

Brand Co-creation in the Saudi Telecommunication Sector: Antecedents and Consequences from Customer Perspective

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Authors' contributions

This work was carried out in collaboration between the two authors. Both authors designed the study, managed and wrote the literature review, performed the statistical analysis, wrote the findings and recommendations and approved the final manuscript.

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ABSTRACT

Brand co-creation has been a crucial concept in contemporary marketing. The growing interest in co-creation had its impact on business research efforts as a support mechanism for developing the firm's brands to meet its customer requirements and enhance the company's competitive advantage. This research investigates the relationships between customers' brand co-creation and its antecedents (brand engagement, brand self-congruity, and brand involvement) and consequences (brand value and brand loyalty). A sample of 428 participants was selected from the three telecommunication firms' customers in Saudi Arabia. Saudi Telecommunication Company (STC), Mobily, and Zain are the surveyed brands. SEM-AMOS was used to test the study hypotheses. The findings of the study revealed that customers who are engaged, involved, and self-congruent with the brands have increased their effectiveness in brand co-creation activities. Moreover, their participation in brand co-creation enhanced their perception about the brand value and made them more loyal to the brands.

Keywords: Brand co-creation; brand engagement; brand self-congruity; brand involvement; brand value; brand loyalty.

1. INTRODUCTION

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 the customer's perspective has been given little attention within the extant literature of branding and marketing. The fast-changing 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 to the firms' performances. Vargo and Lusch [1] emphasized such role by putting customers at the heart of the equation when it comes to brand co-creation. More importantly, customer active co-creation would determine the success of brands among competitors [2]. A new trend of brand management is to incorporate co-creation mechanism to support firms in enhancing their competitive advantages [3]. Theoretical discussion of co-creation has been expanded. However, a small percentage of such discussion was given to the topic of branding in the marketing domain [4]. Enhancing competitive advantage through brand co-creation is an indicator of the success of brand management, which consequently will lead to improving firms' performance [5]. Showing the influence of co-creation on brands' performance becomes critical to the whole business [6]. Thus, there is a need, theoretically and empirically, to understand co-creation and how it can be managed in the domain of brand management [6].

Paradoxically, the research of co-creation has increased under the theory and processes of co-creation concept. However, the customer, who should be the center of such processes, is neglected in such research [6]. In addition, brand loyalty as an outcome of co-creation behaviour has not been given much attention in the whole process of customer co-creation. This research provides a framework for the antecedents and consequences of the customer co-creation behaviour. Antecedents, consequences, and the co-creation behaviour are investigated, in this research, from the customer's perspective. The research intends to empirically investigate the effect of customer's brand engagement, brand self-congruity, and brand involvement in brand co-creation and the effect of co-creation on brand value and brand loyalty. Fulfilling such task would uncover the nature of brand co-creation's

antecedents and outcomes. The objectives of this research are to conceptually identify and empirically test the antecedents and consequences of customer brand co-creation. The research starts 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 and tested. The study theoretical framework is depicted to show the relationships between different variables. Then the methods, measures, and sample used in this study is presented. Finally, the findings, discussion, theoretical and practical implications, limitations, and conclusion are provided.

2. LITERATURE REVIEW & HYPOTHESES DEVELOPMENT

2.1 Customer Brand Co-creation

The concept of customer co-creation has emerged as a practical domain that enhances the participatory culture in society [7]. 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 product improvements [8]. The modern face of co-creation results from three aspects: 1. Digital communications that started to take place from the 1990s till present time have enabled customers to connect to others on online networks, share ideas, recommend improvements, and modify products [9]. 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 [10]. 3. The emergence of the concept "exchange of intangible" which involves a relationship between the customer and the organization is based on a collaborative work to co-create value [1]. Hence, organizations benefit from customer co-creation as they listen to customers' complaints, customers' recommendations, and their opinions regarding brands' performance [8]. 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 [11].

The meaning of co-creation has been widely seen from a managerial perspective and the approach to brands was focusing on the organization itself, neglecting the communicative process between the firm and its customers [12]. Moving away from product-dominant-logic to service dominant-logic has helped in the existence of co-creation concept [1]. This is explicit when a brand development is implemented based on collaborative work rather than a single organization's view [5]. Similarly, Grönroos [13] pointed out that co-creation is initiated by the use 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 [13]. 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 to something that is worthwhile to them [2].

The concept of co-creation has no consensus in meaning and has been defined by several scholars from different perspectives [10,6]. For instance, Prahalad and Ramaswamy [14] 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. [15] 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 behaviours are the customer-led interactions between the customer and the brand" [15]. This definition is adopted in this study as it views the concept of brand co-creation from the customer's perspective.

