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MARKETING | REVIEW ARTICLE

Customer willingness to participate in value co-creation: The moderating effect of social ties (empirical study of automobile customers in Ghana)

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Abstract: Value co-creation as a social process involves the interactions and dialogues between stakeholders. As such, the social ties that stakeholders develop have the propensity to influence their level of interaction in a co-creation activity. In this study, we examine the effect of social ties on consumer's level of interaction and looked at how it moderates on consumers' willingness to engage in interaction leading to co-creation. Data was collected from 535 automobile owners in Ghana through a self-administered questionnaire. The data was analyzed using structural equation model in AMOS and statistical tool package. The test results on consumers' willingness and level of interaction, willingness and co-creation, social ties and level of interaction, social ties and co-creation, interaction and co-creation are significant. On the moderating effect of social ties on willingness, the result shows that



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PUBLIC INTEREST STATEMENT

Creating unique experiences with customers through value co-creation has been identified in the literature as an immediate antecedent to customer satisfaction and customer loyalty. As a result, both manufacturing and services organizations are continuously looking for innovative ways to engage their customers. To be able to engage customers successfully, factors that are likely to impact on this engagement and interaction must be addressed. In this paper, we show how customers' willingness in the form of their motivation and the social ties developed with the organization can influence the interaction and value co-creation drive. Using an empirical study approach, the findings of the study show that social ties and customer willingness influence customers' level of interaction. The findings further show that social ties have a significant moderating effect on customers' willingness to interact in value co-creation. We identified in the paper that customers are more willing to participate in interactions leading to value co-creation when they have strong social ties with the organization. The findings of this study have implications for both practitioners and policy-makers.

social ties strengthen the positive relationship between willingness and interaction. We propose that organizations should manage social ties they develop with their customers effectively so as not to impact negatively on their willingness to engage in co-creation interactions.

Subjects: Consumer Psychology; Business, Management and Accounting; Industry & Industrial Studies

Keywords: social ties; willingness; interaction; co-creation

1. Introduction

A new power shift has emerged in recent times as the consumer is now playing a key role in the value creation process. This is due in part to the competitive business environment and to the reason that the customer is viewed as an important stakeholder in the value creation process. The co-creation of value concept has received much attention from both scholars and practitioners' since the inception of the service-dominant Logic (SDL) by Lusch and Vargo (2004). The concept emphasized on skills and knowledge as the fundamental unit of exchange and that customers are always co-creators of value. This is in vast contrast to the goods-dominant logic (GDL) that viewed the customer as a destroyer of the value created by the firm. The GDL largely focuses on operand resources (specifically good), whereas the SDL centers on operant resources (skills and knowledge). These two logics view the customer differently with respect to the creation of value. The SDL emphasized value as co-created with the customer and not necessarily embedded in the final product. The GDL contrarily views value as defined by the firm and embedded in the final output (Lusch & Vargo, 2006a). According to Lusch and Vargo (2006a), SDL follows these processes: identification of core competencies, identifying potential customers, collaboration with customers to meet needs, and finally evaluation to measure performance. The customer now plays a significant role in the value creation, with the firm acting as a facilitator (Grönroos, 2008; Lusch & Vargo, 2004; Payne, Storbacka, & Frow, 2008; Ramirez, 1999; Vargo & Lusch, 2008). This unique role identified with customers toward the creation of value, cut across industries. For instance, customers' role in the automobile industry cannot be over-emphasized in both advanced and emerging economies. Customers have contributed in diverse ways in the value creation process. In 2011, The People's Car Project initiated by Volkswagen in China received more than 200, 000 design ideas from about 13 million visitors.

