

How to Make Customers Willing to Co-create: Motivation and Ability Effects

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ABSTRACT – Companies are co-creating with their customers more and more to increase their competitive advantage. Despite earlier research into co-creation and the role of customers in co-creation processes, little is known about the willingness of customers to contribute in co-creation processes, even when it serves their own benefits. This research aims to close that gap by identifying the effects of motivational factors and ability to participate in the co-creation activities on customers' willingness to co-create. It does so by using the theory of planned behaviour (TPB) to determine customers' motivation. Therewith the independent variables of this study are ability to participate and the TPB constructs, attitude towards the behaviour, perceived behavioural control and subjective norm. To determine the (degree of) impact of these independent variables upon customers' willingness to co-create, an empirical study in the form of an online survey was administered, from which 421 valid responses were gathered. The study found that there is a positive and significant relationship between the ability to participate, attitude towards the behaviour and subjective norm, and willingness to co-create. Herewith it can be said that both ability and motivation have a positive effect on customers' willingness to co-create. None of the five factor model character traits were found to influence this willingness, unlike age which was found to have a negative relationship with willingness to co-create. This research therefore has begun to add to the literature by making a start in determining what the factors are that constrain or enable the extent to which customers are prepared to get involved in the co-creation process. The study additionally underlines the importance for practitioners of employing appropriate marketing messages and how these can be used to alter customers' perceptions of the co-creation activities making them more willing to participate in said co-creation activities.

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Keywords

Value co-creation, Co-creation willingness, Motivation, Ability, Perceived behavioural control, Attitude towards the behaviour, Subjective norm, Age, Character traits

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1. INTRODUCTION

To what extent are customers willing to participate in their own value creation process? Despite the many efforts and monetary amounts organisations put toward customer satisfaction, it is getting harder and harder to achieve. Consumers are increasingly informed, pro-active, empowered, connected and complex. Understanding these behaviours and defining what customers truly value remains an important source for competitive advantage (Slater & Narver, 1994; Woodruff, 1997). Moreover, consumers are pushing organisations to move from their traditional manufacturing mind-set of value-in-exchange towards a mind-set of value-in-use (Pralhad & Ramaswamy, 2004b; Bolton & Sexena-Lyer, 2009). This affects the way companies should interact with their customer basis. Or, as Agrawal and Rahman (2015, p.149) remark: "Interaction has emerged as a locus of exchange and experience, as co-created value". Companies are strongly inclined to follow this trend because it is argued that co-creation aims to lead to more competitive advantage through customer satisfaction (Aarikka-Stenroos & Jaakkola, 2001; Parent, Plangger & Bal, 2011). It is even considered the next frontier in competitive effectiveness (Dong, Evans & Zhou, 2007). As such, companies are co-creating more and more to increase customer satisfaction through applying the aforementioned value-in-use mind-set (Ngugi et al., 2010; Meuter et al., 2005). Vargo and Lusch (2011) even state that nearly everything is co-created.

Due to these changes it does not come as a surprise that the amount of research into co-creation has grown considerably over the last years (Galvagno & Dalli, 2014 e.g. Vargo & Lusch, 2004; Grönroos, 2008; Aarikka-Stenroos & Jaakkola 2011). Following Roser et al. (2009, p.6) co-creation of value occurs "whenever consumers interact with companies or products and thereby have an active role in the shaping of their experience and ultimately [their] value perception". This implies that co-creation of value in a service network requires the integration of both operand (i.e. books, hard- and software) and operant resources (i.e. knowledge, skills) from the provider as well as the customer (Constantin & Lusch, 1994). These integration efforts are the core of the so-called service-dominant logic of marketing (Vargo and Lusch, 2004; Vargo, 2008) and is implied to benefit both customers and firms (Claycomb et al., 2001).

As Forsström and Törnroos (2005) suggest, mutual investments and bonding as well as mutual learning and/or unlearning are needed for the co-creation of value. Therefore neither the influence nor the perspective of the customer should be neglected in co-creation practices and research. Or as Agrawal and Rahman (2015, p.152) note "keeping customers motivated to contribute is extremely vital [as well as] a challenge for firms in any joint value creation activity".

Albeit some research has focussed on the customer perspective within co-creation, the customer's willingness to co-create has been underexplored. For example Parent et al. (2011) have shown that there is a bi-directionality of communication in co-creation practices as well as that the willingness to co-create is growing. However, they have not focused on the factors that

actually influence customers' willingness to co-create. Dong et al. (2007) shed light on the influence of co-created service recovery upon the customer and have shown that, when in place, it increases the intention to co-create value in the future. Also, Lazarus, Krishna and Dhaka (2014) have shown that customer's willingness influences the level of interaction between firm and customer positively which in turn positively affects the extent of co-creation and Cheung and To (2011) have shown that customer involvement has a positive effect upon the perceived performance of the firm. Nonetheless, these contributions did not probe into the influencing factors to a customer's willingness to co-create itself.