Prahalad and Ramaswamy [16] proposed building blocks of brand co-creation between the firm and the consumer. These building blocks highlight 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 from the firm or from the brand community, to help in 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 (e.g. rewards) or intangible that are 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 copyrights and jeopardize its competitive position [16].

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 behaviour, and marketing [17,18,19]. The concept of engagement in such disciplines indicates, explicitly and implicitly, different forms of interaction, whether with the society - e.g. social engagement - or in the work environment - e.g. employees' engagement - [20,21]. In the context of marketing, engagement concept has several sub-forms such as: customer engagement [22], customer engagement behavior [23], and customer brand engagement [24]. Each sub-form indicates a two-way interaction between customers in one side and product/brand/organization in the other side [25]. Customer brand engagement, specifically, addresses the interaction between a main customer and a specific brand [24].

The seminal works by Vargo and Lusch [1,26] and Lusch and Vargo [27] 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 [17]. Several researchers conceptualized the term engagement in the context of customer brand engagement. For instance, Brodie et al. [17] conceptualized brand engagement as a psychological state, which encompasses a proactive and interactive customer relationship. Hollebeek et al. [19] conceptualized customer brand engagement as "A consumer's positively valences brand-related cognitive, emotional and behavioural 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 term itself 'engagement' which indicates the tendency of interaction with the brand [15]. Moreover, Prahalad and Ramaswamy [14] pointed out that, when a firm would like to create anything that has value, it must engage customers to be able to do so. In the same vein, Hollebeek [24] stated that the co-creation of brand value is an outcome of brand engagement. Furthermore, Payne et al. [28] explored engagement as a tool companies use to co-create value with its customers. Other previous research [29,30] indicates that customer engagement behaviour had an impact on the processes of value creation within the whole system. Empirically, Jaakkola and Alexander [31] interviewed several respondents and based on their work, they identified different types of behaviours for customer engagement. They found that the behaviour of customer engagement motivated customers 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. [6] provided empirical findings that support 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. [32]. It is also defined as "a fundamental driver of the value-creating process" [33]. The Former definition is adopted in this research. The self-congruity theory stated that when people choose to buy and use brands, whether goods or services, they tend to select brands that express themselves and their own images [34]. This action leads customers to feel self-consistent which would enhance their relationship with such brands [35,36]. 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 [37,38].

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 [39] argued that

self-expression can play a crucial role in motivating consumers to co-create brands. Similarly, Ind et al. [40] emphasized the important role that brand communities play in encouraging customers to co-create. These communities are suitable places for customers to express their self-identity [41,42]. In the same vein, Prahalad and Ramaswamy [16] elaborated more on the impact of several factors, including self-expression, on co-creation of brands. When customers access to the information about specific products or services of the company, their initial motivation is self-concept related to these products and services (brands). Based on that, they are allowed to co-create brands without even owning them [43]. Psychologically, self-expression is seen, along with different variables, as a motivator of user generated content engagement in an online medium [44]. Empirically, Christodoulides et al. [45] found that self-concept has a positive influence on customers' tendency to generate content in a company's website. The results of an empirical study conducted by France et al. [6] 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 [46,47]. The concept of involvement has been applied to advertisement context, product context, and purchasing decisions [47]. In the advertisement context, involvement is exploited by emphasizing the relevance of the ad to the customer who is consequently affected by, motivated, and responded to it [48]. Regarding the product context, involvement is used in terms of the needs and values that the product offers to customers [47]. Finally, in terms of purchasing decision context, involvement is manipulated by focusing on the relevancy of decision to fulfil the needs of customers [49]. From these three perspectives of involvement, product involvement is close in meaning to brand involvement. So, the concept of brand involvement is defined in the context of this research as: a person's perceived relevance of the brand based on inherent needs, values, and interests [47].

Involvement with a brand leads to a continuous psychological commitment with that brand [50]. This psychological state can be noticed in both offline and online environments where the brand exists [51]. For instance, in an 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, show more widespread information searching habits, and increase their buying intention [52]. In the same vein, when customers involved with a particular brand their activities within the brand community increase in a manner that increases their efforts in product/service (brand) development. The involved customers with the brand can influence brand development through discussing product and service modifications which consequently affect the whole brand specifications and capabilities [53].

