialogue needs the customer to access some information whether the firm’s information or on the community of the brand to be able to help in contributing to brand co-creation. Third, transparency; the information provided to customers should be transparent and the firm itself should be honest when dealing with customers. Fourth, risk-benefits; customers must not be harmed by participation in the co-creation process and should be benefited. These benefits may be tangible (i.g. rewards) or intangible that is intrinsic in the customers’ feeling of achievement by improving the brand. On the other hand, the company should pay attention to its patents because transparency may harm the firm’s copy rights and jeopardize its competitive position (Prahalad and Ramaswamy, 2004b).

2.2 Antecedents of Customer Brand Co-creation

2.2.1 Brand Engagement

The term ‘engagement’ has been used in several academic publications in different disciplines; such as social psychology, organizational behavior, and marketing (Brodie et al. 2011; Leeftang, 2011; Hollebeek et al. 2014). The concept of engagement in such disciplines indicates to, explicitly and implicitly, different form of interactions whether with the society - e.g. social engagement - or in the work environment - e.g. employees engagement – (Jennings and Zeitner ,2003; Schaufeli et al., 2002). In the context of marketing, engagement concept has several sub-forms such as: customer engagement (Patterson, Yu & De Ruyter, 2006),

customer engagement behavior (Van Doorn et al, 2010), and customer brand engagement (Hellebeek, 2011). Each sub-form indicates a two-way interaction between customers in one side and product/brand/organization in the other side (Bowden,2009). Customer brand engagement, specifically, addresses the interaction between a main customer and specific brand (Hollebeek, 2011).

The seminal works by Vargo and Lusch (2004; 2008) Lusch and Vargo (2006) have created the roots for customer engagement by emphasizing the role that customers play as a partner and co-creator of the products and brands' values (Brodie et al. 2011). Several researchers conceptualized the term engagement in the context of customer brand engagement. For instance, Brodie et al (2011) conceptualized brand engagement as a psychological state, which encompasses a proactive and interactive customer relationship. Hollebeek et al. (2014) conceptualized customer brand engagement as "A consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions" However, the latter definition of brand engagement is adopted in this research.

The role of brand engagement in the process of brand co-creation is obvious from its importance as an antecedent and from the terms itself 'engagement' which indicates the tendency of interaction with the brand (France et al, 2015). Moreover, Prahalad and Ramaswamy (2004a) pointed out that, when a firm needs to create anything that has value, it must engage customers to be able to do so. In the same vein, Hollebeek (2011) stated that, the co-creation of brand value is an outcome of brand engagement. Furthermore, Payne et al. (2008) explored engagement as a tool companies used to co-create value with its customers. Other previous research (Nambisan and Baron, 2009; Schau et al. 2009) indicates that customer engagement behavior will have an impact on the processes of value creation within the whole system. Empirically, Jaakkola and Alexander (2014) interviewed several respondents and based on their work they identified different types of behaviors for customer's engagement. They found that the behavior of customer's engagement motivated them to co-create the value of ScotRail Station (the case used in their study) by suggesting improvements to the stations and their services. France et al., (2018) provided, empirically, findings supporting the positive relationship between brand engagement and customer brand co-creation. Based on the above argument, the relationship between customer brand engagement and customer brand co-creation can be hypothesized that:

H1: Customer Brand Engagement has a positive influence on Customer Brand Co-creation.

2.2.2 Brand Self-congruity

Brand self-congruity was defined as the matching between the customers' self-concept and the image of a given brand, product, etc. (Sirgy et al. 2008). It is also identified as "a fundamental driver of the value creating process" (Gyrd-Jones and Kornum, 2013). the Former definition is adopted in this research. Self-congruity theory stated that when people choose to buy and use brands, whether goods or services, they tend to select brands that expressing themselves and their own images (Sirgy, 1986). This action will lead customers to feel self-consistent which would enhance their relationship with such brands (Aaker, 1997; Graeff, 1996). Customers have more than one reason to purchase a specific brand, apart from utilitarian reasons, they are motivated to purchase brands that express their own self (Park et al. 1986; Sirgy, 1982).

The role of brand self-congruity in influencing the brand value co-creation has been conceptualized by several scholars in branding literature. For instance, Lloyd and Woodside (2013) argued that self-expression can play a crucial role in motivating consumers to co-create brands. Similarly, Ind et al. (2012) emphasized the important role that brand communities play in encouraging customers to co-create. These communities are a suitable place for customers to express their self-identity (Pongsakornrungrasit and Schroeder, 2011; Wirtz et al., 2013). In the same vein, Prahalad and Ramaswamy (2004b) elaborated more on the impact of several factors, including self-expression, on co-creation of brands. When customers access to the information of specific products or services of the company, their initial motivation was self-concept related to these products and services (brands). Based on that, they are allowed to co-create brands without even owning them (Hatch and Schultz, 2010). Psychologically, self-expression is seen, along with different variables, as a motivator of user generated content engagement in an online medium (Krishnamurthy and Dou, 2008). Empirically, Christodoulides et al., (2012) found that self-concept has a positive influence on customers' tendency to generate content in a company's website. The results of empirical study conducted by France et al., (2018) found brand self-congruity as a driver of customer brand co-creation. Based on the above argument, the relationship between brand self-congruity and brand co-creation can be hypothesized that:

H2: Customer Brand Self-Congruity has a positive influence on Customer Brand Co-creation.

