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Using the DART Model of Value Co-creation to Predictcustomer Loyalty in Pension Fund Administration in Nigeria

Ojiaku, Obinna Christian[1], Nwaizugbo, Ireneus Chukwudi[1] & Nwatu, Basil Chibuike[2]

Department of Marketing, Nnamdi Azikiwe University, Awka, Anambra State
E-mail: oc.ojiaku@unizik.edu.ng; ic.nwaizugbo@unizik.edu.ng
Department of Marketing, Enugu State University of Technology, Agbani, Enugu State
E-mail: chybikenice@yahoo.com

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Abstract: As today's empowered consumers increasing put businesses under pressure to co-create value with them, businesses are uncertain if involving customers in value co-creation is a potent strategy for winning customers' loyalty. This study attempts to predict customer loyalty based on the DART (dialogue, access, risk assessment and transparency) model of co-creation. In a cross-sectional survey, involving 364 clients of pension service firm across MDAs in Southeastern Nigeria, we found that the dialogue, access and transparency dimensions of co-create significantly predicts customer loyalty. The implication of the study for practice is discussed.

1. Introduction

In today's knowledge economy, the enablement created by the internet-technology has created a class of sophisticated and knowledgeable consumers who are more connected and empowered than ever before. These consumers are active recipients of brands and offerings and are also able to accept or reject a company's offering based on their experiences and knowledge (Roser, Samson, Humphrey, & Cruz-Valdivieso, 2009). As a consequence, consumers demand greater levels of personalisation in their consumption experience and have therefore placed businesses under increased pressure to co-create value with them. Businesses on the other hand, are compelled to search for new and better ways to create value and differentiate their market offerings in order to profitably attract and retain customers (Bendapudi & Leone 2003; Roser et. al. 2009; Shaw & Ivens 2002). Thus, a potent strategy for firms is to reconfigure its relationships and systems in order to enable customers to utilize all available resources to create value for themselves (Normann & Ramirez, 1993).

Value co-creation is defined as the processes through which firms collaborate with customers to create value (Prahalad & Ramaswamy, 2004). Customer value creation is centered on what the customer does, whereas co-creation takes into perspective the processes within the network (Gummerus, 2013). Value is said to be co-created when an interaction between the company and the customer exist (Alves, Fernandes & Raposo, 2016; Grönroos & Voima 2013). Value co-creation is associated with the opportunity to gain competitive advantage by developing unique competence, together with the appropriate organizational resources and technological capabilities aimed at better satisfying customers demand and gaining customer loyalty (Bendapudi & Leone, 2003; Prahalad & Ramaswamy, 2004). Previous research found a positive correlation between value co-creation and attitudinal loyalty (Auh *et al.* 2007; Sohby *et al.*, 2009), increased likelihood of positive word-of-mouth (File, Judd, & Prince, 1992) and service recovery (Dong, Evans, & Zou, 2008). However, there are recent call for more research to better understand the relationship between customer value co-creation and loyalty (Alves *et al.*, 2016; Payne, Storbacka & Frow, 2008).

Despite the increasing interest in customer value co-creation and its critical role in marketing success (Flores & Vasquez-Parraga, 2015), empirical investigation on the effect of customer value co-creation on marketing outcomes is still sparse. Most of the scholarly debate on co-creation has centered on theoretical underpinnings or conceptual frameworks (Etgar, 2006; Flores *et al.*, 2015; Neghina, Caniels, Bloemer & van Birgelen, 2015; Payne *et al* 2008; Prahalad & Ramaswamy, 2004; Saarijarvi, 2012) with very few empirical investigations (Auh *et al.* 2007; Randell *et al.*, 2011; Rajan & Read, 2016; Sohby *et. al.,* 2009). More so, the literature is dominated by scholarly discussion from developed economies, with few article identified from context of Sub-Sahara Africa (Osei-Frimpong, Wilson & Owusu-Frimpong, 2015). In fact, the literature on the dimensions of value co-creation is confusing and ambiguous (Neghina *et al.*, 2015). Several researchers conceptualizes value co-creation as complex and consisting of several dimensions. For instance, Randell *et al.* (2011) operationalized value co-creation as consisting of connection, trust and commitment, Yi and Gong (2013) considers co-creation as a third-order factor consisting of two primary dimensions, customer citizenship and customer co-creation behavior and Neghina *et al.* (2015) proposed the dimensions of co-creation as consisting of individuating, relating, empowering, ethical, developmental, and concerted interactions. Prahalad & Ramaswamy (2004) in their seminal paper proposed the DART (dialogue, access, risk assessment and transparency) model of customer value co-creation as the fundamental building blocks of value co-creation. The DART model is yet to be empirically investigated. Accordingly, this study builds on the DART model (Prahalad & Ramaswamy, 2004) and investigates the effect of value co-creation on customer loyalty in the Nigerian pension service industry. In other words, the study investigates the effect of dialogue, access, risk assessment and transparency on customer loyalty with pension service firms.