Scholars have conducted extensive studies on consumers' willingness to co-create value as identified in the literature (e.g. Hsu, 2016; Lazarus, Krishna, Dhaka, & Krishna, 2014; Meuter, Bitner, Ostrom, & Brown, 2005; Neghina, 2017). However, the role of social ties in value co-creation has not been researched extensively. Social ties play a paramount role toward organizational development. The social ties that the firm developed with their customers is a possible factor that can influence customers' willingness to interact with the firm to co-create value. According to Tsai and Ghoshal (1998), social ties are the channels that make the flow of information and resources possible. Social ties as a component of the structural dimension of social capital is seen as any contact or relation that customers keep with the firm. The structural dimension of social capital looks at the patterns of relationships among individuals as to how individuals are connected to each other (Tsai & Ghoshal, 1998). Nahapiet and Ghoshal (1998) opined that the structural dimension of social capital is associated with knowledge sharing and its associated activities. Following Tsai and Ghoshal (1998) and Molina-Morales and Martinez-Fernandez (2010), we defined social ties as any contact or relation that a customer/consumer keeps with employees or staff of a firm which can impact on collaboration.

In this study, we examine how social ties impacts on interactions and its moderating effect on consumers' willingness to interact in co-creation. Co-creation cannot be deemed as mandatory as

it depends largely on the interaction between the firm and consumers. Co-creation is a social process that relies on the involvement of all stakeholders, and as such, the social interaction ties that customers develop with employees of the firm must be looked at so as to examine their effects on co-creation.

PwC (2013) noted that co-creation in the automobile industry fosters a true multidirectional collaboration among customers, dealers, suppliers, service and support organizations, and even employees in terms of product design and development to new vehicle sales and services. Many examples already exist to prove that automobile companies have collaborated with their customers to create value; BMW collaborated with its customers to design the telematics features such as GPS navigation; Local Motors collaborates through its value chain in terms of designing new ideas by putting aspects of car manufacturing in the hands of consumers; General Motors also invited customers to build engines of its Chevrolet Corvette. Fiat received 11,000 ideas from 17,000 subscribers in about 120 countries in developing its Fiat Mio. The People's Car Project initiated by Volkswagen in China in 2011 received more than 200,000 design ideas from about 13 million visitors.

The present research aims to achieve the following: First, to find out how customers' willingness impacts on interaction to co-create; second, to establish the role of social relations ties, as espoused in the social capital theory in facilitating interaction in co-creation. Third, to examine how social ties moderate on customers' willingness to interact in a co-creation activity. Lastly, to access the impact of interaction on co-creation. Our findings show that customers' willingness and level of interaction, social ties and level of interaction, interaction, and co-creation are significant and support our hypotheses. In testing the moderating effect of social ties on willingness, the result shows that social interaction ties strengthen the positive relationship between willingness and interaction. Part of the findings of this paper was presented at the 10th International Conference on Information Management and Engineering (ICIME, 2018) and is to be published by ACM.

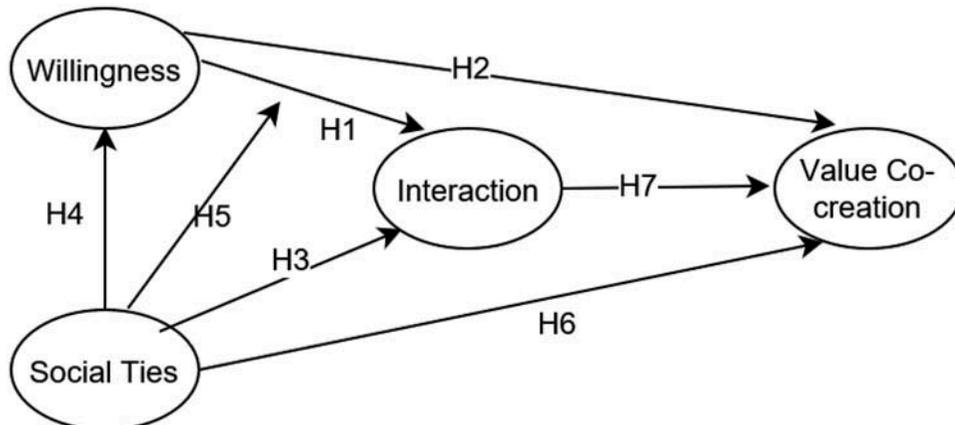
2. Theoretical foundation and hypotheses development