2.2.3 Brand Involvement

The general view of involvement concentrates more on personal relevance (Greenwald and Leavitt, 1984; Zaichkowsky, 1985). The concept of involvement has been applied to advertisement context, product context, and purchasing decisions (Zaichkowsky, 1985). In the advertisement context, involvement is exploited by emphasizing the relevancy of the ad to the customer who is consequently affected by, motivated, and responded to it (Petty and Cacciopo, 1981). Regarding the product context, involvement is used in terms of the needs and values that the product offers to customers (Zaichkowsky, 1985). Finally, In terms of purchasing decision context, involvement is manipulated by focusing on the relevancy of decision to fulfil the needs of customers (Clarke and Belk, 1978). From these three perspectives of involvement, product involvement is close in meaning to brand involvement. So, the concept of brand involvement is defined for the context of this research as: A person's perceived relevance of the brand based on inherent needs, values, and interests (Zaichkowsky, 1985).

Involvement with a brand leads to a continuous psychological commitment with that brand (Gordon et al, 1998). This psychological state can be noticed in both offline and online environments where the brand exists (De Vries and Carlson, 2014). For instance, in online environment, when customers are involved with a specific brand, they become interested in the information and attributes of the portal that host such brand. Their behavior leads them to gain more information, showing more widespread information searching habits, and their buying intention increases (Richard and Chandra, 2005). In the same vein, when customers involved with a particular brand their activities within the brand community increase in a manner that showed their effort in product/service (brand) development. Customers involved with the brand can influence brand development through discussing product and service modifications which consequently affect the whole brand specifications and capabilities (Anderson, 2005).

Brand involvement shows a relevancy to the participation of customers in the process of brand co-creation (France et al, 2015). Ind et al, (2012) claimed that, the feeling of fulfilment that customers experience encouraged them to participate in co-creation. Similarly, the involvement in the brand leads to customers' interests and personal relevance (Bloch, 1981); such relevance and interests are obvious in customers recommendations whether directly - communicating with the company - or non-directly - through word-of-mouth - (Lim and Chung, 2014). A clear example of such behavior can be seen in blog writers whose interest in specific brands and their involvement with such brand encourages them to co-create (Pihl, 2013). Based on the above argument, the relationship between customer brand involvement and customer brand co-creation can be hypothesized that:

H3: Customer Brand Involvement has a positive influence on Customer Brand Co-creation.

2.3 Consequences of Customer Brand Co-creation

2.3.1 Brand Value

Brand value is conceptualized by some scholars as the result of firm's investment which helps in creating and sustaining a competitive advantage in relation to competitors (Doyle, 1990). There is a little agreement on how brand value should be defined and how should it be measured (Kamakura and Russell, 1993). Generally, there are two perspectives in defining and measuring brand value. The first perspective is to the firm which views brand value from financial perspective relative to competitors. This view concentrates on the intangible financial value of the brand that is resulted from the firm's performance in the market and reflected in the financial statement of the company (Barwise et al., 1990). The second view is to the customer, which involves relating brand features and the value gained by the customer to the brand name. this view consequently creates association in the customer's mind when seeing the brand. Simultaneously, it enhances the brand value in consumers' minds (Kamakura and Russell, 1993). To define brand value, in the context of this study, a definition from Zeithaml, (1988) is adopted as; "the consumers' overall assessment of the utility of a brand based on perceptions of what is received and what is given". This definition was slightly modified to suit the context of this study.

The impact of customers' participation on brand value co-creation has been conceptualized by several scholars, for instance, Gregory (2007) pointed out, when stakeholders engaged and involved in the development of corporate brand the values of such brand will be expressed. Likewise, Hatch and Schultz (2010) indicated that, the process of co-creation when handled or implemented with the help of stakeholders (i.g, customers), those individuals will view the value and the meaning of the brand emerges from such participation. Customers' perceptions of brand value will be influenced by their behavior when participating in brand co-creation (Ind et al., 2013). In relationship marketing, customers become active in their collaboration and participation with the brands they have a relationship with. In this case their efforts will be directed to co-creating value with the company (Yi and Gong, 2013). Several Theoretical discussions supported the notion that customers' perception of brand value will be affected favorably by their contribution to the process of brand co-creation (Vargo and Lusch, 2004; Ramaswamy and Gouillart, 2010; Ind et al., 2012). Empirically, France et al., (2018) found a result supporting, strongly, the influence of customer brand co-creation on brand value. Based on the above argument, the relationship between brand co-creation and brand value can be hypothesized that:

H4: Brand Co-creation has a positive influence on Brand Value.