2. CURRENT RESEARCH

2.1 Research Gaps

Hence, despite earlier research into co-creation and the importance of customers in value co-creation processes, research into how customers perceive co-creation activities, customer roles within co-creation activities as well as how these roles are inherently related to the degree of a customers' contribution is lacking (Agrawal & Rahman, 2015; Lazarus, Krishna & Dhaka, 2014). In other words, while the idea of customer pampering and acting on customers is dismissed (Vargo & Lusch, 2004) little is known about the willingness of customers to contribute in co-creation processes even when it is to their own benefit in terms of value. More specifically, we have little understanding of how to influence customers in their willingness to participate into the process of value creation for sake of their own experience of value.

2.2 Aim of the Current Research

Therefore the aim of this research is to improve understanding of the factors that constrain or enable the extent to which customers are willing to engage in co-creation processes. For the purpose of this research the definition of Roser et al. (2009) is used. Co-creation of value occurs "whenever consumers interact with companies or products and thereby have an active role in the shaping of their experience and ultimately [their] value perception" (Roser et al., 2009, p.6).

Naturally the factors that influence customers' willingness to co-create are dependent on the context of the specific co-creation practice. Nevertheless effort was made to make the findings fit a wide spectrum of co-creation practices. In order to make the current study generalizable, the elaboration likelihood model (ELM) of Petty and Cacioppo (1986) has been looked at. This model provides an universal framework for organising, categorising and understanding the basic processes underlying the effectiveness of persuasive communication. The model has two main variables: motivation and ability. When these are both favourable the 'elaboration likelihood' is said to be high and people are likely to attend to the appeal (Petty & Cacioppo, 1986). Having people attend to the company's appeal is exactly what is desired within co-creation practices.

However, co-creation is about communication and actions between companies and customers whereas the ELM focusses on communication alone. There are several reasons why adapting the ELM's core concepts to co-creation is appropriate. First and foremost, the ELM's two factors, motivation and

ability, seem to indeed be generalizable over nearly all co-creation contexts. Secondly, co-creation is in its very essence about the interaction between companies and their customers to facilitate actions afterwards. Interaction in a co-creation setting becomes the defining aspect of resource integration efforts and subsequent value-driving experiences (Pralhad & Ramaswamy, 2004a+b). Accordingly appropriate communication is essential for successful co-creation (Payne, Storbacka & Frow, 2007). Thirdly, attempts to co-create aim at persuading the consumer to interact with the company or products in order to let the customer have that active role in the shaping of their experience and ultimately their value perception. Fourthly, using motivation and ability is supported by Meuter, Bitner, Ostrom and Brown (2005) whom have shown that the two have significant effects on trial of the co-creation.

Because of these reasons and because of the notion that, in essence, companies with co-creation activities want their customers to attend to their appeal, motivation factors and ability will be taken out of the context of the ELM and used as factors that influence the willingness to co-create in a new model.

The research question of this thesis therefore is: *what are the effects of motivation factors and ability to participate in the co-creation activities on customers' willingness to co-create?*

2.3 Research Model and Hypotheses of the Empirical Study

Motivation is a key predictor of performing a task (Barczak et al, 1997). As Meuter et al. (2005) stated, consumers may have a choice between co-creating and being pampered, therefore they must be sufficiently motivated to produce a service independently. Touré-Tillery and Fishbach (2014) state that motivation cannot be observed or recorded directly, and distinct between indirect outcome-focused and process-focused motivation measures. The process of shaping experiences and value perception that define the co-creation activity can be thus described as process-focused. As an indirect measure for this, the evaluation of the process of co-creation itself is named as a measure. Subjective norm, for example, plays a big role in the perception of the process itself as it concerns “the perceived social pressure to perform or not to perform the behaviour” (Ajzen, 1991, p.188). As supported by Meuter et al. (2005) the three constructs of the theory of planned behaviour (TPB) of Ajzen (1991) will be used as representative of motivation in this study. These three TPB factors are attitude, subjective norm and perceived behavioural control, which are used in the TPB to determine the intention to execute the behaviour. “Intentions are assumed to capture the motivational factors that influence behaviour” (Ajzen, 1991 p.181). The factor of perceived behavioural control refers to the perceived ease of performing the behaviour under consideration. As stated, the subjective norm refers to the perceived social pressure to (not) perform the behaviour. Lastly, the attitude toward the behaviour refers to the degree to which a person has a (un-) favourable opinion of the behaviour (Ajzen, 1991). As Ajzen (1991, p.188) stated generally “the more favourable the attitude and subjective norm with respect to a behaviour, and the greater the perceived

control, the stronger should be an individual's intention to perform the behaviour under consideration”. Based on the literature reviewed and the previous discussion, the following hypotheses are proposed:

H1: A high attitude towards the behaviour has a positive impact on the willingness to co-create.

H2: A low attitude towards the behaviour has a negative impact on the willingness to co-create.

H3: A high subjective norm has a positive impact on the willingness to co-create.

H4: A low subjective norm has a negative impact on the willingness to co-create.

H5: A high perceived behavioural control has a positive impact on the willingness to co-create.

H6: A low perceived behavioural control has a negative impact on the willingness to co-create.

The previously discussed three factors of motivation, attitude towards the behaviour, subjective norm and perceived behavioural control, link back to the social aspect of the notion by Agrawal and Rahman (2015) that the level of customer engagement in co-creation processes can be partially explained by social-, psychological- and cultural factors. The fourth factor links back to the cultural factor within Agrawal and Rahman's (2015) statement, it being the ability to perform the necessary tasks that the co-creation requires.