2.1. Co-creation of value

Customers have become very complex in their demands of products and services. This has become very challenging for firms to satisfy. In this regard, firms have moved from a closed system of knowledge generation to an open system whereby they seek for ideas from customers and other important stakeholders in developing new products and services. Consumers are seen not as passive but rather active participants and as such playing significant roles in the creation of value (Vargo & Lusch, 2004; von Hippel, 2005). Vargo and Lusch (2004, 2016) argued on the 6th premise of the SDL that the customer is always a co-creator of value and that value is defined and co-created with the consumer rather than embedded in the finished product or output. As firms attempt to satisfy the individual needs of their consumers, they collaborate, and in so doing, they are able to come out with new ideas. Co-creation is premised on the basis that there is an exchange of information and knowledge between actors for which the customer is a key participant (Chan, Yim, and Lam, 2010) and plays an active role in the sharing of knowledge and information (Boselli, Cesarini, & Mezzanzanica, 2008; Ordanini & Pasini, 2008). Prahalad and Ramaswamy (2000) noted that the firm is using customers as a source of competence and as such putting them to work. Co-creation cannot happen in a vacuum as it involves the interaction of the firm and other stakeholders (customers or suppliers).

Customer interaction in the form of mutual exchange, physical, and mental activities is a major feature of co-creation (Ertimur & Venkatesh, 2010). Also, co-creation is a social activity (Achrol & Kotler, 2012; Vargo & Lusch, 2008) carried through collaboration (Lusch, Vargo, & O'Brien, 2007) and dialogue (Aarikka-Stenroos & Jaakkola, 2012; Grönroos, 2012). Dialogue implies engagement, interaction, and the readiness of both the firm and the customer in terms of their willingness and ability (Prahalad & Ramaswamy, 2004b). Active roles that customers play in the co-creation

Figure 1. Research framework.



activity is dependent on their interactive and synchronous engagement (Edvardsson, Ng, Zhi Min, Firth, & Yi, 2011; Ordanini, Miceli, Pizzetti, & Parasuraman, 2011) as well as their objectivity in expressing their views (Chen, Tsou, & Ching, 2011; Hunt, Geiger-Oneto, & Varca, 2012). Grönroos (2008, 2011) argued that personal interaction with the customer is very essential in value co-creation. Value co-creation is mission impossible without interaction with the consumer (Prahalad and Ramaswamy, 2004a; 2004b).

Many factors are likely to impact on both the firm's and customers' readiness to co-create value. For any effective interaction leading to a possible co-creation, both actors must be motivated enough and must also have the necessary skill and knowledge as co-creation is more of exchange of knowledge and information. Studies by Etgar (2008) and Yim, Chan, and Lam (2012) revealed that customers' motivation to participate in a co-creation is largely influenced by both their extrinsic and their intrinsic rewards. Consumers' motivational level determines how willing they are to co-create. Apart from looking at how social ties moderate on the willingness to interact, we also look at how willingness and social ties influence interaction and how interaction eventually leads to co-creation as it can be seen in Figure 1. Co-creation is a social activity, and as such, it is important that the social ties that companies develop with their customers be given the needed attention.

2.2. Customer willingness

Customer willingness can be referred to as customers' motivation to take part actively in the value co-creation process. Füller (2006) in his study "why customers engage in Virtual new product developments initiated by producers" reveals that customers engage in new product development due to several motivations, such as curiosity, dissatisfaction with existing products, intrinsic interest in innovation, to gain knowledge, to show ideas, and lastly to get monetary rewards. Meuter et al. (2005) investigated customer trial of self-service technologies and revealed that consumers' motivation, both intrinsic and extrinsic, have a significant influence on trial. Hirschman (1986) posited that consumer's motivational state greatly determines the level of involvement in a new product development. Customers do what they do because of their motivational level, which can be intrinsic or extrinsic. Chen and Wang (2016) in their paper "Customer participation, value co-creation and customer loyalty" find evidence that in order to encourage customers to participate in service co-production, both the intrinsic and extrinsic motivators of customers are very important and necessary. We find evidence from Lazarus et al. (2014) that customer willingness significantly influences the level of interaction.