2.3.2 Brand Loyalty

The importance of brand loyalty has been recognized in the marketing literature by several scholars (Howard and Sheth, 1969; Oliver, 1999; Chaudhuri and Holbrook, 2001). The benefits that firms received from brand loyalty are numerous. For instance, positive word of mouth, business profitability, and reducing marketing costs are results of brand loyalty (Maheshwari et al., 2014). A widely used definition for brand loyalty, which is going to be adopted in this study, was proposed by Oliver (1999) as “a deeply held commitment to rebuy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (Oliver, 1999). This definition highlights two different dimensions of brand loyalty; namely behavioral and attitudinal. Behavioral aspect emphasized customers’ repetition in purchasing the brand, while attitudinal aspect concentrates on the inclinational commitment to some values related to the brand (Chaudhuri and Holbrook, 2001).

Co-production (co-creation) from customers’ perspectives may benefit the organization in several aspects (Bateson, 1985). Customers are given opportunities to involve in the process of customization (Schneider and Bowen, 1995; Schneider and Bowen, 2010). It is suggested that, customers’ brand co-creation is associated with their loyalty. Co-creation opportunities given to customers would enhance their perception and lead to favorable assessment of the firm, consequently will motivate their intention to actual purchase of the brand (Auh et al., 2007). Co-creation makes customers able to participate in tailoring products and services of the intended brand and it is assumed that, tailored brands might be eligible of high prices paid by customers who co-created them (Grissemann, and Stokburger-Sauer, 2012). Empirically, customers are highly willing to pay more for products or services that were self-designed than those products or services that they did not participate in creating (Franke and Piller, 2004; Schreier, 2006). A study conducted to measure the association between co-production and loyalty in the financial sector found that, attitudinal loyalty was positively correlated with co-production. However, behavioral loyalty was not supported to have such a relationship (Auh et al., 2007). Similarly, Grisseman and Stokburger-Sauer (2012) found a positive relationship between the degree of customer co-creation in travelling services and their loyalty. Based on the above argument, the relationship between brand co-creation and brand loyalty can be hypothesized that:

H5: Brand Co-creation has a positive influence on Brand Loyalty.

3. Research Methodology

3.1 Sample and Data Collection

The target population of this study is the customers of telecommunication companies in Saudi Arabia who have a sim card from telecommunication service providers. There are only three telecommunication firms; namely Saudi Telecommunication Company (STC), Mobily Company (Mobily), and Zain Company (Zain). The sampling method used in this research is non-probability sampling and the tool used is snowballing which is a type of convenience sampling. In line with some branding research (Yi and Gong, 2013, Celuch et al., 2015), this research used this sampling technique. An online self-administered questionnaire was sent to

some customers and asked them to resend it to their family, friends, and everyone they know. The questionnaire was translated from English (the original language of the items) into Arabic (the language of the respondents). The survey first translated by the researchers, then they sent it to 30 respondents to check its clarity. Some amendments were made according to comments from respondents before confirming the final version. Data was collected using google forms on the internet. The survey, then, sent to respondents using the technique mentioned above and after about one month, 428 usable questionnaires were received as the study sample size.

Table (1): Sample Characteristics

Construct	Classification	Number	Percentage
Telecommunication Company	Saudi Telecommunication Company (STC)	294	68.70%
	Mobily	100	23.40%
	Zain	34	7.90%
Gender	Male	273	63.80%
	Female	155	36.20%
Age	Less than 18	5	1.20%
	18 to 25	50	11.70%
	26 to 35	151	35.30%
	36 to 45	143	33.40%
	More than 45	79	18.50%
Education	High School or below	58	13.60%
	College/University	260	60.70%
	Graduate School or above	110	25.70%
Monthly Income	S.R. 5000 or less	124	29%
	S.R. 5001 to S.R. 10000	91	21.20%
	More than S.R. 10000	213	49.80%

Note: n = 428

3.2 Measures

The measures used in this study were adapted from different scholars in the field of branding. Brand engagement scale was adapted from Hollebeek et al. (2014), brand self-congruity and Brand involvement scales were adapted from France et al., (2016). Regarding customer brand co-creation scale, it was adapted from Christodoulides et al (2012) with some re-wording of the items to fit the definition of co-creation used in this study. Brand value scale was adapted from Sweeney and Soutar (2001) with some re-wordings to fit the context of this research. Finally, brand loyalty scale was adapted from Zeithaml et al. (1996). All items were measured using a 5-point Likert scale and the anchors are: (1) “strongly disagree”, (2) “disagree”, (3) “Not sure”, (4) “Agree”, (5) “strongly agree”.

3.3 Analytical Model

The objective of this research is to test relationships between variables that already conceptualized in branding literature (France et al., 2015). In addition to the objective of empirically testing the model, one consequence – brand loyalty - was added to the model for extending it theoretically. Moreover, the sample size in this research was 428 participants.

According to Hair et al. (2010) SEM-AMOS is preferred when the research is a theory driven, the sample size is big, and the measurements used are established. This study is a theory driven research, the sample is big, and the measurements used were already established in the literature. So, SEM-AMOS is a suitable analytical model for this research to test the hypotheses.

4. Results

4.1 Exploratory Factor Analysis (EFA)

EFA was conducted on each construct using principal component method to confirm the loadings of items belonging to each factor. All items were loaded highly on the factors (constructs) used in this research; namely, Brand Engagement, Brand Self-congruity, Brand Involvement, Brand Co-creation, Brand Value, and Brand Loyalty. According to Ho (2013), for Factor Analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than 0.05. Moreover, if Kaiser-Meyer-Olkin Measure of Sampling Adequacy is greater than 0.5, this indicates that factor analysis for data reduction is effective and the sample adequacy is accepted (Ho, 2013). These two tests reflected that the study sample is adequate for further analysis, starting with the factor analysis for construct validity testing of the measurement scales.