There is a good amount of research that supports the notion that customer education has a positive impact on co-creation (Auh et al., 2007; Groth, 2005; Payne et al., 2007) as well as that companies need to facilitate appropriate and preferred techniques (Durugbo & Pawar, 2014). Ability to participate therefore seems to be an essential concept to co-creation. According to Hibbert, Winklhofer and Temerak (2012) customers must obtain the needed skills and knowledge to be effective resource integrators in co-creation practices and that companies therefore have to support customer learning through customer education practices. This again underlines the importance of the ability to participate in co-creation practices. “The resources that customers deploy to be able to learn include both their own operant (e.g., intelligence, imagination) and operand resources (e.g., books, technological devices) and the operant (e.g., specialist knowledge, skills as mentors or coaches) and operand resources (e.g., simulation software) afforded by organizations and other network actors.” (Hibbert et al, 2012 p.4). In turn, the success of the learning effort depends on the effectiveness with which the customer integrates these resources to be able to participate in co-creation activities. Meuter et al.'s (2005) measurements of ability will be adapted and used to measure this ability participate in the co-creation activities. From this the last hypotheses follow:

H7: A high ability to participate in the co-creation activities has a positive impact on the willingness to co-create.

H8: A low ability to participate in the co-creation activities has a negative impact on the willingness to co-create.

The previously mentioned determinants form the basis of the research model used. This research model has four latent independent variables, namely: (1) perceived behavioural control, (2) attitude towards the behaviour, (3) subjective norm, (4) ability to participate, and (5) willingness to co-create as the dependent variable in this study. Below, we conceptualised the relationships between these determinants including the hypotheses that guide the research.

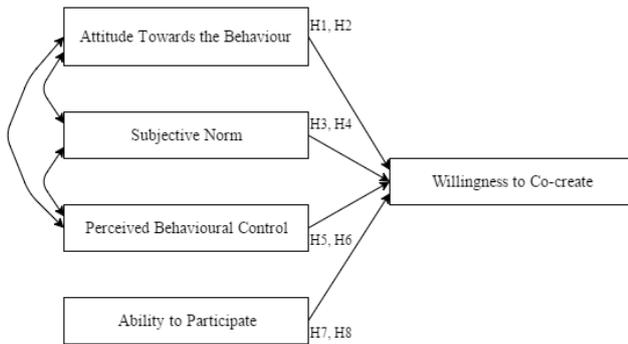


Figure 1 - Conceptual Framework

In a study by Chen and Lee (2008) it was found that personality plays an important role within the effectiveness of persuasive communication. Azjen (1991) stated that personality traits are implicated in human behaviour. Due to this personal traits will be used as control variable. Added benefit is that personal traits link back to the social aspect of the notion by Agrawal and Rahman (2015). Herewith social-, psychological- as well as cultural factors have been accounted for in this research.

3. METHODOLOGY

Based on the research model, a questionnaire has been constructed that forms the basis for this empirical study. To ensure reliability and validity of the measures, measurement items were, wherever possible, adopted from existing literature or slightly modified from existing literature to fit the current study.

The online survey has been administered with the intent of determining the (degree of) impact of the independent variables on the dependent variable in the study's theoretical model. The choice was made for a self-administered online survey to minimise interviewer bias and influence to the data gathered from the respondent. The additional benefits of a self-administered online survey are the reduced costs, fast delivery and easy personalisation as well as not being bound geographically and reaching target groups otherwise not reachable (Wilson, 2012). A preliminary version of the survey was developed and discussed with external parties. This has been done to assess the appropriateness of the research survey items and the approach in asking the questions as well as the clarity and unambiguity of the survey. After this the survey was finalised.

Non-probability sampling methods can be executed more quickly and easily than probability samples (Wilson, 2012).

Due to the fact that time is an important constraint to this research convenience sampling has been used. The survey was constructed with help of Qualtrics. This programme provided a link to the online survey which was spread through e-mail, LinkedIn and Facebook to increase the number of respondents. Subsequently the Facebook posts have been shared a total of 18 times and the LinkedIn post once. The survey was online for ten days and completion took about 5.3 minutes on average.

3.1.1 Research Context

According to Azjen (1991, p.185), intentions and perceptions are better assessed "in relation to the particular behaviour of interest, and the specified context must be the same as that in which the behaviour is to occur". It is therefore that the survey asks its questions in the context of buying goods from IKEA. There were three reasons for choosing IKEA as research setting. First, on average every Dutchman spends 60 euros at IKEA yearly (The Post Online, 2016). Hence it is highly likely that respondents are familiar with the purchasing process at IKEA, increasing the validity of the study. This purchasing process is defined as the actions taken from walking into the store until furniture assembly is finished and placed at its final destination. Second, purchases at IKEA vary in their co-creation. Buying a kitchen asks more co-creation of a customer than buying a desk chair does. And third, a purchase process at IKEA has several elements of co-creation; customers pick their own orders, are able to coordinate their own payment activity by using the self-scan cash desks, often deliver their purchases home themselves as well as self-assemble these. In the case of e.g. closets and kitchens, customers are even designing their own ideal modular setting and combination of items themselves.