Hence, we propose the following hypothesis:

H1: Customer willingness influences level of interaction to participate in co-creation

H2: Customer willingness has a positive significant effect on co-creation

2.3. Social ties

Social ties are a component of the structural dimension of social capital. The structural dimension looks at the patterns of relationships among individuals as to how individuals are connected to each other (Tsai & Ghoshal, 1998). Following Tsai and Ghoshal (1998) and Molina-Morales and Martinez-Fernandez (2010), we defined social ties as any contact or relation that a customer/consumer keeps with employees or staff of a firm which can impact on collaboration. As noted by Tsai and Ghoshal (1998), social ties make it possible and facilitate the flow of information and knowledge resources. Co-creation involves the exchange of resources between the firm and other stakeholders. These resources include knowledge, information, and other operant resources (information, relational, organizational competencies, and cultures) (Hunt, 2004). The relationship that firms keep with their customers goes a long way to influence the flow of information, knowledge, and ideas that might aid in the creation of a product or service (Tsai & Ghoshal, 1998). In addition, co-creation is a social process that relies on the involvement of all stakeholders, and as such, the social interaction ties that consumers develop with employees of the firm must be looked at to examine their effects on co-creation. Social interaction ties act as a stimulant in the formation of a co-production that results in value co-creation (Hoegl, Parboteeah, & Munson, 2003). Kotlarsky and Oshri (2005) found evidence that social ties play a key role in facilitating a successful collaboration. Karpen, Bove, and Lukas (2012) in their paper proposed six capabilities necessary for a successful co-creation. The second capability championed by Karpen et al. (2012) emphasized the need for communication and relating to customers through social interaction processes. They argued that although the S-D logic is relational in nature, its quality and intensity will be affected by the interpersonal relationships and connections between the actors. Based on these arguments, we propose the following hypotheses:

H3: Social ties customers developed with the firm influence their level of interaction

H4: Social ties impact on customers' willingness

H5: Social ties moderate positively on customers' willingness to interact in co-creation.

H6: Social ties have positive significant effect on co-creation

2.4. Interaction and co-creation

According to Ranjan and Read (2016), interaction acts as the basic interface for parties undertaking a co-creation activity. Level of interaction or dialogue between the firm and the customers goes a long way to determine the success or otherwise of co-creation. Co-creation is made possible through interaction-centric capabilities (Ramaswamy, 2009). Co-creation is largely driven by consumers active role-played during the interaction process (Edvardsson et al., 2011; Ordanini & Pasini, 2008). Interaction between the customer and the firm forms the basis of co-creation (Vargo & Lusch, 2004), the defining force for the integration of resources and the creation of value (Prahalad and Ramaswamy, 2004). There is a constant interaction between the service provider and the customer whereby there is an intervention in the consumption process through sharing of skills and practices (Navarro, Andreu, & Cervera, 2014). Grönroos and Ravald (2009) and Prahalad and Ramaswamy (2004a) concluded that it is highly impossible for co-creation to take place without interaction.

Karpen et al. (2012) proposed six interaction capabilities: individuated interaction capability; relational interaction capability; ethical interaction capability, empowered interaction capability; developmental interaction capability; and concerted interaction capability. Lazarus et al. (2014) find evidence that the level of interaction influences the extent of co-creation. In this regard, we propose the following hypothesis:

H7: Level of interaction influences co-creation

Table 1. Demography of respondents

Gender		Driving experience	
Male	68%	Below 1 year	3.30%
		1-5 years	12%
Female	32%	6-10 years	33.60%
		11-15 years	27.50%
Age:		16-20 years	20.60%
18-29	22.60%	Above20years	3%
30-39	35.10%		
40-49	26.30%		
50-59	12.10%		
60 and above	3.90%		
Education:			
Postgraduate	32.80%		
Degree/HND	45.90%		
High School	16.30%		
Below high school	5%		