Table (2) shows the values of some important measures for the model, first; it shows each construct with the standard regression weights, Cronbach Alpha, Average Variance Extracted (AVE), and Composite Reliability (CR). Cronbach Alpha is higher than 0.7 for all constructs which indicates high internal consistency between the items of each variable. AVE is higher than 0.5 for all constructs except Brand Co-creation. According to Fornell and Larcker (1981) AVE should be higher than 0.5 and the value 0.4 is accepted only when the Composite Reliability (CR) of the same construct is higher than 0.6, the CR of Brand Co-creation is 0.744 so the convergent validity of Brand Co-creation is still adequate (Fornell and Larcker (1981).

Table (2): Standardized Factor Loadings, Cronbach Alpha, AVE, and CR

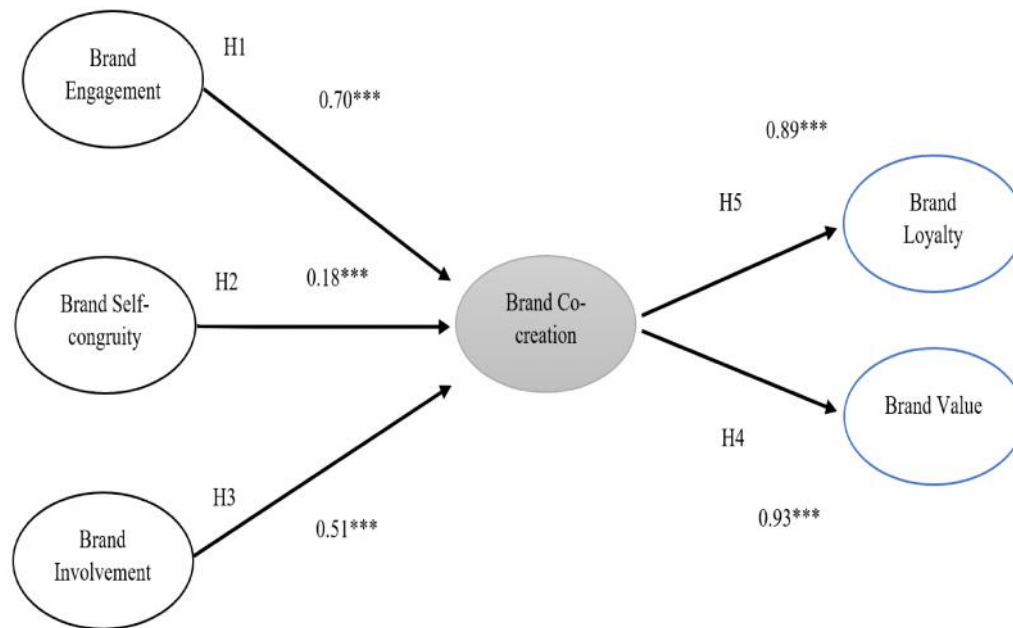
Construct	Items	Standardized Factor Loadings	AVE	CR
Brand Engagement $\alpha = 0.917$	Using this brand gets me to think about it	0.507	0.515	0.912
	I think about this brand a lot when I am using it	0.535		
	I feel very positive when I use this brand	0.786		
	Using this brand makes me happy	0.791		
	I feel good when I use this brand	0.785		
	I am proud to use this brand	0.823		
	I spend a lot of time using this brand	0.612		
	Whenever I am using the category involving different brands, I usually use this brand	0.756		
	This brand is one of the brands I usually use	0.736		
	Using this brand stimulates my interest to learn more about it	0.765		
Brand Self-Congruity $\alpha = 0.956$	This brand image corresponds to my self-image in many respects.	0.890	0.845	0.956
	This brand is exactly how I see myself.	0.890		
	This brand reflects who I am.	0.957		
	This brand is a lot like me	0.938		
Brand	This brand means a lot to me.	0.885	0.678	0.913

Involvement $\alpha = 0.918$	This brand is significant to me.	0.851		
	For me personally, this brand is important.	0.770		
	I am interested in this brand.	0.871		
	I am involved with this brand	0.728		
Brand Co- Creation $\alpha = 0.805$	I enjoy creating online content about the brand I like	0.443	0.43	0.744
	I want to be able to have online dialogue with those responsible for the brand I like	0.725		
	I find information from other consumers about the brand I like trustworthy	0.642		
	If I can customize the brand I like, then I feel more confident using it	0.766		
Brand Value $\alpha = 0.968$	This brand has consistent quality	0.781	0.644	0.966
	This brand is well made	0.817		
	This brand has an acceptable standard of quality	0.804		
	This brand would perform consistently	0.807		
	This brand is the one I would enjoy	0.792		
	This brand would make me want to use it	0.893		
	This brand is the one that I would feel relaxed about using	0.886		
	This brand would make me feel good	0.882		
	This brand would give me pleasure	0.894		
	This brand is reasonably priced	0.713		
	This brand offers value for money	0.742		
	This brand would be economical	0.703		
	This brand would help me to feel acceptable	0.755		
	This brand would improve the way I am perceived	0.728		
	This brand would make a good impression on other people	0.830		
	This brand would give its owner social approval	0.779		
Brand Loyalty $\alpha = 0.945$	I recommend this brand to other people	0.875	0.746	0.946
	I introduce this brand to other people	0.762		
	I say positive things about this brand to other people	0.880		
	I intend to remain loyal to this brand in the future	0.887		
	I will not stop supporting this brand	0.917		
	I think of myself as a loyal customer/supporter of this brand	0.854		