3.1.2 Constructs

Azjen's (2002) paper on constructing a theory of planned behaviour questionnaire was adapted to construct questions to measure subjective norm, perceived behavioural control and attitude towards the behaviour. Three questions measuring perceived behavioural control, five measuring attitude and four measuring subjective norm were adapted to fit this research.

Ability is measured by using the 2005 research of Meuter et al. into customer trial of self-service technologies. One of the aspects they measured was the ability of customers to use self-service technologies. As self-service technologies enabling customers to overtake part of the production process are a form of co-creating (Roser et al., 2009), the six measurements of ability Meuter et al. (2005) used will be adapted and used to measure customers' ability to participate in the co-creation activities.

The measurement of the dependent variable willingness to co-create will be taken from Lazarus, Krishna and Dhaka (2014). In their 2014 article they created a co-creation willingness matrix and capability continuum for classification and scaling of services. In their theoretical model customers' willingness to co-create was an independent variable.

Besides these main constructs, the control variable of character traits needs to be measured. According to Chen and Lee (2008) through general consensus it has been concluded that the five

factor model of personality (FFM) measures ‘the most salient aspects of personality’ (Avery, 2003; McCrae & Costa, 1987). The FFM measures openness, conscientiousness, extroversion, agreeableness and neuroticism. There are several important characteristics of these five factors. Firstly, people vary continuously on these factors as they are dimensions instead of types. Secondly, the factors are partially heritable. Thirdly, the factors are shown to be stable over a 45-year period (beginning in young adulthood). Fourth and lastly, the factors of openness, conscientiousness, extroversion, agreeableness and neuroticism are considered universal (McCrae & Costa, 1996; Howard & Howard, 2000). Therefore the FFM will be used to examine personalities as third condition that influences willingness to co-create.

There are several rating instruments in place that measure the FFM, ranging from 5 to 45 minutes to complete. However, when personality is not the primary topic of interest a very brief measure of the FFM personality traits can be applied instead (Gosling, Rentfrow & Swann, 2003). Research has shown: the longer a survey, the less time respondents spend answering each question (Brent, 2011). Respondents may start satisficing through the questions which would negatively influence the quality and reliability of the data. Additionally, survey length is seen to influence response rate negatively (Herbelein & Baumgartner, 1978; Steele, Schwendig & Kilpatrick, 1992; Yammarino, Skinner & Childers, 1991). Therefore the TIPI of Gosling et al. (2003) is used to measure the FFM elements.

To summarise a twenty-nine item survey was developed in which three items measuring perceived behavioural control, five measuring attitude towards the behaviour and four measuring subjective norm all adapted from Azjen (2002), six on ability adapted from Meuter et al. (2005), four on willingness to co-create, and ten items about the FFM personality traits taken from Gossling et al. (2003). In addition to this, several demographic questions were posed, such as age and nationality. The items were, where possible, randomised to decrease question order effects. All of the items were tested using a seven-point Likert-type scale which ranged from ‘disagree strongly’ to ‘agree strongly’.

3.1.3 Sample Profile

Among the 488 respondents, 421 responses were valid without missing data. No incentives were offered for participation in this study. About 37.5% of the subjects were male and 61.8%

female. The remaining three respondents preferred not to state their gender. 83.4% of the respondents were 30 or younger. The majority of respondents, 54.6%, were between 21 and 25 years old. 77.2% of respondents are going to, or have finished, university. Lastly, respondents came from a variety of 26 countries in total; however the majority was Dutch (73.4%).

4. DATA ANALYSIS AND RESULTS

IBM SPSS Statistics version 23 and IBM SPSS Amos version 24 were used to analyse the dataset. As stated, all items were tested using a seven-point Likert-type scale ranging from ‘disagree strongly’ to ‘agree strongly’. Before further analysis, the validity and internal consistency of the multiple-item measures was verified. This was done in accordance with Lazarus, Krishna and Dhaka’s (2014) study through a factor analysis, using principal component analysis and Varimax rotation. Questions that rendered high loadings on wrong constructs were dropped from further analysis. As a result of this process, one item from the original measure for ability and one from perceived behavioural control were dropped. Namely, the questions “*My past experiences increase my confidence that I will be able to successfully purchase furniture at IKEA*” and “*For me to buy furniture at IKEA would be impossible*”. The question “*If I wanted to I could buy furniture at IKEA*” also loaded on the ability to participate construct. However, this question was decided not to be dropped as it was deemed preferred to have more than one item on each construct for reliability reasons (Timpany, 2011).

Subsequently the multi-item constructs used the standard of 0.40 factor loading threshold (Walker & Maddam, 2008). When items did not meet this minimum criterion, they were dropped from the constructs and not further analysed. The factor loading of 0.399 was deemed close enough to 0.40 to stay in the analysis. This resulted in no extra items being dropped due to low factor loadings.

After this, the Cronbach’s alpha check illustrated that willingness to co-create (0.807), ability (0.838) and attitude towards the behaviour (0.821) yielded a good internal consistency (George & Mallery, 2003). Whilst subjective norm (0.689) can be said to have acceptable internal consistency and perceived behavioural control (0.571) has poor internal consistency. The results are shown in Table 1 below.