Brand involvement shows a relevancy to the participation of customers in the process of brand co-creation [15]. Ind et al. [40] claimed that, the feeling of fulfillment, that customers experience, encouraged them to participate in co-creation. Similarly, the involvement in the brand leads to customers' interests and personal relevance [54]; such relevance and interests are obvious in customer's recommendations, whether directly - communicating with the company - or non-directly - through word-of-mouth - [55]. A clear example of such behavior can be seen in blog writers whose interest in specific brands and their involvement with such brand encourage them to co-create [56]. 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 the firm's investment which helps in creating and sustaining a competitive advantage compared to competitors [57]. There is a little agreement on how brand value should be defined and how it should be measured [58]. Generally, there are two perspectives in defining and measuring brand value. The first perspective

is to the firm which views brand value from a financial perspective relative to competitors. This view concentrates on the intangible financial value of the brand that results from the firm's performance in the market and reflected in the financial statement of the company [59]. 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 an association in the customer's mind when seeing the brand. Simultaneously, it enhances the brand value in consumers' minds [58]. This study adopted the brand value definition of Zeithaml [60] as "the consumers' overall assessment of the utility of a brand based on perceptions of what is received and what is given".

The impact of customers' participation in brand value co-creation has been conceptualized by several scholars, for instance, Gregory [61] pointed out that when stakeholders engaged and involved in the development of corporate brand, the value of such brand will be expressed. Likewise, Hatch and Schultz [43] indicated that when the process of co-creation is handled or implemented with the help of stakeholders (e.g., customers), the value of the brand is emerging from such participation. Customers' perceptions of brand value are influenced by their behavior when they participate in brand co-creation [8]. In relationship marketing, customers become active in their collaboration and participation with the brands that they are in relationship with. In this case, the customers' efforts are directed to co-creating value with the company brand [62]. Several Theoretical discussions supported the notion that customer's perception of brand value will be affected favorably by their contribution to the process of brand co-creation [1,63,40]. Empirically, France et al. [6] found a significant 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 [64,65,66]. The benefits that firms received from brand loyalty are numerous. For instance, positive word of mouth, business profitability, and reduction of marketing costs are

results of brand loyalty [67]. A widely used definition of brand loyalty, which is going to be adopted in this study, was proposed by Oliver [65] 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” [65]. 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 inclinations commitment to some values related to the brand [66].

Co-production (co-creation) from customers’ perspectives may benefit the organization in several aspects [68]. for instance, customers are given opportunities to involve in the process of product customization [69,70]. 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 [71]. Co-creation makes customers able to participate in tailoring products and services of the intended brand. However, it is assumed that tailored products might be eligible of high prices paid by customers who co-created them [72]. Empirically, customers are highly willing to pay more for products or services that are self-designed than those

products or services they did not participate in creating [73,74]. A study conducted to measure the association between co-production and customer loyalty found that attitudinal loyalty was positively correlated with co-production. However, behavioral loyalty was not supported to have such a relationship [71]. Similarly, Grisseman and Stokburger-Sauer [72] 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 [62,75], this research used this sampling technique. An online self-administered questionnaire was sent to some

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

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 the 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.

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. [19], brand self-congruity and Brand involvement scales were adapted from France et al. [15]. Regarding customer brand co-creation scale, it was adapted from Christodoulides et al. [45] with some re-wording of the items to fit the definition of co-creation used in this study. The brand value scale was adapted from Sweeney and Soutar [76] with some re-wordings to fit the context of this research. Finally, the brand loyalty scale was adapted from Zenithal et al. [77]. 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 [15]. 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. [78], 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 the 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 [79], 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 [79]. 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 [80], 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 [80].

4.2 Multicollinearity Check

Table (3) shows Multicollinearity checks for the independent variables. These checks are based on the Variance Inflation Factor (VIF) and Tolerance indicators. In order to obtain a stable estimated slope parameters, VIF should be less than 5 and Tolerance greater than 0.10 (Hair, 2010). As shown in table (3), the Tolerance values ranged between 0.240 to 0.304, which are greater than 0.10. VIF for all the independent variables ranged between 3.685 to 4.159, which are less than 5. Hence, the problem of Multicollinearity does not exist.

Table 2. Standardized factor loadings, Cronbach Alpha, AVE, and CR

Construct	Items	Standardized 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 involvement $\alpha = 0.918$	This brand means a lot to me.	0.885	0.678	0.913
	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 an 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			

Construct	Items	Standardized loadings	AVE	CR
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		

Table 3. Multicollinearity checks

Independent variables	Tolerance	VIF
Brand Engagement	.271	3.685
Brand Self-congruity	.304	3.290
Brand Involvement	.240	4.159

Dependent variable: Brand Co-creation

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 0.70, 0.18, and 0.51 respectively. Regarding the consequences of Brand Co-creation, the results supported the hypotheses (H4, H5) that the customer Brand Co-creation has 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.