4.3 Hypotheses Testing

The hypotheses of this research were tested using SEM-AMOS which showed the estimate of the variance of each dependent (endogenous) variable caused by independent (exogenous) variables and its related P-value as shown in figure (1). Regarding the antecedents of the Brand Co-creation, the results showed that Brand Engagement, Brand Self-congruity, and Brand Involvement (H1, H2, H3) have statistically significant positive effects on customer Brand Co-creation at the confidence level (99%) with the estimates of 0.7, 0.18, and 0.51 respectively. Regarding the consequences of Brand Co-creation, the results supported the hypotheses (H4, H5) that customer Brand Co-creation have statistically significant positive impact on both Brand Value and Brand Loyalty at the confidence level (99%) with the estimates of 0.93 and 0.89 respectively. Thus, all the five hypotheses of the study are upheld.

403 **Figure (1): Hypotheses testing**



404

405 **5. Discussion**

406 The results of the relationship between Brand Engagement and Brand Co-creation in the form
 407 of influencing one another provide a proof on two aspects: first, Brand Engagement is distinct
 408 from Brand Co-creation behavior (France et al. 2015). Second; in line with previous research,
 409 when customers are engaged passionately with a brand, the likelihood of participating in co-
 410 creation activities is high (Hollebeek et al., 2014; France et al. 2018). This hypothesis was
 411 supported in this study. Telecommunication customers who are engaged with the brand of
 412 their service provider are likely to participate in co-creation activities. The findings also
 413 support the relationship between Brand Self-congruity and Brand co-creation as per previous
 414 conceptualizations and empirical findings in the literature (Dretscher and Kirmani, 2014;
 415 France et al., 2015; France et al. 2018). Customers of telecommunication firms who are
 416 aligning their self-image with the image of their service provider tend to participate in co-
 417 creation activities. However, Brand Engagement effect on Brand Co-creation behavior is
 418 higher than that of Brand Self-congruity. The third antecedent of Brand Co-creation was
 419 having an influence on the customers' co-creation behavior was Brand Involvement.
 420 Customers of telecommunication companies who are involved with the brands as important
 421 assets are more inclined to show a co-creation behavior. This is validated by previous studies
 422 of Ind et al. (2012) and Pihl (2013) who revealed that customers who were involved with a
 423 particular brand had a high tendency to show co-creation behavior.

424

425 Two outcomes of Brand Co-creation were proposed in this research, the first consequence is
 426 Brand Value and the second is Brand Loyalty. Regarding Brand Value, the findings of this
 427 study acknowledge the impact of customers' Brand Co-creation behavior on the value they
 428 perceive when co-creating telecommunication brands. The aspects of brand value that
 429 customers perceived are emotional, quality, price, and societal. This indicates that, customers
 430 of telecommunication firms, after participating in co-creation behavior, express their
 431 perceived value of their emotion toward the brand, the quality they perceived, the reasonable

price, and the societal impact that telecommunication brand provides to them. In consistent with previous theoretical and empirical research (Vargo and Lusch, 2004; Ramaswamy and Gouillart, 2010; France et al. 2018), the results of this study confirm the effect of Brand Co-creation behavior on Brand Value of telecommunication companies. The other outcome of brand co-creation is Brand Loyalty, customers of STC, Mobily, and Zain who are inclined to participate in co-creation behavior tend to recommend and spread a positive word of mouth about these brands. Moreover, they express their loyalty and intend to stay using such brands in the future. This result is in line with previous research (Auh et al., 2007; Grisseman and Stokburger-Sauer, 2012) in that, customers co-creation behavior will enhance the attitudinal and behavioral loyalty of customers towards telecommunication brands. So, co-creation behavior with a specific brand, initiated by the customers, would increase their loyalty level to that brand.

6. Theoretical and practical Implications

This research theoretically contributes to the branding literature by presenting the concept of brand co-creation from customers' perspective in a model that has antecedents and consequences. Co-creation has been always seen from firm's perspective. This study flips up the coin and show how customers voluntarily participate in co-creating the brands they engaged, involved with and reflected their self-image. In addition, this research provides two outcomes of customers co-creation behavior: Brand Value and Brand Loyalty. The value of the brand in customers' minds will be maximized because they co-create the brands they like, this is one important consequence of brand co-creation behavior. The second outcome is brand loyalty, which was not tested before in the literature of branding. Offering a brand co-creation model that has a network of antecedents and consequences is extending the knowledge of brand co-creation. Moreover, providing a model that has three antecedents related to the relationship between the customers and the brands in one side and their perception about that brand on the other side is a contribution to a little work done in customer-centered co-creation literature. Another aspect of theoretical contribution in this study is the empirical validation of the relationships in the model of Brand Co-creation including its antecedents and consequences as one complete structure. The last point that can be considered a contribution of this research is the context that this study has been conducted in. To the best of researchers' knowledge, no study related to brand co-creation from customers' perspective has been carried out in Saudi Arabia. So, conducting a research related to brand co-creation in different culture is considered by many researchers as a contribution to the literature.