Table 1 - Properties of Constructs

Construct	Measurement Item	Factor Loadings	Mean	SD
Attitude towards the behaviour (adapted from Azjen, 2002) (Cronbach’s α = 0.821)	For me to buy furniture at IKEA is:			
	1. Harmful : Beneficial	0.680	5.39	1.223
	2. Pleasant : Unpleasant*	0.860	5.19	1.420
	3. Good : Bad*	0.843	5.37	1.144
	4. Worthless : Valuable	0.516	4.87	1.273
	5. Enjoyable : Unenjoyable*	0.807	5.14	1.404
Subjective norm (adapted from Azjen, 2002)	1. Most people who are important to me think that buying furniture at IKEA when I need furniture is something I should do	0.770	4.69	1.488

(Cronbach's $\alpha = 0.689$)	2. It is expected of me that I buy furniture at IKEA when I need furniture	0.526	3.48	1.800
	3. The people in my life whose opinions I value would approve when I buy furniture at IKEA	0.685	5.39	1.286
	4. Most people who are important to me buy furniture at IKEA	0.760	4.69	1.454
Perceived behavioural control (adapted from Azjen, 2002) (Cronbach's $\alpha = 0.571$)	1. For me to buy furniture at IKEA would be impossible*	Removed	Removed	Removed
	2. If I wanted to I could buy furniture at IKEA	0.399	6.30	1.061
	3. It is mostly up to me whether or not I buy furniture at IKEA	0.652	6.02	1.270
Ability (adapted from Meuter et al., 2005) (Cronbach's $\alpha = 0.838$)	1. I am fully capable of buying furniture at IKEA	0.786	6.35	0.976
	2. I am confident in my ability to buy furniture at IKEA	0.776	6.19	1.028
	3. Buying furniture at IKEA is well within the scope of my abilities	0.734	6.14	1.035
	4. I do NOT feel I am qualified for the task of making a purchase at IKEA*	0.758	6.34	1.235
	5. My past experiences increase my confidence that I will be able to successfully purchase furniture at IKEA	Removed	Removed	Removed
	6. In total, purchasing furniture at IKEA involves things that are more difficult than that I am capable of doing*	0.743	6.00	1.374
Willingness to co-create (from Lazarus, Krishna and Dhaka, 2014) (Cronbach's $\alpha = 0.807$)	1. I will work together with a firm for enhancing my overall experience	0.806	5.01	1.336
	2. I will work together with a firm for enjoyment and entertainment	0.839	4.98	1.350
	3. I will work together with a firm to develop myself	0.812	5.53	1.386
	4. I will work together with a firm to get rewards	0.673	5.06	1.457

* Reversed-scored items were recoded prior to this analysis

Next, openness, conscientiousness, extraversion, agreeableness and emotional stability were controlled for to find out whether character traits affected the model in any way. Table 2 below shows that the relationships between the five character traits and willingness to co-create were insignificant. This means that these character traits do not confound the relationships specified in the model. Therefore these character traits were dropped from the model in further analysis.

Table 2 – Regression weights of FFM

	Estimate	S.E.	C.R.	P val.
Openness with willingness to co-create	0.099	0.053	1.874	0.061*
Conscientiousness with willingness to co-create	0.079	0.043	1.839	0.066*
Extraversion with willingness to co-create	0.039	0.037	1.037	0.300*
Agreeableness with willingness to co-create	-0.010	0.059	-0.174	0.862*
Emotional stability with willingness to co-create	-0.044	0.040	-1.100	0.271*

* two-tailed p-value

After this the fit of the model was studied to see if the proposed conceptual framework was accurate. With a significant Chi-square test ($p < 0.001$), NFI (0.357), TLI (-1.186), CFI (0.344), GFI (0.878) and AGFI (0.392) values below 0.9 and RMSEA (0.373) above 0.08 the model does not fit the data (Bentler & Bonnett, 1980; Hu & Bentler, 1999).

After reviewing model correlations it was found that ability to participate and perceived behavioural control correlate significantly (Pearson's $r = 0.572$, $p < 0.001$), as the definitions of the two are so similar this is not surprising. The factor of perceived behavioural control refers to the perceived ease of performing the behaviour under consideration and the factor of ability to participate then signifies the ability to actually perform the behaviour. Attitude towards the behaviour and ability to participate were also found to correlate significantly (Pearson's $r = 0.199$, $p < 0.001$). This too is plausible as previous studies also have shown these to correlate (Pamuji, 2015; Djojuroto, 2014). Therefore, the decision was made to adjust the model such as in Figure 2 on the next page.

