The Role of The Moderation of Satisfaction With The Co-Creation Performance in The Relationship of Degree of Co-Creation to Satisfaction with The Company, Loyalty and Expenditures on Customer Co-Creation: A Research on Digital Banking Jenius BTPN

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Abstract
The BTPN Jenius digital bank conducts co-creation activities as a manifestation of efforts in banking innovation to improve service quality. This study aims to determine the influence of Degree of Co-Creation on Satisfaction with the Company, Loyalty, and Expenditures. And to find out the role moderation of Satisfaction with the Co-Creation Performance in the relationship between Degree of Co-Creation and Expenditures, Satisfaction with the Company, and Loyalty. Data collection method used in this research is online questionnaire with sample of 153 respondents who are active Jenius customers in the Jabodetabek. Data analysis is done by using the SPSS 24. The summary of the result from this research are, Degree of Co-Creation have a postive impact to Satisfaction with the Company, Degree of Co-Creation have a positive impact to Loyalty, Degree of Co-Creation have a positive impact to Expenditures. Satisfaction with the Co-Creation Performance is not proven to moderate the influence of the relationship between Degree of Co-Creation and Expenditures, Satisfaction with the Co-Creation Performance is not proven to moderate the influence of the relationship between Degree of Co-Creation and Loyalty, Satisfaction with the Co-Creation Performance is not proven to moderate the influence of the relationship between Degree of Co-Creation and Loyalty.

Keywords: Degree of Co-Creation, Satisfaction with the Company, Loyalty, Expenditures, Satisfaction with the Co-Creation Performance.

Abstrak

Kata Kunci: Tingkat Co-Creation, Kepuasan dengan Perusahaan, Loyalitas, Pengeluaran, Kepuasan dengan Kinerja Co-Creation.
1. Introduction

The development of information technology that is growing rapidly at this time, can have a positive influence on economic activities such as increased performance and productivity. So that it brings human civilization to the digital era where everything is done based on the internet, where the internet can make it easier for people to access various information and electronic service features (Wibowo, 2016). A survey of Indonesian internet users 2017 conducted by the Indonesian Internet Service Providers Association (APJII) showed that in that year as many as 143.26 million Indonesians had used the internet. Compared to the population of 262 million, internet penetration in 2017 reached 54.68 percent. This penetration rate increases compared to the results of a survey conducted by APJII in 2016, which was only 132.7 million (Source: www.techno.okezone.com). With the large number of Indonesian internet users, it can enable the increasing potential of the digital economy in Indonesia, especially in the financial industry, which is characterized by the emergence of technology-based financial systems or commonly called fintech.

One of the current technological developments can be seen from the emergence of improved quality of digital banking services (digital banking) in Indonesia due to the rise of start-up businesses engaged in finance that resemble banking or Financial Technology (fintech) (Source: www.news.detik.com). To suppress the occurrence of this phenomenon, banks need innovation in the field of technology, by increasing or improving digital banking services. By using telecommunications systems and technology, banks can reach customers and not only provide general information about banking services but also opportunities to conduct interactive retail transactions (Aladwani, 2001). This shows that technology in the banking sector is needed to increase the quality of banking services in the digital era so that it can meet customer desires and satisfaction. Digital banking is a matter where financial service consumers often conduct their bank business by switching to using computers, smart phones, and tablets, while they will rarely visit branch and call hotline services (Barquin & HV, 2015). So as to enable the services offered by banks to be faster and more practical compared to the manual banking service system.

The Financial Services Authority (OJK) noted, the number of e-banking or digital banking users increased by 270%, from 13.6 million customers in 2012 to 50.4 million customers in 2016. While the frequency of e-banking user transactions increased 169 %, from 150.8 million transactions in 2012 to 405.4 million transactions in 2016 (Source: www.infobanknews.com). With this increase proves that e-banking can provide positive progress in the banking industry so that it has a good influence on the Indonesian economy. Digital banks or e-banking services continue to be improved by banking companies in order to provide optimal services for their customers. Since the mid-1990s, there has been a fundamental shift in the banking channel, using self-services channels such as online banking services (The Finnish Banker's Association, 2003; cf. Nordea Oyj, 2003; Pikkarainen, Pikkarainen, Karjaluo, & Pahlina, 2004). Innovation in online banking services is urgently needed to adjust customer needs in the banking sector in the digital era. To improve performance through innovation, service managers must do well to look out for core organizations, for example, collaborating with business partners and customers (Ordanini & Parasuraman, 2011). Engaging consumers as co-creators during innovation in developing new products will produce ideas that are more creative, more valued by customers, and easier to implement (Kristensson et al. 2004; Kristensson, Matthing, & Johansson, 2008). Collaboration created with consumers during the innovation process seems to be increasingly popular in recent years (Vargo and Lusch, 2004; Kristensson et al., 2008).