The Nigerian pension service industry consists of pension fund administrators (i.e., PFAs), pension fund custodians, and the regulatory body (i.e., National Pension Commission), employers of labour, employees or retirement savings account holders (RSA). The industry contributes about 6 per cent to the nations GDP and manages over ₦7.4 trillion ($20.5 billion)pension assets (National Pensions Commission, 2016). However, the industry is under increased threat of collapse at least for pension fund administrators following public distrust towards the scheme and unfavourable government policies. Furthermore, despite the high switching barrier customers' experience and the 'passively' competitive nature of the market, evidence of switching behaviour has started to emerge as manifested by the increased agitations to switch provider on the one hand, and concerted efforts to amend the Pension Reform Act (2010 amended) to allow for licensing of ministries, departments and agencies to operate and manage a closed pension in order to privately run, operate and administer pension funds for its workers on the other hand (Ojiaku, Olise & Nwankwo, 2015). Accordingly, it has become imperative that pension firms collaborate with customers to co-create value in the administration of their pension fund in order to build trust, commitment and loyalty. Arnould (2005) argue that for firm to succeed, and gain customer loyalty, it is important that resources are deployed to enable customers integrate their cultural resources into the firms' systems and processes and extract value for themselves. (Alves *et al.*, 2016).

The rest of this paper is organised as follows: In section 2 related literatures is reviews. Section 3 discusses the research method, while section 4 presents the results of the study. Then the discussion and implications is presented in section 5. Finally, the conclusion of the study, limitations and suggestions for further research is presented in sections 6 and 7 respectively.

2. Literature review

2.1.Customer Value Co-Creation

Customer value co-creation is a post modern marketing thought centered on service-dominant logic (Vargo and Lusch, 2004). According to the service-dominant logic, customers actively participate in defining and creating value with firm rather than being passive receiver of value embedded in product or service output (Vargo and Lusch, 2004). The value co-creation paradigm differ from the traditional paradigm of good-logic, where firm create value and customer receive value at the point where goods are exchanged for money thereby assigning distinct roles to firms and customers (Vargo, Maglio and Akaka, 2008). In the S-D logic, 'the customer is always a co-creator of value' (Lusch and Vargo, 2006b: 284) and 'value is always uniquely and phenomenologically determined by the beneficiary (i.e., customers)' (Lusch and Vargo, 2006b). Thus, value is co-created through the combined efforts of firms, employees, customers, stakeholders, government agencies, and other entities related to any given exchange, but are always determined by the customer (Vargo *et al.*, 2008). According to Prahalad and Ramaswamy (2004), co-creation refers to the processes by which both consumers and firms collaborate, or otherwise participate, in creating value. Co-creation is a joint activity involving two or more economic actors with the purpose of creating value beyond what each actor can achieve independently (Neghina *et al.*, 2017).

In Value co-creation, firms through active and conscious process, develop, design, manufacture and propose value through market offerings and customers continue value creation process through use (Heinonen, Strandvik, & Voima, 2013; Vargo *et al.*, 2008). Co-creation enables the firm to develop product or services tailored to the customer needs rather than standardize offering. Prahalad and Ramaswamy, (2004) add that it is the consumers' integration of resources during co-creation that allows value to emerge. In other words, customers extract value by acting on operand resources facilitated by the firm. As in the case of pension services, pension firms provide operand resources in the form of pension accounts (i.e., mandatory retirement savings accounts and voluntary pension accounts) whereas the customer extract value by opening retirement savings accounts and providing employment information for consequent funding of the accounts. In addition, pension firms facilitate value co-creation through providing customers access to their pension accounts using digital platforms. Therefore, customers are value co-creators during consumption and in value-supporting interactions whereas firms are value facilitators and co-creators (Heinonen *et al.*, 2013). Groonroos & Voima, (2013) delineate the co-creation activities into the provider sphere, customer sphere and the joint provider and customer sphere. Similarly, Payne *et al.* (2008) designate these same processes as the processes of customer value creation, processes of supplier value creation, and processes of encounter (Alves *et al.*, 2016).