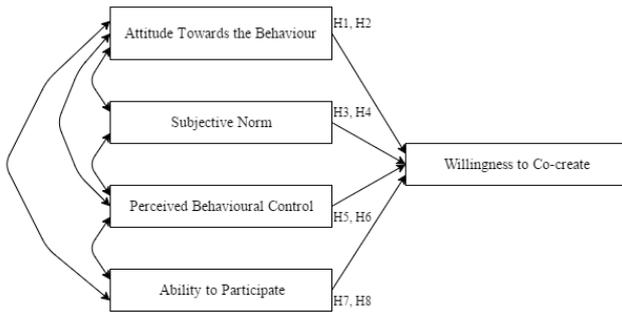


Figure 2 - Revised Conceptual Framework

Again, the fit of the model was studied. The Chi-square test for this model is not significant ($\chi^2 = 2.195$, $df = 1$ and $p = 0.138$). Satisfactory fits are obtained now as the GFI (0.998), AGFI (0.969), NFI (0.992), TLI (0.955) and CFI (0.996) are all greater than 0.9 and the RMSEA is 0.053 (Bentler & Bonnett, 1980; Hu & Bentler, 1999). The new model therefore indicates a good fit to the data.

The results of the path analysis for the model show that the model as a whole predicts 8.3% of the change in willingness to co-create (Figure 3 below). The contribution of perceived behavioural control ($\gamma = 0.065$, $p = 0.1565$) is insignificant. Therewith it can be said that a high subjective norm ($\gamma = 0.143$, $p = 0.0025$), a high ability to participate ($\gamma = 0.131$, $p = 0.0035$) and a high attitude towards the behaviour ($\gamma = 0.163$, $p = 0.002$) positively impact the willingness to co-create.

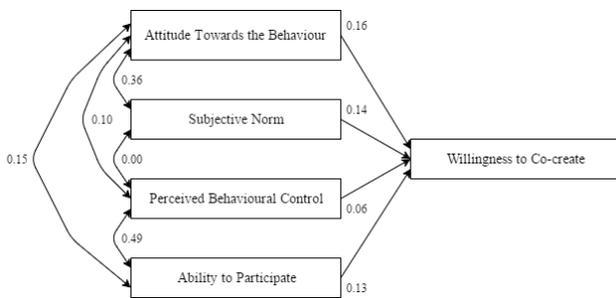


Figure 3 – ‘Willingness to Co-create’ Structural Equation Model

In their 2005 paper Meuter et al. state that age has been shown to influence consumers’ trial of innovations. From the 228 studies they reviewed, half showed a significant positive link whereas the other half showed a significant negative link. It can be argued that trial of innovation is not the same as trial of co-creation. However, as more than 50% of Fortune 500 companies have made co-creation through community sourcing an integral part of their innovation strategy it does not seem unlikely that age also impacts co-creation willingness and not only customers’ trial of innovations (Welch, 2016). To see

whether age plays a significant role in this model another path analysis was run, one with age as control variable. This analysis showed that, indeed, age has a significant effect on customers’ willingness to co-create ($\gamma = -0.104$, $p = 0.004$). In this study the effect of age was negative, therefore it can be said that the older the customer, the less willing he/she is to participate in co-creating activities. Age was also found to have a significant negative effect on the subjective norm ($\gamma = -0.344$, $p < 0.001$). Therefore the model was adjusted to add these two significant paths.

The results of the final path analysis show that the model with age added as confounding variable predicts 9.8% of the change in willingness to co-create within customers. The Chi-square test for this model is not significant ($\chi^2 = 4.531$, $df = 4$ and $p = 0.3398$). Satisfactory fits are obtained as the GFI (0.996), AGFI (0.981), NFI (0.985), TLI (0.993) and CFI (0.998) are all greater than 0.9 and the RMSEA is with 0.018 also less than the desired 0.08 threshold (Bentler & Bonnett, 1980; Hu & Bentler, 1999). The new model therefore indicates a good fit to the data.

However, as can be seen in Table 3 the contribution of perceived behavioural control ($\gamma = 0.062$, $p = 0.162$) within the model is insignificant. A high subjective norm ($\gamma = 0.111$, $p = 0.0145$) and a high attitude towards the behaviour ($\gamma = 0.164$, $p = 0.0015$) both positively impact the willingness to co-create. Also it can be said that customers’ ability to participate significantly influences the willingness to participate in co-creation activities positively ($\gamma = 0.137$, $p = 0.0275$). With this H1, H2, H3, H4, H7 and H8 find support within this analysis, whereas H5 and H6 do not. It must be noted that the insignificance outcome might be attributed to the low factor analysis results for the perceived behavioural control construct.

Table 3 - Regression weights final model

	Estimate	S.E.	C.R.	P val.
Attitude towards the behaviour with willingness to co-create	0.164	0.056	2.948	0.0015*
Subjective norm with willingness to co-create	0.111	0.051	2.180	0.0145*
Perceived behavioural control with willingness to co-create	0.062	0.063	0.986	0.162*
Ability to participate with willingness to co-create	0.137	0.071	1.919	0.0275*
Age with willingness to co-create	-0.104	0.036	-2.859	0.004**

* one-tailed p-value

** two-tailed p-value

The final structural equation model can be seen in Figure 4 on the next page.