One of the digital banks conducting co-creation in Indonesia is the genius of BTPN. Jenius is a Reinvented Bank, by using Jenius consumers have full control in managing their lives and finances through smartphones safely, easily, and smartly. According to a survey conducted by Financial IT magazine, Jenius is among the best digital banking products in the world. Jenius is considered to fulfill three assessment categories in the 2017 Top 50 Digital Only Banks Ranking, namely media coverage for digital banking, number of employees, and evaluation of the impact of digital banking implementation (Source: www.infobanknews.com).

2. Theoretical Background and Development of Hypothesis
2.1 Co-Creation

Co-creation is a shared value creation by companies and customers, in this case not a company that seeks to please customers (Prahalad & Ramaswamy, 2004). Traditionally, suppliers produce goods and services, and customers buy goods and services, but at present conditions customers can be actively involved in dialogue with suppliers at each stage of product design and product delivery (Payne et al., 2008). Customers no longer become passive audiences, but become active co-producers. Customers and companies actively create shared value by providing services, where their personal needs are better served and satisfaction increases (Dong, Evans, & Zou, 2008). Customers move out of their traditional roles to
become co-creators as well as consumers who have value (Prahalad & Ramaswamy, 2004). As co-creators in new products, customers play a valuable role, where their participation starts from product design activities to product development activities, including validating product architecture choices, designing product features and priorities, specifying product interface requirements, and setting priorities and metrics in the process of product development (Satish Nambisan, Nambisan, & Nambisan, 2002). Products produced from co-creation activities are proven to often have benefits and updates that are in line with expectations, so that they can ultimately increase commercial attractiveness (Franke, von Hippel, and Schreier 2006; Magnusson, Matthing, and Kristensson 2003; Hoyer et al., 2010).

2.2 Co-creation and Firm Performance

Generally, the construct of customer satisfaction is recognized as an important relationship between company activities and subsequent customer behavior (Grissemann & Stokburger-Sauer, 2012). When customers are involved in the service development process, their perception of the company reflects their satisfaction and loyalty to service companies (Grissemann & Stokburger-Sauer, 2012). It is understandable that satisfaction with the company is the overall satisfaction of the customer in the service company (Grissemann & Stokburger-Sauer, 2012). Customer loyalty refers to the reuse and purpose of the customer to recommend it (Grissemann & Stokburger-Sauer, 2012). The fact is that co-creation has the possibility for customers to tailor products or services to suit their individual needs which leads to the assumption that customers are willing to pay more for a product or service that is created together (Grissemann & Stokburger-Sauer, 2012). Customer service expenditures refer to the total amount of money that customers are willing to spend and put it for a service (Grissemann & Stokburger-Sauer, 2012). Therefore, it can be proposed that the level of customer participation has a positive influence on satisfaction with the company, customer loyalty, and service expenditures.

**H1:** The degree of co-creation has a positive effect on customer satisfaction with service companies.

**H2:** The degree of co-creation has a positive effect on customer loyalty with service companies.

**H3:** The degree of co-creation has a positive effect on customer service expenditures.

2.3 Customer satisfaction with the co-creation process

When the results of co-created products are in accordance with what is needed by the customer, the business process is also considered positive and can complement the subjective values inherent in the product (Grissemann & Stokburger-Sauer, 2012). This is because the efforts made in the process of co-creation are considered as a useful and enjoyable experience that can lead to an assessment of product value (Franke & Schreier, 2010; Grissemann & Stokburger-Sauer, 2012). To describe these findings, it can be proposed that customers assess the extent to which the co-creation process relates to their satisfaction with the performance of their own co-creation (Grissemann & Stokburger-Sauer, 2012). Therefore, it can be concluded that when customers are satisfied with the performance of their own co-creation, they will be willing to spend or put more of their money on the service (Grissemann & Stokburger-Sauer, 2012).

**H4:** The higher the customer satisfaction with the performance of the co-creation, the stronger the effect of the degree of co-creation on service expenditures.