2.2.Dimensions of DART model and Hypotheses

2.2.1. Dialogue

Dialogue is an interactive process where customers and firm reasons together around issues of common interest to create a common platform of knowledge, which supports value co-creation (Grönroos, 2000). Dialogue is an interactive communication necessary to make value proposition and co-create value with customers (Lusch & Vargo, 2006); Ballantyne and Varey (2006) add that it is a process of learning together, with its ethical underpinnings built on trust. Customers interact with companies in respect of new product or service development, support services, or both in order to initiate, develop, and manage co-creation (Galvagno & Dalli, 2014). For instance, pension service firms interact with customers to learn about their preferences, problems and value expectations with respect to their pension accounts. Customers in turn learn about the challenges of the firm in receiving pension contributions, regulation restrictions on investments, value propositions and together information is shared between the customer and firm, and value is co-created. When dialog is lacking, consumers can enforce interaction by forcing firms to respond when they complain, negotiate, fight and appropriate (Cova & Dalli, 2009). Therefore, the quality of the interaction and the responsibility for the final value that is created and shared lies with the firm, the service employee and the customer (Grönroos, 1996; Grönroos and Voima, 2013). The dialogue between customers and firm supports value co-creation and leads to sustainable competitive advantage (Ballantyne & Varey, 2006,). Tynan, McKechnie, and Chuon (2010) find that co-creating experiences for luxury brands involve an active dialog between owners, employees and customers. Baumann & Le Meunier (2015) posits that interactive dialogue between customers and service employees is the nucleus of value co-creation. Therefore, the interactive communication with customers in value co-creation will lead to customer loyalty. Thus:

H_1: Dialog will have a significant influence on customer loyalty.

2.2.2. Access

According to Prahald & Ramaswamy (2004) value co-creation means that firms will have to grant customers deep access into their process and resources and allow customers experience the brand. Access in the context of co-creation is the willingness to share control over information and facilitate a collaboration environment (Rajan & Read, 2016). Customers need to access as much information as they need from the company as well as from other customers (Jaakkola & Alexander, 2014) when experiencing the service. For co-creation to occur firms have to provide the necessary support devoid of barriers through the provision of appropriate tools, trainings, and facilitative environment to enable customers co-create value across the value chain. Company supports can take the form of access to the internet environment such as customers' online accounts, social media and company's website for an enjoyable and rewarding experience (Fuller, 2009). Suh and Lee (2005), emphasizing the importance of access, posit that access to virtual environments enables customers to solve problems conveniently and complete stated tasks easily. In a similar vein, Jaakkola and Alexander (2014) report that a central factor driving customers' engagement with a service provider is the access provided through easy involvement with the service system. Pension service firms can provide customers access into their systems and processes by allowing customers easy access into their pension savings accounts, investments portfolios and returns, updates on personal information e.t.c., and by so doing increase the customers commitment with the firm and willingness to recommend the firm to others. Therefore, we expect access to have a significant positive effect on customer loyalty. Thus:

H_2: Access will significantly influence customer loyalty

2.2.3. Risk Assessment

Risk is the possibility of suffering injury or loss due to product or service use. According to Prahalad and Ramaswamy (2004), it is "the probability of harm to the customer" (pg. 7). Risk assessment is the extent customers are able to make informed choices based on the associated costs and benefits of using a product or service. A precondition for customers accepting responsibility for risk is the firms' willingness to enable customers to make informed risk-benefit tradeoffs through transparency about the various risk associated with the products and services on offer (Prahalad and Ramaswamy 2004). In pension services, customers need to be aware of the social, financial, and security risk involved in co-creating value. Traditionally, companies shield customers from the risk inherent in the use of service offering, but as customers becomes value co-creators they become more willing to assume responsibility for these risk (Prahalad and Ramaswamy, 2004). Thus, companies would have to proactively communicate and share information with customers regarding its resources, capabilities and the risk customers may encounter while using the service to gain competitive advantage (Prahalad and Ramaswamy, 2004). Baqer (2006) find that customers are willing to purchase a co-produced service when they are aware of the risk involved in co-producing the service. Therefore, we expect customers' ability to assess the risk involved in co-creating pension services to significantly influence their loyalty with a pension service provider.

H_3: Risk Assessment will significantly influence customer loyalty

2.2.4. Transparency

Traditionally, the transactional nature of customer-company interaction leads to information asymmetry in favor of the company. However, as customers become empowered, this information asymmetry in cost and other related factor is gradually diminished. Therefore, it is important that companies are transparent in dealings with customers to facilitate dialogue and enable value co-creation to occur. According to Randall *et al.* (2011), value co-creation means that a certain degree of transparency, integrity and shared risk should be present. Transparency is concerned with the extent companies are willing to share information about the business

(Baqer, 2006), its products, technologies, processes, systems, transaction cost, security concerns, and profit. Transparency of information is required to develop trust between companies and customers. In addition, transparency is necessary to build close relationships between customer and firm and thereby enable value co-creation to occur. Neghina *et al.* (2015) suggest the need for ethical joint actions for symmetric information exchange between service employees and customers. Employees ethical action include presenting service providers offer truthfully, treating customers with respect, ensuring transparency and full disclosure during service interaction (Neghina *et al.*, 2015). They argue that providing false or misleading information and other unethical claim affect customers switching behavior (Neghina *et al.*, 2015). In contrast, providing open dialogue and transparency builds trust and increase customers' commitment to a firm (Terho *et al.*, 2012). Accordingly, information transparency would have positive influence on customers' loyalty. Thus:

H_4: Transparency will significantly influence customer loyalty with pension service firms

2.3. Customer Loyalty

Firms strive to achieve customer's loyalty, because a loyal customer is an asset to the firm and a source of competitive advantage. Oliver (1999) defines customer loyalty as a deeply held commitment to always patronize a service provider or product consistently in the future irrespective of situational influences or marketing efforts to cause switching behaviour. In the context of pension service, it is a customers' commitment for continuance patronage and recommend intention. Customer loyalty is perceived as future intention-to-repurchase or commitment that reflects the cognitive and emotional attachment associated with a brand. The literature suggests that customer loyalty leads to firm profitability because customer loyalty positively influences firm product-marketplace performance (Anderson & Mittal 2000) and financial performance (Anderson *et al.*, 1994; Gupta & Zeithaml 2006), and creates shareholder wealth (Anderson *et al.* 2004). Evidence suggests that co-creating value with customers leads to loyalty (Alves *et al.*, 2016). For instance, Cova and Dalli (2009) argue that involving customers in service co-production increases their affective evaluations of the service and the company and invariably increases their loyalty and willingness to buy. Luo *et al.* (2015) add that co-creation practices strengthen ties, enhances the level of commitment and boost customer loyalty among community members.

3. Methods

364 respondents from Anambra State, Southeast Nigeria, participated in the study. The respondents were proportionately selected from pension account holders in

ministries, departments and agency (MDAs) in Anambra State Southeast, Nigeria. The choice of MDAs is because of the mandatory nature of the scheme in the sub-sector. The instruments were self-administered and returned to the interviewer upon completion.

3.1.Measures

The survey instrument consists of a 7 point Likert-scale ranging from Strongly Disagree '7' to Strongly Agree '1'. The questionnaire is structured in two-parts. The items were generated from themes in the co-creation literature. 6 items were generated for dialogue dimension, while assess contains 4-items. Risk assessment consists of 5 – item and while 5 –items was generated for transparency. Customer loyalty was measured using 5 –items adapted from Abba & Hamdy (2015). Data collected were analysed using SPSS version 17 to generate needed information. Descriptive statistics was used to summarize the demographic characteristics of respondents, while a principal component analysis was performed to reduce the data and test for commonality. The hypotheses were tested using multiple regression analysis.The validity and reliability of the constructs was tested after a pilot study by performing a principal component analysis (PCA). The constructs was face validated by marketing professionals with specialization in services marketing. Subsequently, the instruments were pilot tested on a sample of 20 respondents for internal consistency. All the factors were reliable with Cronbach á > 0.70 (Nunnally &Bernstein, 1994). The data were collected in December, 2015. The result of the principal component analysis, Cronbach's alpha is summarized in Table 4.2.

4. Results

4.1.Profile of Respondents

Majority of the respondents were female (59%), more than half of the respondents (55%) were between the ages of 21 and 30 years. Less than 50% of the respondents are married and some are windowed (3%). The educational qualification of the respondents shows that 9 out of 10 respondents possess tertiary education qualification (90%). The summary of the respondents profile is shown in Table 4.1.

4.2.Principal Component Analysis

Principal component analysis (varimax rotation), extraction method was applied to the data. Items that did not load on any factor (< 0.5) were removed. The first four components displayed eigenvalues greater than 1, and the results of a scree test suggest that the four components are significant. Therefore, the four

Table 4.1
Respondents Demographics Characteristics

Variable	*Description*	*Frequency*	*Valid Percent*	*Mean*	*Standard deviation*
Sex	Male	148	40.7		
	Female	216	59.3	1.60	0.51
Age	< 20 yrs	28	7.7		
	21 - 30 yrs	199	54.7		
	31 - 40 yrs	106	29.1		
	41 - 50 yrs	19	5.2		
	>50 years	12	3.3	2.42	0.84
Marital Status	Married	163	45.2		
	Single	187	51.8		
	Widowed	11	3.0	1.58	0.55
Educational Qualification	Tertiary education	328	90.1		
	Secondary education	36	9.9	1.10	0.30
N = 364					

Source: Primary data

components were retained. The factors account for 67.3% of total variance explained. Six items loading highly on the first factor were associated with *transparency* and account for 41.7% of explained variances while three items loaded highly on the second factor and are associated with *access,* the factors account for 11.7% of the explained variance. The third factor consists of four items relating to *risk assessment* and accounts for 7.3% of the explained variance. Finally, four items loaded highly the fourth factor and are associated with *dialog* and accounts for 6.6% of the explained variance. One statement "My PFA recognizes the competence of its customers base" had a low loading (0.43) less than 0.5 and was dropped. The Cronbach's alpha was computed to measure the internal reliability of the factors. All factors had internal reliability between .78 and .85 ($\alpha > .70$; Nunnally, 1970).