In addition to the theoretical contribution, which considered the guidelines for practice, practical contribution of this research is obvious. Practitioners in branding, particularly telecommunication brand managers, can benefit from the findings of this research in enhancing their customers' relationships and improve their strategic insights. Putting potential efforts in reaching the stages of brand engagement (Jaakkola, and Alexander, 2014), brand self-congruity (Christodoulides et al. 2012), and brand involvement (Pihl, 2013) would help brand managers to facilitate the participation of customers in brand co-creation. The co-creation behavior, based on the results of this study, can be initiated from the three antecedents. So, brand managers, can parallelly work on developing the sense of brand engagement, self-congruity, and involvement. At the same time encourage customers who are high in such attributes to participate in the co-creation behavior. In terms of brand co-creation outcomes, brand managers in telecommunication companies can increase the value of their brands in consumers' minds which consequently would increase the success of the brand

itself (Zeithaml, 1988). The other outcome of customers co-creation behavior, is Brand Loyalty. Managers of Telecommunication brands can, strategically, use the co-creation behavior to spread a positive word of mouth about their brands. Additionally, they can keep loyal customers to develop the sense of participating in brand co-creation. In the literature of marketing, brand value perception and loyalty would increase the probability of firm's success and customers' retention (Auh et al., 2007; Zeithaml, 1988). Brand managers in STC, Mobily, and Zain can use the findings of this study to design or reform a strategy that takes into consideration the influence of brand co-creation antecedents and its consequences.

7. Limitations and Future Research

The sample chosen only limited to telecommunication firms' customers in Saudi Arabia, which limits the generalizability of results on other telecommunication markets outside Saudi Arabia. Also, the sampling method used in this research is non-probability sampling and the technique used was snowballing, which may limit the randomness of responses. This research investigated service brands in telecommunication companies, future research may investigate the services in different sectors, like banking or comparing the co-creation concept in both private sector and public sector. Future research could be also applied the same model in different settings such as brands related to tangible products, like fashions, cars, mobiles, personal computers, etc. There are some spaces in the model to add more antecedents and consequences of brand co-creation behavior. Future research could extend the model by adding more antecedents and consequences or some mediating and moderating variables that may affect the studied relationships and test them to expand the knowledge in this important business area.

Reference

- Aaker, J. L. (1997). Dimensions of brand personality. *Journal of marketing research*, 347-356.
- Amabile, T. M. (1998). *How to kill creativity* (Vol. 87). Boston, MA: Harvard Business School Publishing.
- Anderson, P. H. (2005). Relationship marketing and brand involvement of professionals through web-enhanced brand communities: The case of Coloplast. *Industrial marketing management*, 34(3), 285-297.
- Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and customer loyalty in financial services. *Journal of retailing*, 83(3), 359-370.
- Barwise, P., Higson, C., Likiernan, A., & Marsh, P. (1990). Brands as "separable assets". *Business Strategy Review*, 1(2), 43-59.
- Bateson, J. E. (1985). Self-service consumer: An exploratory study. *Journal of retailing*.
- Bloch, P. (1981). An exploration into the scaling of consumer's involvement with a product class. *Advances in Consumer Research*, 8(1), 61-65.
- Bowden, J. L. H. (2009). The process of customer engagement: A conceptual framework. *Journal of Marketing Theory and Practice*, 17(1), 63-74.
- Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of service research*, 14(3), 252-271.
- Celuch, K., Robinson, N.M. and Walsh, A.M. (2015). A framework for encouraging retail customer feedback. *Journal of Services Marketing*, 29(4), 280-292.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of marketing*, 65(2), 81-93.
- Christodoulides, G., Jevons, C., & Bonhomme, J. (2012). Memo to marketers: Quantitative evidence for change: How user-generated content really affects brands. *Journal of advertising research*, 52(1), 53-64.