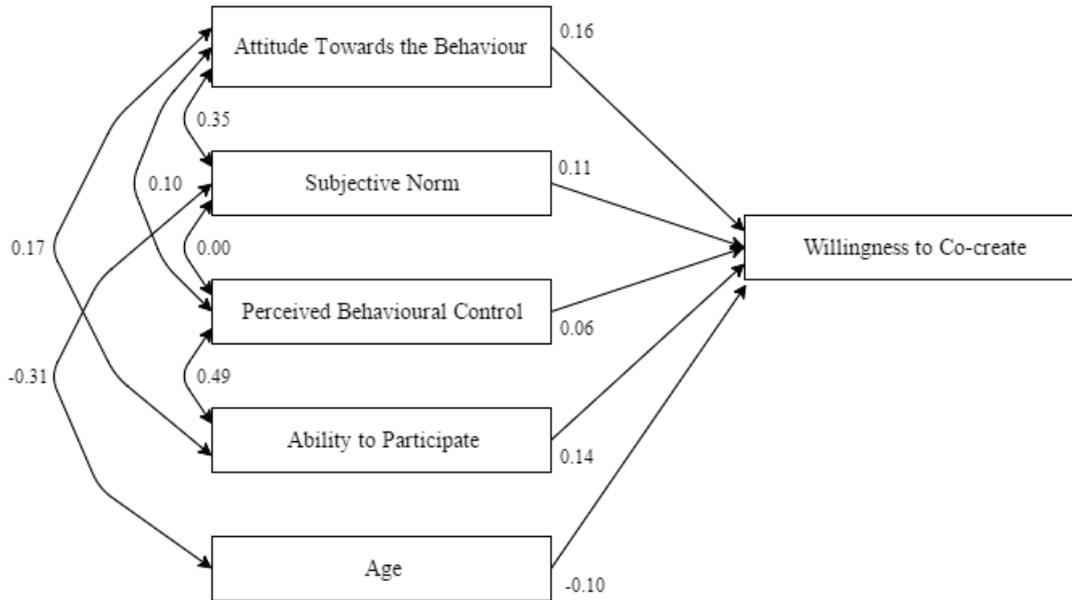


Figure 4 - 'Willingness to Co-create' Structural Equation Model (with Age)

5. DISCUSSION AND CONCLUSION

The purpose of this paper was to examine the effects of ability and motivational factors on customers' willingness to co-create. In doing so, several analytical processes were used. Firstly a factor analysis was done to strengthen the constructs. Then the factor analysis correlation studies and path analyses were performed. All of this was in accordance with Lazarus, Krishna and Dhaka's (2014) study and employed to determine the effects of motivation and ability to participate on willingness to co-create.

From these analyses we learn that the ability to participate in co-creation activities has a significant positive relationship with customers' willingness to co-create ($\gamma = 0.137$). This finding supports hypotheses seven and eight and therewith the central role of ability upon customers' willingness to co-create.

In addition to this the current study establishes that the motivation within a customer has a relationship with the willingness to engage in co-creation activities. Analyses showed that attitude towards the behaviour and subjective norm to be positively and significantly impacting the extent to which the respondents are willing to co-create (resp. $\gamma = 0.164$ and $\gamma = 0.111$). This finding supports hypotheses one till four.

However, the perceived behavioural control did not significantly affect the willingness to co-create. In addition to this the internal consistency reliability for the perceived behavioural control construct was poor (Cronbach's $\alpha = 0.571$) (George & Mallery, 2003). Hence, support for hypotheses five and six could not be found.

As previously mentioned, the lack of support for hypotheses five and six can possibly be attributed to the found correlation between ability to participate and perceived behavioural control (Pearson's $r = 0.572$, $p < 0.001$). The factor of perceived behavioural control refers to the perceived ease of performing

the behaviour under consideration. The factor of ability to participate signifies the ability to actually perform the behaviour. As explanation for the correlation, we assume that this part of the questionnaire was not sufficiently developed to filter out this subtle difference. Subsequently the two constructs were similar in the factor analysis.

Unlike what was expected in line with the research by Chen and Lee (2008), none of the big five character traits were found to influence the model significantly. This might be attributable to the TIPI being used as measure of the five factor model, it being very short and basic.

With all this in mind it can be stated that the findings from this study support the model proposed in the beginning of the research. This can be seen in Figure 1 on page 4. Motivational factors and ability do impact customers' willingness to co-create. The model did, however, need some adaption after reviewing the initial path analysis.

This analysis showed ability to participate and perceived behavioural control as well as ability to participate and attitude towards the behaviour to be linked. Additionally, age was found to significantly impact customers' willingness to co-create directly as well as indirectly through subjective norm. The final model that was validated through this study can be seen in Figure 4 above. This final model predicts 9.8% of the change in willingness to co-create within customers.

Willingness to co-create, as stated in the literature review, has already been shown to positively impact the level of interaction between the customer and the firm which in turn positively impacts the extent of co-creation (Lazarus, Krishna & Dhaka, 2014). Higher customer involvement has been shown to positively impact the perceived performance (Cheung & To, 2011). The empirical evidence provided by this study has brought to light that ability and motivation to participate within

co-creation activities are pivotal with regards to customers' willingness to participate in co-creation activities.