3. Methodology

3.1. Sample and data collection

We sample 535 automobile customers/owners in Ghana's two biggest cities, Accra and Kumasi, for the study. Accra and Kumasi were selected due to the reason that these two cities have the highest units of automobiles users in the country and the highest number of dealer shops for automobiles. Through random sampling approach, 350 respondents were selected from each of the cities between January and June 2018. Questionnaires were self-administered to customers for their responses in 18 dealer shops in Accra and 12 dealer shops Kumasi. Out of the 700 questionnaires distributed, 620 were returned, giving a return rate of 88.57%. Out of this, 535 were selected to be part of the final work. Table 1 shows the demography of respondents.

3.2. Measures

The study adapted existing measuring scales and made few modifications where necessary to suit the present study. We employed 6-point Likert-type scales, ranging from strongly disagree (1) to strongly agree (6). We identified that most responded decided to stick to the middle during the pilot study. The analysis shows that the 6 points had a higher trend of discrimination and reliability than scale 5 points used during the pilot study. This made us to have respondents commit to either the positive or the negative end of the scale. We believe in not giving the respondent a neutral or ambivalent answer choice. This 6-point Likert-type scale was constructed to avoid undecided responses who might want to stick in the middle. On consumers' willingness to participate in co-creation, four-item scales was adapted from Füller (2010). An item each was adapted from Füller (2010) on compensation, showing of ideas, gain knowledge, and intrinsic motives. All four items measuring interaction were adapted from Lazarus et al. (2014) and five adapted from Chan et al. (2010) to measure co-creation. In analyzing how social ties influence consumers' co-creation drive, four-item measures on social ties were adapted from Tsai and Ghoshal (1998).

3.3. Reliability and validity analysis

The questionnaire was first piloted by sending it to 32 PhD candidates in China; revisions were made based on their responses and suggestions, and the measures were modified. A two-step approach was adopted to analyze the data. First, we performed the confirmatory factor analysis (CFA) to check convergent validity, that is, the adequacy of the constructs. Secondly, in structural

Table 2.

Table 2. Reliability and means of variables

Variable	Item	Item mean	Item total correlation	Cronbach's alpha	Variable mean
Customer willingness (CW)	CW1	5.07	0.823	0.913	5.09
	CW2	4.92	0.829		
	CW3	5.23	0.779		
	CW4	5.17	0.790		
Customer social ties (CST)	CST1	5.05	0.842	0.93	5.01
	CST2	4.98	0.843		
	CST3	5.00	0.860		
	CST4	4.99	0.813		
Customer interaction (CI)	CI1	4.99	0.867	0.937	4.98
	CI2	4.96	0.831		
	CI3	5.05	0.881		
	CI4	4.94	0.848		
Value co-created (VCC)	VCC1	4.59	0.760	0.899	4.56
	VCC2	4.59	0.743		
	VCC3	4.63	0.814		
	VCC4	4.44	0.754		
	VCC5	4.45	0.678		

equation model (SEM), we performed to test for causal relationships, estimated the model fitness, and tested if the data supports the theory.

The scores for Cronbach's alpha, the Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), and other indices were higher than the recommended (Hair, Black, Babin, Anderson, & Tatham, 2006). The Cronbach's alpha showed a good fit for all the scales; willingness = 0.913, social relation ties = 0.930, interaction = 0.937, co-creation = 0.899 as shown in Table 1. The factor loadings of the items as shown in Table 2 indicate that all the loadings are very high. The chi-squared diff. is 2.86; GFI = .974; NFI = .984; RFI = .973; IFI = .989; TLI = .981; CFI = .989; and Root Mean Square Error of Approximation (RMSEA) of .064.

Item reliability, construct reliability (CR), and average variance extracted (AVE) were performed to check for convergent validity of the model; we first calculated the AVE which should be greater than 0.5 and then calculated the CR which should be greater than 0.7 (Hair et al., 2006). The results, as shown in Table 2, indicate that our AVEs were greater than the accepted 0.5 and the CRs greater than the accepted 0.7. This implies that our constructs have achieved convergent validity.