4.3.Hypotheses Testing

Multiple regression analysis was used to test the stated hypotheses. Overall, the result show that the model is a good fit ($F[4, 361] = 12.49, p < 0.00$) and explains 14 percent of the variation in the dependent variable.All Variance Inflation Factor (VIF) is less than 5; therefore, our analysis is free from multicollinearity problem.

Table 4.2
DART-Model Principal Component Analysis

Component Label	*Items*	*Factor Loading*	*Cronbach's "á"*	*Variance Explained (%)*
Transparency	My PFA is open on pension investment and returns	.787		
	My PFA is open with information about its service systems and processes	.765		
	My PFA is open about pension administration fees and costs	.705		
	My PFA is transparent in their dealings with customers	.666		
	My PFA allows customers access to information on their ratings and performance.	.659	.85	41.7
Access	My PFA allows me access to information and tools I need to experience services	.802		
	My PFA provides me online access for service delivery	.783		
	My PFA allows me access to resources to suggest ways of services delivery	.774	.78	11.7
Risk Assessment	My PFA provides appropriate methods for me to assess risk involved in my dealings	.789		
	I am well informed of the risks involved in my pension fund investments	.677		
	I am willing to commit to creating desired value with my PFA even if it is risky	.619		
	My PFA should tell me about the risk involved in any business	.552	.79	7.3
Dialogue	My PFA engages in interactive dialogue with its customers	.815		
	My PFA uses different medium to communicate with its customers	.732		
	My PFA interacts with its customers to learn from them	.500		
	Interacting with my PFA gives me a sense of belonging	.653	.75	6.6

Note: p = 0.001; extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization; variance explained 67.2%

Source: Primary data

However, as indicated in table 4.4, the predictor variables transparency, dialogue, and access had significant positive regression weights,indicating that customer value co-creation significantly influence customer loyalty. However, customers' risk-benefit trades off show a positive but insignificant effect. For the regression coefficients, Dialogue had the most prominent effect on customer loyalty and was found to be statistically significant *($\beta = 0.27, p < 0.001$)* thus, hypothesis 1 was accepted. Access was also found to statistically significant *($\beta = 0.14, < 0.01$)* thus, hypothesis 2 is accepted. Risk assessment was found to be statistically not significant *($\beta = 0.09, p = 0.07$)* thus hypothesis 3 is rejected. Dialogue had the most prominent effect on customer loyalty and was found to be statistically significant *($\beta = 0.27, p < 0.001$)* thus, hypothesis 4 is accepted. Finally, transparency was also found to be statistically significant *($\beta = 0.11, p < 0.05$)* thus, hypothesis 1 is accepted

Table 4.3
Regression results

Model		*Unstandardized Coefficients*		*Standardized Coefficients*			*Collinearity Statistics*	
		B	*Std. Error*	*Beta*	*t*	*Sig.*	*Tolerance*	*VIF*
1	(Constant)	1.272	.463		2.745	.006		
	Transparency	.115	.050	.113	2.279	.023	.989	1.011
	Access	.176	.064	.140	2.749	.006	.935	1.069
	Risk Assessment	.088	.049	.093	1.803	.072	.914	1.094
	Dialogue	.302	.059	.265	5.081	.000	.887	1.127

a. Dependent Variable: Customer Loyalty

5. Discussions and Implications

In this study, the DART model of value co-creation proposed by Prahald and Ramaswamy (2004) is empirically investigated using pension service firms. The findings provide support for the effect of value co-creation on customer loyalty and sustainable advantage supporting Ballantyne & Varey (2006) assertions. In other words, the findings empirically demonstrate that value co-creation leads to customer loyalty through dialogue, access, risk assessment and transparency.

The finding from this study provides support for the effect of value co-creation on customer loyalty and empirical evidence to support some of the theoretical proposition of the service dominant logic. The dominance and the significant effect of dialogue on customer loyalty support Baumann & Le Meunnier (2015) emphasis of dialogue as the 'nucleus' of co-creation and Tynan *et al.* (2010). The finding further confirms Ballantyne and Varey (2006) assertions and some of the foundation premise proposed by Vargo and Lusch (2004). Therefore, dialoguing with customers during service encounters contributes to customers' co-creation experiences and provides opportunity for mutual learning and trust building. When customers are involved in deep level of interactive engagement with the service employees, customers learn of the service processes and systems of the service firm and are willing to commit to the firm and recommend it to others.The implication of this finding suggest the need for pension service providers to facilitatevalue co-creating activities with customers by providing platform such as corporate blogs, discussion forum and social media for customers to share, learn, communicate and interactively dialogue with service employees and extract value. For example, IBTC pensions incentivize its customers to participate in interactive dialogue and co-create value through its on-line platforms social media. In addition, pension service firms can facilitate the creation of on-line communities around their service brand, such on-line communities requires the participation of providers to mitigate and control interactive contents and risks capable of arising from such communities.