- Clarke, Keith and Russell W. Belk (1978). The Effects of Product Involvement and Task Definition on Anticipated Consumer Effort. *Advances in Consumer Research*, 5, ed. H. Keith Hunt, Ann Arbor, MI: Association for Consumer Research, 313-318.
- De Vries, N. J., & Carlson, J. (2014). Examining the drivers and brand performance implications of customer engagement with brands in the social media environment. *Journal of Brand Management*, 21(6), 495-515.
- Doyle, P. (1990). Building successful brands: the strategic options. *Journal of consumer Marketing*, 7(2), 5-20.
- Dretsch, H.J. and Kirmani, A. (2014). Why are some brand co-creation activities more effective than others? the effects of brand knowledge potential and self-brand connection on brand engagement intentions. *Advances in Consumer Research*, 42, 535-536.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- France, C., Merrilees, B., Miller, D. (2015). Customer brand co-creation: a conceptual model. *Marketing Intelligence & Planning*, 33(6), 848-864.
- Franke, N., & Piller, F. (2004). Value creation by toolkits for user innovation and design: the case of the watch market. *Journal of Product Innovation Management*, 21(6), 401-415.
- France, C., Grace D., Merrilees, B., and Miller, D. (2018). Customer brand co-creation behavior: conceptualization and empirical validation. *Marketing Intelligence & Planning*, 36(3), 334-348.
- France, C., Merrilees, B. and Miller, D. (2015). Customer brand co-creation: a conceptual model. *Marketing Intelligence & Planning*, 33(6), 848-864.
- Galvagno, M. and Dalli, D. (2014). Theory of value co-creation: A systematic literature review. *Managing Service Quality: An International Journal*, 24 (6), 643-683, DOI: 10.1108/MSQ-09-2013-0187
- Gordon, M., McKeage, K., & Fox, M. (1998). Relationship marketing effectiveness: The role of involvement. *Psychology & Marketing*, 15(5), 443-459.
- Graeff, T. R. (1996). Using promotional messages to manage the effects of brand and self-image on brand evaluations. *Journal of consumer marketing*, 13(3), 4-18.
- Greenwald, A. G., & Leavitt, C. (1984). Audience involvement in advertising: Four levels. *Journal of Consumer research*, 11(1), 581-592.
- Gregory, A. (2007). Involving stakeholders in developing corporate brands: The communication dimension. *Journal of Marketing Management*, 23(1-2), 59-73.
- Grissemann, U. S., & Stokburger-Sauer, N. E. (2012). Customer co-creation of travel services: The role of company support and customer satisfaction with the co-creation performance. *Tourism Management*, 33(6), 1483-1492.
- Grönroos, C. (2011). Value co-creation in service logic: A critical analysis. *Marketing Theory*, 11(3), 279-301. <http://dx.doi.org/10.1177/1470593111408177>
- Gulbrandsen, I. T., & Just, S. N. (2011). The collaborative paradigm: towards an invitational and participatory concept of online communication. *Media, Culture & Society*, 33(7), 1095-1108.
- Gyrd-Jones, R. and Kornum, N. (2013). Managing the co-created brand: value and cultural complementarity in online and offline multi- stakeholder ecosystems. *Journal of Business Research*, 66(9), 1484-1493.
- Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2010). *Multivariate Data Analysis* (7th Ed). Englewood Cliffs, NJ: Prentice Hall.
- Hatch, M.J. and Schultz, M. (2010). Toward a theory of brand co-creation with implications for brand governance. *Journal of Brand Management*, 17(8), 590-604.
- Ho, R. (2013). *Handbook of univariate and multivariate data analysis with IBM SPSS*. CRC press.
- Hollebeek, L. (2011). Exploring customer brand engagement: definition and themes. *Journal of strategic Marketing*, 19(7), 555-573.
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of interactive marketing*, 28(2), 149-165.
- Howard, J., & Seth, J. (1969). *The Theory of Buyer Behavior*. New York, John Wiley & Sons.
- Ind, N., & Coates, N. (2013). The meanings of co-creation. *European Business Review*, 25(1), 86-95.
- Ind, N., Fuller, C. and Trevaill, C. (2012). *Brand Together: How Co-creation Generates Innovation and Re-energizes Brands*, Kogan Page, London.