To be sure, if the constructs were not measuring different things, we checked the discriminant validity by comparing the squared correlations and the AVE scores for each of the pairwise constructs. We achieved discriminant validity as the square root for the constructs was greater than the correlation coefficients (Fornell & Larcker, 1981).

4. Results

The hi-square difference, the RMSEA, GFI, NFI, and CFI were examined if we achieve a good fit for the structural model. The several fit indexes reported showed that our model is a good fit as all the

Table 3.

CFA results of the measurement model

Variable	Item	Factor loadings	Error variance	CR	AVE
Customer willingness (CW)	CW1	0.88	0.22	0.915	0.729
	CW2	0.88	0.19		
	CW3	0.82	0.29		
	CW4	0.84	0.18		
Customer social ties (CST)	CST1	0.87	0.16	0.932	0.774
	CST2	0.88	0.14		
	CST3	0.88	0.12		
	CST4	0.88	0.11		
Customer interaction (CI)	CI1	0.87	0.18	0.94	0.796
	CI2	0.84	0.20		
	CI3	0.92	0.16		
	CI4	0.91	0.19		
Value co-created (VCC)	VCC1	0.79	0.29	0.899	0.642
	VCC2	0.76	0.33		
	VCC3	0.90	0.15		
	VCC4	0.82	0.26		
	VCC5	0.72	0.35		

Table 4. Path analysis

Path	Estimate	S.E.	C.R.	P-value	Hypotheses	Remarks
Willingness → interaction	0.773	0.034	22.479	***	H1	Supported
Willingness → co-creation	0.811	0.054	21.363	***	H2	Supported
Social ties → interaction	0.899	0.068	13.18	***	H3	Supported
Social ties → willingness	0.999	0.046	21.868	***	H4	Supported
Social ties → co-creation	0.891	0.064	14.21	***	H6	Supported
Interaction → co-creation	0.778	0.030	25.955	***	H7	Supported

***P < 0.001.

Table 5. Moderating analysis

Path	Hypothesis	Estimate	S.E.	Z-score	P-value
CW x CST → CI	H5	0.03	0.003	10	0.001

indicators were above the minimum. Chi-square difference was 2.911, RMSEA 0.69, GFI 0.9, NFI 0.938, and a CFI 0.946. The SEM results for the standardized path coefficients and path significances for the constructs as shown in Figure 2 all support our hypotheses. Table 4 shows the standardized regressions weights of the hypotheses at $P < 0.001$. The results show that consumer willingness not only has a significant relation with interaction but also has a significant influence on customer participation in value co-creation. This result confirms earlier study by Lazarus et al. (2014) and Joseph, Junwu, and Enock (2018). Results on social interaction ties and interactions, social ties and willingness, and social ties and co-creation are all significant. These results

Graph 1. Results of moderating effect of social ties on willingness path diagram.