In a similar vein, customers'wants access to pension service providers' tools and information to co-create value. This is evident in the significant relationship between access and customer loyalty.This finding corroborates earlier findings by Jakkola and Alexander (2014) and Suh and Lee (2005) who argued that access to providers' system and processesincreases customers competencies in solving problems and completing task; Also findings by Fuller (2009) shows that tool support (access) are very important for customers to experience enjoyable and rewarding virtual environments. As resource integrators, customers need access to providers' resources and these resources needs to be integrated and applied through exchange processes to co-create value. The findings also lend support to the theoretically assertion by Prahalad and Ramaswamy (2004) that firms which provide deep access to the company's resources and processes enables a range of experiences for the customer thereby making such customers involved in the co-creation of value. The implication of this finding is that enabling customers' access to information and tools such as pension providers' web environment, corporate bog, social media, financial reports etcwill increase customers active engagementwith the firm, provide a sense of belonging in the process of service provision and value exchange which enhances customer loyalty.

Baqer (2006) find that customers are willing to purchase a co-produced product when the risk of co-production is known to them. This contradicts our findings which indicate that risk assessment does not have any significant effect on customer loyalty. A plausible explanation for the non-significant effect of risk assessment is that customers are risk averse when it comes to financial decisions especially with regard to pension fund which ought to provide financial and social security during retirement. Customers would rather pension firms disclose information about pensions services and process but may not be willing to make risk-benefit tradeoff. They would rather leave it for the expert. Nevertheless, risk assessment contributes simultaneously with dialogue, access and transparency to customer loyalty and will require consideration in the build up to customer value co-creation. This implies that informing customers of pension savings and investment risks may not be a worthwhile strategy for value co-creation and sustainable advantage.

Transparency was also found to positively predict customer loyalty. This finding contradicts Baqer (2006) but supports Terho *et al.* (2012) who argue that transparency builds trust and increases customers' commitment. In addition, the finding supports Prahalad and Ramaswamy (2004) assertion, which states that information transparency builds trust between firms and customers. The finding suggest that when pension firms are open, providing offers truthfully, transparently and fully disclosing every information the customers need to make informed decisions and co-create value, the customers will be committed to the firm and will be willing to recommend the firm to others. Customers wants pension firms to be forthcoming with information on pension investments and returns, its systems and processes, fees and costs and information on their ratings and performance to extract value during service encounters. It is when firms provide symmetry information that they can enjoy competitive advantage such as customer loyalty

6. Conclusions

The dialogue building block has more predictive effect on customer loyalty than access, transparency and risk assessment. Also, enabling customers' access to firms' resources leads to customer loyalty. Customers' wants access to information exclusive to the service provider, they also want access to tools such as a virtual environment and other operant resources from the service provider to enable them engage in co-creation of service and share knowledge. Transparency in dealings with customers builds trust and influences customer loyalty. Thus, customers expect service firms to deal transparently in all transactions, willingly offer assistant to customers and provide prompt services. Finally, in as much as customers co-create value with pension service firms, they are not willing to suffer harm that might arise from co-creation activities. However, they want access to information about business risks including financial, personal and societal risks.

7. Limitation and Suggestion for Further Research

The study has several limitations. First, the method for item generation is not robust. However, the scales were sufficiently validated and reliable. Future studies may use a robust method to generate measurement items. Furthermore, the scale may need to be tested using different service context or product. Second, only the customers' view of value co-creation was investigated. Since co-creation is joint activity facilitated by the firm, future studies may incorporate both consumers and service providers to gain a more comprehensive and robust understanding of the applicability of the model in various industries. Other member of the value chain such as regulators and intermediaries may be also incorporated into further studies. Third, this study is limited to the effect of co-creation on loyalty. Its effect on satisfaction was not studied which could mediate the effect on loyalty as such future studies should incorporate satisfaction as a mediator to customer loyalty.Finally, care must be taken in adopting the findings of this study due to the weak explanatory power of the predictors. Thus, future studies should increase include more items on the variables and test the various combinations of the DART dimensions on marketing outcome.

References

Abbas, H.A., & Hamdy, H.I. (2015). Determinants of continuance intention factor in Kuwait communication market: Case study of Zain-Kuwait. *Computers in Human Behavior*, 49, 648-657.