One might expect that when customers provide sufficient input in service development then when customers are satisfied with the contribution they make to create the same service, then they feel customer commitment to the company is declining, which results in unfair resource distribution (Grissemann & Stokburger-Sauer, 2012). The negative effects of the degree of co-creation on satisfaction with the company and on customer loyalty are expected for customers to be more satisfied with their own co-creation performance than those who are less satisfied with themselves (Grissemann & Stokburger-Sauer, 2012). Therefore, the following hypothesis is formed:

**H5:** The higher customer satisfaction with co-creation performance, the less powerful is the effect of the degree of co-creation on customer satisfaction with the company.

**H6:** The higher customer satisfaction with co-creation performance, the less powerful is the effect of the degree of co-creation on customer loyalty.

3. Research Methodology

3.1 Research Object

The object used in this research is BTPN's digital banking Jenius. Jenius is a reinvented bank in the form of a digital bank that conducts all banking transaction activities through an application and carries out co-creation activities with customers to develop new products or services tailored to customer needs. Jenius allows customers to have a bank account and manage finances from a cellphone without having to go and meet in the bank. This research was conducted with an online survey of respondents. The target of the respondents for
this study were all male and female respondents in the Jabodetabek area who were BTPN's Jenius customers.

3.2 Research Design

This research was conducted using descriptive methods. Descriptive research method represents a study that tries to find answers to who, what, where, and, questioning questions, which by using this research method the researcher tries to describe or study the subject, often by creating a profile of problems, people, or events (Cooper & Schindler, 2011). This type of research is quantitative research, namely research that discusses to quantify data and usually uses statistical analysis specifically used in this research is a cross-sectional where researchers conduct research or research variables carried out and research related to a particular ship-

3.3 Data Processing and Analysis Method

The method of data analysis in this study was carried out using a statistical approach, through a multivariate analysis method wherein the statistical method to test more than one dependent variable

<table>
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<tr>
<th>Variable</th>
<th>Definisi</th>
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<th>Instrument</th>
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<tbody>
<tr>
<td>Degree of co-creation</td>
<td>Refers to the extent to which companies rely on co-creation activities to develop products that focus on innovation (Hoyer et al., 2010).</td>
<td>DOC 1: In Jenius I can be actively involved in managing my financial transactions. DOC 2: In Jenius I used the experience of previous banking applications in managing my financial transactions. DOC 3: In Jenius the idea of managing my financial transactions, was proposed by myself. DOC 4: In Jenius I spend a lot of time managing my own financial transactions. (Grissemann &amp; Stokburger-Sauer, 2012) DOC 5: In Jenius I can give my opinion to contribute to improving services. (Cambra-Fierro, Pérez, &amp; Grott, 2017)</td>
<td>Likert Scale (1-7)</td>
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<td>Satisfaction with the company</td>
<td>Refers to the disconfirmation confirmation paradigm, which proposes that the results of customer satisfaction are a comparison of customer expectations with company performance (Oliver, 1976). SWC 1: I am satisfied with the customer service facilities available in the Jenius application. SWC 2: Overall, I am very satisfied with the facilities available in the Jenius application. SWC 3: The financial transaction facilities available in the Jenius application have met my expectations. (Grissemann &amp; Stokburger-Sauer, 2012)</td>
<td>Likert Scale (1-7)</td>
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<td>Loyalty</td>
<td>Customer loyalty is defined as a firmly held commitment to repurchasing or repeating a product or service that is consistently preferred in the future, regardless of situational influences and marketing efforts that have the potential to cause behavioral changes. (Oliver, 1999).</td>
<td>LOY 1: In the future I tend to use Jenius applications more often. LOY 2: I tend to do financial transactions through the Jenius application the next day, when I need it. LOY 3: I will recommend the Jenius application to my friends, relatives and relatives. LOY 4: I like to discuss about Jenius applications with other people. (Grissemann &amp; Stokburger-Sauer, 2012) LOY 5: I will encourage my friends, relatives and siblings to use the Jenius application. (Yang &amp; Peterson, 2004)</td>
<td>Likert Scale (1-7)</td>
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and more than one independent variable. Data analysis will be carried out using SPSS software (Statistical Package for Social Science), which tests on data include reliability and validity tests and classic assumption tests. While the hypothesis development testing process will be carried out by analyzing the data in order to find out the linear relationship between the variables in the research conducted using the Simple Linear Regression Analysis and Moderating Regression Analysis approaches.

The step taken is testing the validity and reliability of 30 respondents using IBM SPSS 24 and then testing the validity and reliability of 153 respondents using IBM SPSS 24. Then the classic assumption test is done. If you have tested the classical assumption, you can test the hypothesis to determine the significance of the causal relationship that exists in the overall model (Hair et al., 2010), and also test the moderating variable to see the influence of moderator variables where regression testing is done by comparing three regression equations to determine the type of moderator variable (Ghozali, 2016).