6. IMPLICATIONS

6.1 Theoretical Implications

Willingness to co-create has been shown to have positive effect upon the extent of co-creation through increasing the level of interaction between the firm and its customers (Lazarus, Krishna & Dhaka, 2014). In its turn, the extent of co-creation has been shown to effect the perceived service performance of the firm positively (Cheung & To, 2011). This underlines the importance of understanding what influences the factors that constrain or enable the extent to which customers are prepared to get involved in the co-creation process: to understand what makes customers willing to co-create. The results of this study improve our understanding of the factors that constrain or enable the extent to which customers are willing to engage in co-creation processes. Therewith this research is the first to attempt to close the gap identified in the pre-existing literature.

In this attempt it was found that, overall, both a higher ability to participate and increased motivational factors have shown to lift customers' willingness to co-create. This finding is in agreement with the findings of Petty and Cacioppo (1986) that a high motivation and ability increases the success of persuasive communication practices. The findings are also in accordance with Vargo and Lusch' (2004; 2008) foundational premises, which argue that specific knowledge and competences (operant resources) need to be employed to be able to facilitate any value generation.

Lastly, the research also shows that companies need to take into account the age of their target group in their expectations of co-creation degrees. Therewith it supports Meuter et al. (2005) in their findings that age does matter in customers' trial decisions.

6.2 Managerial Implications

The empirical evidence provided by this study has provided implications from a managerial perspective. Given the research context of the study, the results are specifically interesting for marketers of companies that already have co-creation practices in place as well as those that are in the process of establishing co-creation practices.

The study has brought to light that ability and motivation to participate within co-creation activities should not be overlooked in marketing activities promoting the co-creation activities. These marketing activities can influence the willingness of a customer to participate within said co-creation activities and therewith the perceived performance of the firm.

When the attitude toward the behaviour is low, the customer perceives the behaviour as unfavourable. If subjective norm is low, the customer perceives the pressure to not participate in the co-creation activities higher than the pressure to do participate. Both can be changed by employing appropriate marketing messages to shape the perceptions of customers towards the co-creation activities. Therefore the study underlines the importance of company traits such as brand image and reputation as they can be employed to shape both subjective norm and attitude towards the behaviour.

When ability to participate is low, the customer does not think he/she is capable of participating in the co-creation activities. This can be aided through making operant (i.e. helpdesk phone numbers) and/or operand resources (i.e. instruction manuals) available or merely making them more visible and known (Hibbert et al, 2012). This also can be done through creating the right marketing message, one that shapes the perceptions of ease and capability to participate within customers.

7. LIMITATIONS

Limitations of this study should be noted. The research study explored the effects of two concepts, motivation and ability to participate, through four different constructs on customers' willingness to co-create. Evidently, this is not all-inclusive. Fuller (2010) stated that the willingness of a customer can be attributed to amongst others a firm's brand value, availability of suitable platform, customers' knowledge and interest in the activity, social approval and social connect. Mochon, Norton and Ariely (2012) argue feelings of competence to drive willingness to co-create. Meuter et al. (2005) thought innovation-type characteristics such as compatibility, relative advantage, complexity, observability, trialability and perceived risk to be of influence. Therefore there may be other factors impacting customers' willingness to co-create on which this study did not focus. In addition to this, Mankoff (1974) and Brown (1976) concluded that not attitudes but values are the most useful concept in determining motivation instead of using Azjen's (1991) theory of planned behaviour as was done in the current study.

In addition to this there is not one agreed upon definition of co-creation. As Vargo and Lusch (2011) state that nearly everything is co-created, the much encompassing definition of Roser et al. (2009, p.6) appears to be appropriate, being "whenever consumers interact with companies or products and thereby have an active role in the shaping of their experience and ultimately value perception". Therefore the questions were asked in the context of IKEA, a company that does numerous activities that fit to this definition, e.g. self-scan cash desks, customers picking their own order, self-design through modular structures, self-assembly of furniture as well as a competition for kids in which they can design a stuffed animal. However, other research has used other definitions and as such encompasses co-creation to be a slightly different or perhaps include a narrower scope of activities.

Lastly, the administered survey was not flawless. For example, the four independent variables of ability to participate, subjective norm, perceived behavioural control and attitude towards the behaviour, were tested in the context of IKEA whereas the dependent variable, willingness to co-create, was not. Also, upon post-review the questions on ability to participate might measure more so the ability to purchase, than the ability to participate.

8. FUTURE RESEARCH

The previously discussed limitations could be amended through future research. These future investigations could include interview and observation methods and other perspectives upon motivation and ability in order to confirm the findings of this

study more solidly. Especially it would be good to further explore the correlation between ability to participate and perceived behavioural control. It needs to be tested whether these constructs still correlate when research is able to filter out the subtle difference between the two.

In addition to this it might be interesting to take a gender perspective upon co-creation willingness to generate more insights for practitioners. The dataset suggests that gender significantly influences customers' attitude towards the behaviour ($y = 0.092, p < 0.001$) as well as subjective norm ($y = 0.061, p = 0.021$). This is supported by research by Teller and Thomson (2012) which shows that women perceive purchasing more as a leisure activity and because of this value the complementary experiences, whereas men perceive buying more as a task and therefore are more focussed on the logistics of shopping efforts.

Also later research could further explore the effects of openness and conscientiousness influencing the willingness to co-create as the findings of this research would have been significant on the one-tailed level.

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