Alves, H., Fernandes, C., & Raposo, M. (2016). Value co-creation: Concept and contexts of application and study. *Journal of Business Research*, *69*(5), 1626–1633. https://doi.org/10.1016/j.jbusres.2015.10.029

Anderson, E. W. & Mittal, V. (2000). Strengthening the Satisfaction-Profit Chain.*Journal of Service Research*,3(November), 107-120.

Anderson, E.W., Fornell, C.& Mazvancheryl, S. K. (2004). 'Customer Satisfaction and Shareholder Value.*Journal of Marketing*, 68 (October), 172-185.

Arnould, E. (2005). Animating the bigmiddle. Journal of Retailing, 81(2), 89–96. http://dx.doi.org/10.1016/j.jretai.2005.03.001.

Auh, S., Bell, S.J., McLeod, C.S. & Shih, E. (2007). Co-production and Customer Loyalty in Financial Services.*Journal of Retailing*, 83(3), 359–70.

Ballantyne, D., & Varey, R. J. (2006). Creating value-in-use through marketing interaction: The exchange logic of relating, communicating and knowing. *Marketing Theory*, *6*(3), 335–348. https://doi.org/10.1177/1470593106066795

Baqer, S. M. (2006). The value of customer co-production in developing new products, (December). Retrieved from *http://search.proquest.com/docview/304905865?accountid=51189*

Baumann, J., & Le Meunier-FitzHugh, K. (2015). Making value co-creation a reality – exploring the co-creative value processes in customer–salesperson interaction. *Journal of Marketing Management*, *31*(3–4), 289–316. https://doi.org/10.1080/0267257X.2014.956137

Bendapudi, N., & Leone, R. P. (2003). Psychological implications of customer participation in co-production. *Journal of Marketing*, 67(1), 14–28

Cova, B., & Dalli, D. (2009). Working consumers: The next step in marketing theory? *Marketing Theory*, *9*(3), 315–339. https://doi.org/10.1177/1470593109338144

Cova, B., Dalli, D., & Zwick, D. (2011). Critical perspectives on consumers' role as "producers": Broadening the debate on value co-creation in marketing processes. *Marketing Theory*, *11*(3), 231–241. https://doi.org/10.1177/1470593111408171

Dong, B., Evans, K. R., & Zou, S. (2008). The effects of customer participation in co-created service recovery. *Journal of the Academy of Marketing Science*, *36*(1), 123–137. https://doi.org/10.1007/s11747-007-0059-8

Etgar, M. (2006).Co-Production of Services," in the Service- Dominant Logic of Marketing: Dialog, Debate, and Directions, Robert F. Lusch and Stephen L. Vargo, eds., Armonk, NY: M.E. Sharpe, 128–138.

Flores, J., & Vasquez-Parraga, A. Z. (2015). The impact of choice on co-produced customer value creation and satisfaction. *Journal of Consumer Marketing*, *32*(1), 15–25. https://doi.org/10.1108/JCM-04-2014-0931

Fuller, J., Muhlbacher, H., Matzler, K. & Jawecki, G. (2009). Consumer empowerment through internet-based co-creation.*Journal of Management Information Systems*, 26(3), 71-102.

Galvagno, M., & Dalli, D. (2014). Theory of value co-creation: A systematic literature review. *Managing Service Quality: An International Journal*, 24(6), 643–683. http:// dx.doi.org/10.1108/MSQ-09-2013-0187

Grönroos, C. (2011b). Value co-creation in service logic: A critical analysis. *Marketing Theory*, *11*(3), 279–301. https://doi.org/10.1177/1470593111408177

Grönroos, C., & Voima, P. (2013). Critical service logic: Making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, *41*(2), 133–150. https://doi.org/10.1007/s11747-012-0308-3

Gronroos, C. (1994). From Marketing Mix to Relationship Marketing: Towards a Paradigm Shift in Marketing. *Asia-Australian Marketing Journal*, 2 (1), 9-29.

Gronroos, C. (2000). Service Management and Marketing: A Customer Relationship Management Approach. West Sussex, UK: Wiley.

Gummerus, J. (2013). Value creation processes and value outcomes in marketing theory strangers or siblings?, *Marketing Theory* 13(1), 19-46.

Gupta, S. & Zeithaml,V. (2006). Customer metrics and their impact for financial performance. *Marketing science*, 25(6), 7-18.