- Ind, N., Iglesias, O., & Schultz, M. (2013). Building brands together: Emergence and outcomes of co-creation. *California Management Review*, 55(3), 5-26.
- Jaakkola, E., & Alexander, M. (2014). The role of customer engagement behavior in value co-creation: a service system perspective. *Journal of Service Research*, 17(3), 247-261.
- Jennings, Kent M., & Zeitner, V. (2003). Internet use and civic engagement: A longitudinal analysis. *Public Opinion Quarterly*, 67(3), 311-334.
- Kamakura, W. A., & Russell, G. J. (1993). Measuring brand value with scanner data. *International journal of Research in Marketing*, 10(1), 9-22.
- Kärreman, Dan and Rylander, Anna (2008). Managing Meaning through Branding the Case of a Consulting Firm. *Organization Studies* 29(1):103-125. DOI: 10.1177/0170840607084573
- Krishnamurthy, S., & Dou, W. (2008). Note from special issue editors: Advertising with user-generated content: A framework and research agenda. *Journal of Interactive Advertising*, 8(2), 1-4.
- Leeflang, P. (2011). Paving the way for distinguished marketing. *International Journal of Research in Marketing*, 28(2), 76-88.
- Lim, B. C. and Chung, C. M. Y. (2014). Word-of-mouth: the use of source expertise in the evaluation of familiar and unfamiliar brands. *Asia Pacific Journal of Marketing and Logistics*, 26(1), 39-53.
- Lloyd, S. and Woodside, A. (2013). Corporate brand- rapture theory: antecedents, processes, and consequences. *Marketing Intelligence & Planning*, 31(5), 472-488.
- Lusch, R. F., & Vargo, S. L. (2006). Service-dominant logic: reactions, reflections and refinements. *Marketing theory*, 6(3), 281-288.
- Maheshwari, V., Lodorfos, G., & Jacobsen, S. (2014). Determinants of brand loyalty: A study of the experience-commitment-loyalty constructs. *International Journal of Business Administration*.
- Merz, M.A., He, Y. and Vargo, S.L. (2009). The evolving brand logic: a service-dominant logic perspective. *Journal of the Academy of Marketing Science*, 37(3), 328-344.
- Muniz, A. M., & O'guinn, T. C. (2001). Brand community. *Journal of consumer research*, 27(4), 412-432.
- Nambisan, Satish and Robert A Baron (2009). Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co- creation Activities. *Journal of Product Innovation Management*, 26 (4), 388-406.
- Oliver, Richard L. (1999). Whence Consumer Loyalty?" *Journal of Marketing*, 63 (Special Issue), 33-44.
- Park, C. W., Jaworski, B. J., & MacInnis, D. J. (1986). Strategic brand concept-image management. *The Journal of Marketing*, 50(4),135-145.
- Patterson, Paul, Ting Yu and Ko de Ruyter (2006). Understanding Customer Engagement in Services.' *Advancing Theory, Maintaining Relevance, Proceedings of ANZMAC Conference, Brisbane*, 4-6 December.
- Payne, A. F., Storbacka, K. and Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83-96.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of personality and social psychology*, 41(5), 847.
- Pihl, C. (2013). When customers create the ad and sell it – a value network approach. *Journal of Global Scholars of Marketing Science*, 23(2), 127-143.
- Pongsakornrungrasit, S. and Schroeder, J.E. (2011). Understanding value co-creation in a co-consuming brand community. *Marketing Theory*, 11(3), 303-324.
- Prahalad, C. K., & Ramaswamy, V. (2000). Co-opting customer competence. *Harvard business review*, 78(1), 79-90.
- Prahalad, C. K., & Ramaswamy, V. (2004a). Co-creating unique value with customers. *Strategy & leadership*, 32(3), 4-9.
- Prahalad, C.K. and Ramaswamy, V. (2004b). *The Future of Competition: Co-Creating Unique Value with Customers*. Boston, MA: Harvard Business School Press.
- Ramaswamy, V. and Gouillart, F. (2010). *The Power of Co-Creation*, Free Press, New York, NY.
- Ramaswamy, Venkat and Ozcan, Kerimcan (2014). *The co-creation Paradigm*. Stanford Business Books, Stanford.

- 629 Richard, M. and Chandra, R. (2005) A model of consumer web navigational behavior: Conceptual development
630 and application. *Journal of Business Research*, 55(8), 1019–1029.
- 631 Schau, Hope J, Albert M Muñiz Jr and Eric J Arnould (2009). How Brand Community Practices Create Value.
632 *Journal of Marketing*, 73(5), 30-51.
- 633 Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement
634 in university students: A cross-national study. *Journal of cross-cultural psychology*, 33(5), 464-481.
- 635 Schneider, B., Bowen, D.E. (1995). *Winning the service game*. Harvard Business School Press, Boston, Mass.
- 636 Schneider, B., & Bowen, D. E. (2010). *Winning the service game*. In *Handbook of service science*. Springer,
637 Boston, MA. DOI:10.1007/978-1-4419-1628-0_4
- 638 Schreier, M. (2006). The value increment of mass-customized products: an empirical assessment. *Journal of*
639 *Consumer Behaviour*, 5(4), 317-327.
- 640 Sirgy, M. J. (1982). Self-concept in consumer behavior: A critical review. *Journal of consumer research*, 9(3),
641 287-300.
- 642 Sirgy, M. J. (1986). *Self-congruity: Toward a theory of personality and cybernetics*. Praeger
643 Publishers/Greenwood Publishing Group.
- 644 Sirgy, M.; Lee, D.; Johar, J; and Tidwell, J. (2008). Effect of self-congruity with sponsorship on brand loyalty.
645 *Journal of Business Research*. 61(10), 1091-1097. DOI:.org/10.1016/j.jbusres.2007.09.022
- 646 Sweeney, Jillian C. and Geoffrey N. Soutar (2001). Consumer Perceived Value: The Development of a Multiple
647 Item Scale. *Journal of Retailing*, 77(2), 203-220.
- 648 Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer
649 engagement behavior: Theoretical foundations and research directions. *Journal of service research*, 13(3),
650 253-266.
- 651 Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of*
652 *marketing*, 68(1), 1-17.
- 653 Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy*
654 *of marketing Science*, 36(1), 1-10.
- 655 Wirtz, J., den Ambtman, A., Bloemer, J., Horváth, C., Ramaseshan, B., vandeKlundert, J., Canli,Z.G. and
656 Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal*
657 *of Service Management*, 24(3), 223-244.
- 658 Yi, Y. and Gong, T. (2013). Customer value co-creation behavior: scale development and validation. *Journal of*
659 *Business Research*, 66(9), 1279-1284.
- 660 Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of consumer research*, 12(3), 341-352.
- 661 Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of
662 evidence. *The Journal of marketing*, 2-22.
- 663 Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996). The behavioral consequences of service quality.
664 *Journal of Marketing*, 60(2), 31-46.