4. Analysis and Discussion

In this study, researchers obtained 215 respondents. Of the 215 respondents who filled out the online questionnaire, there were 153 respondents who were active Jenius customers or around 71.2% of respondents. With the majority of respondents are female. The majority of the respondents' last education is high school or equivalent. While for the respondent's work is dominated by students, with the majority of expenditure per month amounting to Rp. 1,000,000 - Rp.3,000,000. The majority of respondents reside in the Jakarta area. In addition, for the majority of the frequency of respondents using Jenius to transact in a month is 1 - 5 times a month.

The following hypothesis models are presented to further clarify the output regression model as follows:

4.1 The Effect of Degree of Co-Creation to Satisfaction with the Company

Based on the test output regression has been obtained results that the Degree of Co-Creation has a positive significant effect on Satisfaction with the Company, this is due to the value of Sig. 0.000 and the value of $\beta$ 0.886. This study successfully proved that the Degree of Co-Creation has a positive effect on the satisfaction of digital natives customers with Jenius digital bank companies in Jabodetabek.

This shows the satisfaction of digital natives customers in the digital bank company Jenius because it is influenced by the level of joint creation. This is supported by research conducted by...
states that the degree of shared creation has a positive influence on expenditures, where the fact is that co-creation allows customers to obtain products or services that suit their individual needs leads to the assumption that customers are willing to pay more for products or services created together. In addition, there is empirical evidence that customers have a higher willingness to pay for products designed by themselves than standard products (Piller, 2004; Schreier 2006; Grissemann & Stokburger-Sauer, 2012).

4.2 The Effect of Degree of Co-Creation to Loyalty

Based on the test output regression has been obtained results that the Degree of Co-Creation has a significant positive effect on Loyalty, it is due to the value of Sig. 0.000 and the value of $\beta$ 0.701. This study successfully proved that the Degree of Co-Creation has a positive effect on customer loyalty at Jenius digital banks in Jabodetabek.

This shows the loyalty of digital natives customers to Jenius digital banks because it is influenced by the level of joint creation. This is supported by research conducted by (Grissemann & Stokburger-Sauer, 2012) which states that the degree of shared creation has a positive influence on loyalty, where when customers are involved in co-creation activities, the customer's perception of the company reflects customer loyalty with the company services, so that when the customer has the opportunity to do joint creation, the customer tends to repurchase the same company and recommend the service company to others.

4.3 The Effect of Degree of Co-Creation to Expenditures

Based on the test output regression has been obtained results that the Degree of Co-Creation has a significant positive effect on Loyalty, it is due to the value of Sig. 0.049 and $\beta$ value 193105.702. This study successfully proved that the Degree of Co-Creation has a positive effect on customer expenditures on Jenius digital banks in Jabodetabek. This shows the digital natives customer expenditures on the digital bank Jenius because it is influenced by the level of co-creation.

This is supported by research conducted by (Grissemann & Stokburger-Sauer, 2012) which states that the degree of shared creation has a positive influence on expenditures, where the fact is that co-creation allows customers to obtain products or services that suit their individual needs leads to the assumption that customers are willing to pay more for products or services created together. In addition, there is empirical evidence that customers have a higher willingness to pay for products designed by themselves than standard products (Piller, 2004; Schreier 2006; Grissemann & Stokburger-Sauer, 2012).

4.4 The Effect of Satisfaction with the Co-Creation Performance which moderates the relationship between the Degree of Co-Creation and Expenditures

Based on the moderated regression analysis (MRA) test, the results of the interaction between the Degree of Co-Creation and Satisfaction with the Co-Creation Performance (DOC * SCP) are obtained with $\beta$ -34663.102 and Sig. 0.728. A variable can be expressed as a moderating variable if its moderate variable or interaction variable has a predetermined significance value (Liana, 2009). This assessment proves that Satisfaction with the Co-Creation Performance does not moderate the relationship between the Degree of Co-Creation and Expenditures because it has a Sig. (> 0.05). This result is similar to the results of previous studies conducted by (Grissemann & Stokburger-Sauer, 2012) which state that no significant moderating effect was found for the relationship between the level of joint creation and expenditures.