Heinonen, K., & Strandvik, T. (2015). Customer-dominant logic: foundations and implications. *Journal of Services Marketing*, *29*(6/7), 472–484. https://doi.org/10.1108/JSM-02-2015-0096

Heinonen, S., & Ruotsalainen, J. (2012). Toward the Age of Neo-Entrepreneurs. *World Futures Review*, *4*(2), 123–133. https://doi.org/10.1177/194675671200400216

Jaakkola, E., & Alexander, M. (2014). The Role of Customer Engagement Behavior in Value Co-Creation: A Service System Perspective. *Journal of Service Research*, *17*(3), 247–261. https://doi.org/10.1177/1094670514529187

Luo, N., Zhang, M., & Liu, W. (2015). The effects of value co-creation practices on building harmonious brand community and achieving brand loyalty on social media in China. *Computers in Human Behavior*, *48*, 492–499. https://doi.org/10.1016/j.chb.2015.02.020

Lusch, R. F., & Vargo, S. L. (2006). Service-dominant logic: Reactions, reflections and refinements. *Marketing Theory*, *6*(3), 281–288. https://doi.org/10.1177/1470593106066781

Neghina, C., Caniëls, M. C. J., Bloemer, J. M. M., & van Birgelen, M. J. H. (2015). Value cocreation in service interactions: Dimensions and antecedents. *Marketing Theory*, *15*(2), 221–242. https://doi.org/10.1177/1470593114552580

Nunnally, J. C., & Bernstein, I. (1994). Psychometric theory (3rd ed.). New York: McGraw-Hill

Ojiaku, C.O., Olise, M.C., & Nwankwo, P.A. (2015) Customer expectation and service performance in pension fund administration (PFA) in Southeast Nigeria. *Business and Economic Research,*5(2), 191- 206

Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(4), 33–44.

Osei-Frimpong, K, & Osei-Frimpong, K. (2016). Examining the effects of patient characteristics and prior value needs on the patient-doctor encounter process in healthcare service delivery. *International Journal of Pharmaceutical and Healthcare Marketing* 10(2), 192-213.

Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, *36*(1), 83–96. https://doi.org/10.1007/s11747-007-0070-0

Prahalad, C. K., & Ramaswamy, V. (2004a). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, *18*(3), 5–14. https://doi.org/10.1002/dir.20015

Prahalad, C. K., & Ramaswamy, V. (2004b). Co creating unique value with customers. *Strategy & Leadership*, *32*(3), 4–9. https://doi.org/10.1108/10878570410699249

Ramírez, R. (1999). Value co-production: Intellectual origins and implications for practice and research. *Strategic Management Journal*, *20*(1), 49–65. https://doi.org/10.1002/(SICI)1097-0266(199901)20:1<49::AID-SMJ20>3.0.CO;2-2

Randall, W.S., Gravier, M.J. and Prybutok, V.R. (2011). Connection, Trust, and Commitment: Dimensions of Co-creation.*Journal of Strategic Marketing,* 19(1), 3–24.

Ranjan, K. R., & Read, S. (2016). Value co-creation: concept and measurement. *Journal of the Academy of Marketing Science*, *44*(3), 290–315. https://doi.org/10.1007/s11747-014-0397-2

Roser, T., Samson, A., Cruz-Valdivieso, E., & Humphreys, P. (2009). Co-creation/ : New pathways to value An overview. *Promise Corporation*, 22. Retrieved from http://personal.lse.ac.uk/samsona/cocreation_report.pdf

Saarijärvi, H. (2012). The mechanisms of value co-creation. *Journal of Strategic Marketing*, *20*(5), 381–391. https://doi.org/10.1080/0965254X.2012.671339

Shaw, C. & Ivens, J. (2002). Building great customer experiences. London: Palgrave.

Sohby, M., Winklhofer, H. & Hibbert, S. (2009). Managing customer participation through customer education. The 2009 Naples Forum on Services: service-dominant logic, service science, and network theory, Capri, June 16–19.

Suh, K.-S. & Lee, Y. E. (2005). The effects of virtual reality on consumer learning: An empirical investigation.*MIS Quarterly*, 29(4), 673-697.

Terho, H., Haas, A., Eggert, A. & Ulaga, W. (2012). It's almost like taking the sales out of selling'-towards a conceptualization of value-based selling in business markets.*Industrial Marketing Management*, 41(1), 174-185.

Tynan, C., McKechnie, S.,& Chhuon, C. (2010). Co-creating value for luxury brands. *Journal of Business Research*, 63(11), 1156–1163. http://dx.doi.org/10.1016/j.jbusres.2009.10. 012

Vargo, S. L., & Lusch, R. F. (2004). The Four Service Marketing Myths: Remnants of a Goods-Based, Manufacturing Model. *Journal of Service Research*, *6*(4), 324–335. https://doi.org/10.1177/1094670503262946

Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, *26*(3), 145–152. https://doi.org/10.1016/j.emj.2008.04.003

Yi, Y., & Gong, T. (2013). Customer value co-creation behavior: Scale development and validation. *Journal of Business Research*, *66*(9), 1279–1284. https://doi.org/10.1016/j.jbusres.2012.02.026