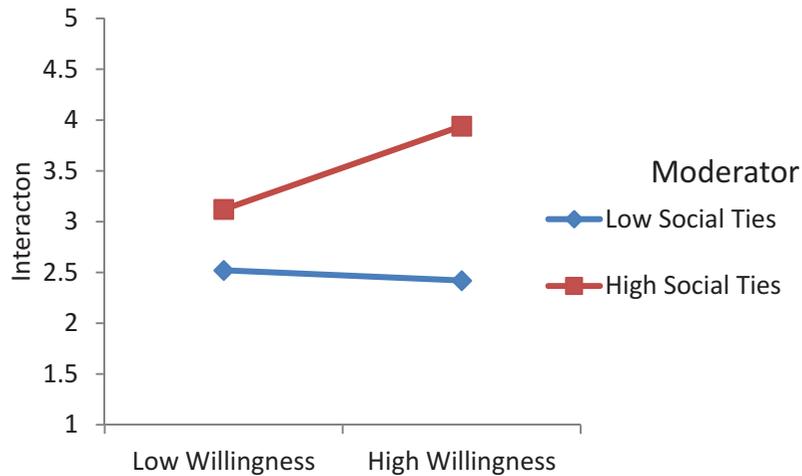
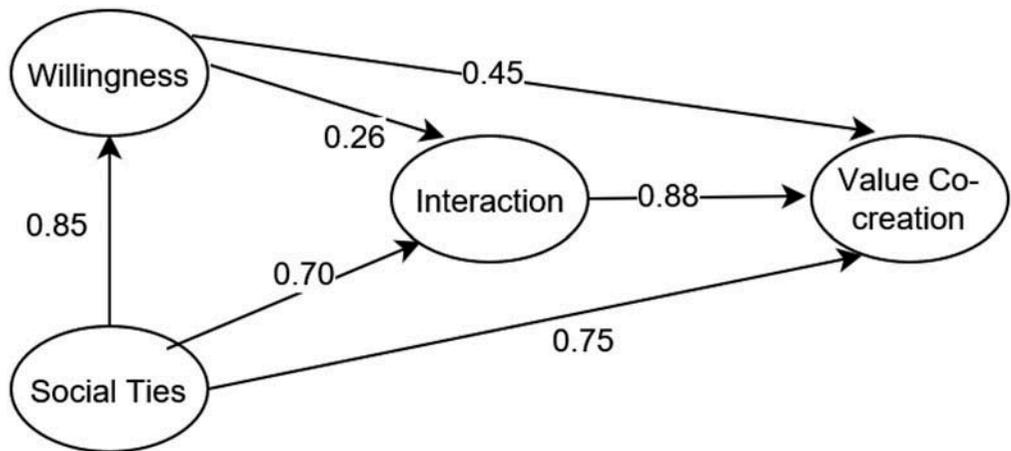


Figure 2. Path diagram for the structural model.



supported hypotheses 3, 4, and 6. This result supports earlier studies by Kotlarsky and Oshri (2005), Lazarus et al. (2014), and Tsai and Ghoshal (1998).

On the moderating effect of social relation ties, the regression results showed a significant relationship as shown in Table 5. We also extract a graph on the excel sheet to critically examine the moderating effect of social ties on the willingness to interact as shown in graph 1 below. In testing the moderating effect of social interaction ties on willingness, the result shows that the social tie strengthens the positive relationship between willingness and interaction. This means that the higher social ties that the firm develop with its consumers, the more consumers will be willing to interact in a co-creation scenario.

5. Discussion

This study contributes to the existing literature on value co-creation concept and the role of customer willingness and customer social ties on customer value co-creation. In this study, we investigated how social ties impacts on consumers' willingness to interact to co-create value in the automobile industry in Ghana. The findings of this study are discussed in detail below.

First, as shown in Table 3, the H1 and H2 were supported that consumer's willingness affects positively on interaction and co-creation. This confirms the study by Lazarus et al. (2014) that consumers' willingness has a significant relationship with interaction. This means that for any

effective interaction to take place that will lead co-creation, consumers' willingness in terms of their motivation must be looked at. An unwilling consumer no matter how skillful and knowledgeable might not share information, ideas, or knowledge with the firm to co-create. Consumers' motivation levels affect their level of willingness (Hirschman, 1986), and as such, appropriate measures to increase consumers' motivation must be given the needed attention so that they can be willing to participate in a value co-creation activity.

Secondly, we refer to social ties in this study as any contact or relation that a customer/consumer keeps with employees or staff of a firm that can influence collaboration. Our results H3 show that social ties have a significant relationship with interaction confirming earlier studies by Tsai and Ghoshal (1998) and Kotlarsky and Oshri (2005) as shown in Table 3. This means that there is a high level of interaction and collaboration when consumers develop personal relation with the staff of the firm.