5. DISCUSSION

The results of the relationship between Brand Engagement and Brand Co-creation in the form of influencing one another provide a proof on two aspects: first, Brand Engagement is distinct from Brand Co-creation behavior (France et al. 2015). Second; in line with previous research, when customers are engaged passionately with a brand, the likelihood of participating in co-creation activities is high (Hollebeek et al., 2014; France et al. 2018). This hypothesis was supported in this study. Telecommunication customers who are engaged with the brand of their service provider is likely to participate in

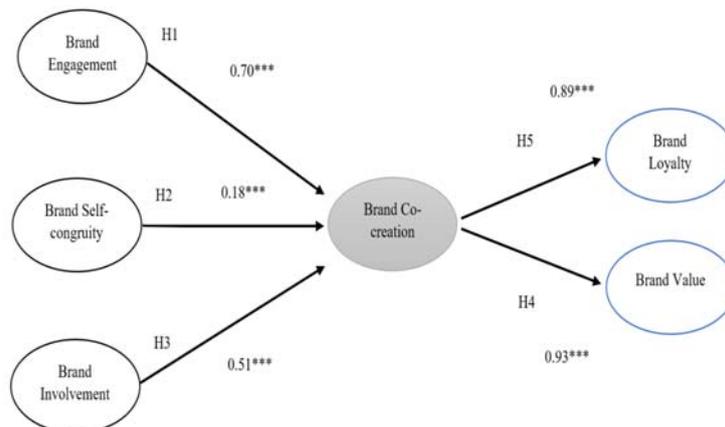


Fig. 1. Hypotheses testing

co-creation activities. The findings also support the relationship between Brand Self-congruity and Brand co-creation as per previous conceptualizations and empirical findings in the literature [81,15,1]. Customers of telecommunication firms who are aligning their self-image with the image of their service provider tend to participate in co-creation activities. However, the Brand Engagement effect on Brand Co-creation behavior is higher than that of Brand Self-congruity. The third antecedent of Brand Co-creation was having an influence on the customers' co-creation behavior was Brand Involvement. Customers of telecommunication companies who are involved with the brands as important assets are more inclined to show a co-creation behavior. This is validated by previous studies of Ind et al. [40] and Pihl [56] who revealed that customers who were involved with a particular brand had a higher tendency to show co-creation behavior.

Two outcomes of Brand Co-creation were proposed in this research, the first consequence is Brand Value and the second is Brand Loyalty. Regarding Brand Value, the findings of this study acknowledge the impact of customers' Brand Co-creation behavior on the value they perceive when co-creating telecommunication brands. The aspects of brand value that customers perceived are emotional, quality, price, and societal. This indicates that, customers of telecommunication firms, after participating in co-creation behavior, express their 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 [1,63,6], 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 [71,72] in that, customer 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. IMPLICATIONS AND CONCLUSION

This research theoretically contributes to the branding literature by presenting the concept of brand co-creation from the customers' perspective in a model that has antecedents and consequences. Co-creation has been always seen from the 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 customer 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 the 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. To the best of researchers' knowledge, no study related to brand co-creation from the customers' perspective has been carried out in Saudi Arabia. So, conducting a research related to brand co-creation of a 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 customer relationships and improve their strategic insights. Putting potential efforts in reaching the stages of brand engagement [31], brand self-congruity [45], and brand involvement (Pihl, 2013) [56] would help brand managers to facilitate the participation of customers in brand co-creation. The co-creation behaviour, based on

the results of this study, can be initiated from the three antecedents. So, brand managers can parallel 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 behaviour. 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 [60]. The other outcome of customer co-creation behaviour, is Brand Loyalty. Managers of Telecommunication brands can, strategically, use the co-creation behaviour to spread a positive word of mouth about their brands. Additionally, they can keep loyal customers to develop the sense of the participation in brand co-creation. In the literature of marketing, brand value perception and loyalty would increase the probability of the firm's success and customer retention [71,60]. Brand managers in STC, Mobily, and Zain can use the findings of this study to design or reform a strategy that takes into account the influence of brand co-creation antecedents and its consequences. Telecommunication companies in Saudi Arabia can, through customer co-creation, innovate better products that are customer-centric. This allows the companies to mitigate risks associated with the product development, reducing the fail possibilities and enhance the efficiency of R&D, marketing, and operations activities. Customer brand co-creation could be a base of effective strategic integrated marketing communications that strengthen the company's sustainable competitive advantage, which is so critical for attaining a higher market share and profitability.

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 behaviour. 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.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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