4.5 The Effect of Satisfaction with the Co-Creation Performance that moderates the relationship between the Degree of Co-Creation and Satisfaction with the Company

Based on the moderated regression analysis (MRA) test, the results of the interaction between the Degree of Co-Creation and Satisfaction with the Co-Creation Performance (DOC * SCP) are obtained with the values of $\beta$ -0.082 and Sig. 0.219. A variable can be expressed as a moderating varia-

![Figure 2. Regression Test Results](image-url)
izable if its moderate variable or interaction variable has a predetermined significance value (Liana, 2009). This assessment proves that Satisfaction with the Co-Creation Performance does not moderate the relationship between the Degree of Co-Creation and Satisfaction with the Company because it has a Sig. (> 0.05). This result is different from the results of previous research conducted by (Grissemann & Stokburger-Sauer, 2012) which states that Satisfaction with the Co-Creation Performance significantly changes the relationship between the Degree of Co-Creation and Satisfaction with the Company, where negative signs indicate that the increase in Co-Creation Performance will decrease Satisfaction with the Company, which is caused by customers who are very satisfied with their own Co-Creation Performance, so the effect of the Degree of Co-Creation on Satisfaction with the Company is not significant, because customers feel that company in co-creation activities, where customers feel there is injustice in the distribution of resources.

4.6 The Effect of Satisfaction with the Co-Creation Performance that moderates the relationship between the Degree of Co-Creation and Loyalty

Based on the moderated regression analysis (MRA) test, the results of the interaction between the Degree of Co-Creation and Satisfaction with the Co-Creation Performance (DOC * SCP) are obtained with the values of β -0.030 and Sig. 0.591. A variable can be expressed as a moderating variable if its moderate variable or interaction variable has a predetermined significance value (Liana, 2009). This assessment proves that Satisfaction with the Co-Creation Performance does not moderate the relationship between Degree of Co-Creation and Loyalty because it has a Sig. (> 0.05). This result is different from the results of previous research conducted by (Grissemann & Stokburger-Sauer, 2012) which states that Satisfaction with the Co-Creation Performance significantly changes the relationship between Degree of Co-Creation and Loyalty, where the negative sign indicates that the Co-Creation Creation Performance then Loyalty will decrease, due to customers who are very satisfied with their own Co-Creation Performance, so the effect of the Degree of Co-Creation on Loyalty is not significant, because customers feel that the involvement of the company is low in co-creation activities, where customers feeling an injustice in the distribution of resources.

5. Conclusions and Recommendations

Based on the results of the analysis described, this study shows 3 hypotheses that have a significant effect and 3 hypotheses that have no significant effect. In testing the hypothesis, it can be concluded that: 1) Variable Degree of Co-Creation has a significant positive effect on Satisfaction with the Company. 2) Variable Degree of Co-Creation has a significant positive effect on Loyalty. 3) Variable Degree of Co-Creation has a significant positive effect on Expenditures. 4) Variable Satisfaction with the Co-Creation Performance does not moderate the positive significant effect of the relationship between Degree of Co-Creation and Expenditures. 5) Variable Satisfaction with the Co-Creation Performance does not moderate the negative significant influence of the relationship between the Degree of Co-Creation and Satisfaction with the Company. 6) Variable Satisfaction with the Co-Creation Performance does not moderate the negative significant influence of the relationship between the Degree of Co-Creation and Loyalty.

Some suggestions that can be given to the digital bank of Jenius BTPN bank are as follows: 1) because it is proven that digital natives customers are satisfied with the digital bank Jenius BTPN because of the level of co-creation, so digital banks Jenius BTPN need to improve the performance of their co-creation multiply activities involving customers, and publish them in a unique and creative way, publish through social media, web, and Jenius applications by raising notifications in the application if there are co-creation activities that will be held by BTPN's Jenius bank. 2) Improve good relations with customers by maintaining Jenius customers by providing attractive offers by contacting customers directly and sending attractive promos to Jenius applications owned by selected customers who often make transactions using Jenius and customers who often deposit funds in Jenius. Because it is proven that Jenius customer loyalty is influenced by the level of co-creation. 3) Add new financial transaction features needed by Jenius customers and update available financial transaction features based on the results of co-creation activities.

In addition to the Jenius BTPN bank as for advice that can be given to future researchers, it is recommended to re-examine this research on different objects, which are suggested to test on non-service company objects such as trading companies that produce and sell products such as fashion products, shoes, bags, cosmetics) which the company involves customers in its production activities or it can be said that the company is carrying out co-creation activities in its production process. Based on this, it is expected that future research on customer co-creation can measure and analyze empirical studies by producing better and more useful research results.

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