Thirdly, the result for H4 also shows that there is a significant relationship between social ties and willingness. Consumers attain higher willingness to collaborate as a result of the social ties they have with the firm. On the moderating effect of social ties on the willingness to interact, the test result for H5 shows a very strong positive relationship. This means that as the level of social ties increases, consumers' willingness to engage in interactions leading to co-creation increases. The results also supported H6 that social ties impact significantly on co-creation. Firms should develop personal relationships with their customers so that the exchange of knowledge and information, which forms the basis of the co-creation concept, can be achieved. Customers will be more willing to share ideas, knowledge, and information as the social ties and connections develop.

The test result for interaction and co-creation H7 shows that there is a significant relationship between interaction and co-creation. This result also confirms the study by Lazarus et al. (2014). Co-creation is as a result of an interaction between two or more stakeholders (in this case, we look at the interaction between the firm and the consumer). In seeking for consumers' knowledge and ideas, firms should create the enabling environment by having an appropriate platform whereby effective interaction can take place.

5.1. Practical and theoretical implications

In this study, customer willingness and social ties had been used as two important antecedents in customers' interaction in value co-creation. This has both practical and theoretical implications. First, firms must not just develop social ties with their customers but must also deepen the ties they create with their customers. Secondly, customers' motivation, which turns to influence their willingness to participate in value co-creation, must be given attention. This study contributes to the literature on value co-creation and the role of willingness, social ties, and interaction.

5.2. Limitations of the study and future research

The study is subjected to some limitations just like any other studies. First, the research only looked at the automobile industry in Ghana and overlooked other sectors of the Ghanaian economy. Most automobile consumers in Ghana buy second-hand cars from dealers who import such vehicles mostly from the United States or Europe. This is due to the low level of income of Ghanaian consumers affecting their ability to buy new cars. As a result, consumer's ability to purchase a car is greatly influenced by their purchasing power, which will in turn affect their readiness to participate in the collaboration. This research only focuses on two factors that affect consumers' interaction levels to co-create, that is, willingness and social ties. There are other factors that affect consumers' readiness to interact, such as availability of a suitable platform, empowerment, ability in terms of skills and knowledge, risk-taking levels, as well other factors as enumerated by Fuller (2010). Future researches should be interested in finding out the other factors that affect consumers' readiness to participate in co-creation in a developing country like Ghana.

5.3. Conclusions

In this paper, we examined two antecedents of customer participation in value co-creation, willingness, and social ties. Through the self-administered questionnaire, 535 customers were randomly selected in Ghana's two major cities, Accra and Kumasi, to be part of the study. We hypothesize that customer willingness and the social ties they build with the firm significantly influence interaction and co-creation. We also hypothesize that social ties moderate positively on customer willingness. Our results supported the hypotheses developed. We propose that firms should not just focus on the motivational needs of their customers to participate in value co-creation, but should also develop strong relations and ties with their customers. This is because social ties have been found in this paper to have a significant impact on customer willingness. As social ties increase or become stronger, customers are more willing to take part in co-creation.

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Competing Interests

The author declares no competing interest.

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Appendix

Measures

Customer Willingness (CW)

- CW1: I collaborate with my dealership to enhance my overall experience.
- CW2: I collaborate with my dealership for enjoyment and entertainment.
- CW3: I collaborate with my dealership to get more insight into automobiles.
- CW4: I collaborate with my dealership to get rewards.

Customer Social Ties (CST)

- CST1: I maintain close relationships with some employees of my dealership.
- CST2: I spend lots of time interacting with some employees of my dealership.
- CST3: I know some employees of my dealership on personal level.
- CST4: I have frequent communication with some staff of my dealership.

Customer Interaction (CI)

- CI1: I interact more with my dealership as it continues to engage me.
- CI2: I interact more with my dealership as I am willing to collaborate.
- CI3: I interact more as my contributions can enhance my service experience.
- CI4: I interact more as my contributions can enhance my service experience.

Value Co-creation (VCC)

- VCC1: I spend a lot of time-sharing information about my needs and opinions.
- VCC2: I put a lot of effort into expressing my personal needs.
- VCC3: I always provide suggestions to the staff in improving the product.
- VCC4: I have high level of participation in the service process.
- VCC5: I am very much involved in deciding how the service should be provided.



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