Importance-Performance (IPMA) Analysis of Loyalty in Indonesia Cellular Operator During COVID-19 Pandemic

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Abstract. *During the pandemic of Covid-19, customer loyalty becomes the crucial thing that needs to be concerned by cellular operators due to the internet usage is growing rapidly in the activities of work from home and study from home. In dealing with this, the company can find out from the user response regarding to their experience, satisfaction, switching barriers, and corporate image. User experience consists of functionality, social, monetary, trustworthiness, and perceived service quality. This research was conducted to 385 respondents of Indonesian cellular operators that was spread by internet survey. expert opinion was conducted before distributing questionnaires as many as 75 items with quota sampling technique. Based on Importance and Performance Matrix Analysis (IPMA) results, it was found that companies must concentrate first on trustworthiness, satisfaction, and corporate image. Then pay attention to monetary, switching barriers, and social. Variables that were considered low priority are functionality and perceived service quality, this is because the company's performance was very high compared to the level of importance of the user.*

Keywords: *Corporate image, COVID-19, IPMA, loyalty, user experience*

Abstrak. *Saat pandemi Covid-19, loyalitas pelanggan menjadi hal krusial yang perlu diperhatikan oleh operator seluler karena penggunaan internet berkembang pesat dalam aktivitas bekerja dari rumah dan belajar dari rumah. Dalam menghadapi hal ini, perusahaan dapat mengetahui dari tanggapan pengguna mengenai pengalaman, kepuasan, peralihan hambatan, dan citra perusahaan mereka. Pengalaman pengguna terdiri dari fungsionalitas, sosial, moneter, kepercayaan, dan kualitas layanan yang dirasakan. Penelitian ini dilakukan terhadap 385 responden operator seluler Indonesia yang disebarkan melalui survei internet. Pendapat ahli dilakukan sebelum menyebarkan kuesioner sebanyak 75 item dengan teknik quota sampling. Berdasarkan hasil Importance and Performance Matrix Analysis (IPMA), ditemukan bahwa perusahaan harus berkonsentrasi terlebih dahulu pada kepercayaan, kepuasan, dan citra perusahaan. Kemudian perhatikan moneter, peralihan hambatan, dan sosial. Variabel yang dianggap prioritas rendah adalah fungsionalitas dan persepsi kualitas layanan, hal ini dikarenakan kinerja perusahaan sangat tinggi dibandingkan dengan tingkat kepentingan pengguna.*

Kata Kunci: *Citra perusahaan, COVID-19, loyalitas, pengalaman pengguna*

Introduction

The phenomenon of industrial development in Indonesia has grown rapidly and has led to competition among companies aimed at gaining a bigger market share and profits by penetrating markets to attract new customers and developing the ability to maintain customer loyalty. Building customer loyalty is one of the most important tasks for telecom companies operating in a market that is gradually becoming saturated (Hwang & Kim, 2018). In addition, competition leads to customers becoming more critical in terms of the products and services they use, thereby further encouraging companies to retain their existing customers (Hermawati, 2013).

Practitioners and academicians believe that loyalty is the most important factor in maintaining the existence of a company. The ability to retain existing users and strengthen loyalty appears to be critical in gaining competitive advantage (Lopez-Miguens & Vazquez, 2017). In recent years, academic research has supported factors that are able to increase and maintain loyalty. Oliver (1999) described that if a company can satisfy the needs of its customers better than its competitors, it will be easier for that company to create customer loyalty.

Recently, the world is facing a pandemic of COVID-19 including Indonesia. Covid-19 has caused an economic shock, which affects the economy individually, households, micro, small, medium and large companies, and even affects the country's economy with coverage scales from local, national and even global (McKibbin & Fernando, 2020).

As stated by Taufik & Ayuningtyas (2020), it has been found that the impact of the Covid-19 pandemic, was clustered in 3 states of business activity, as follows: The First was the sustained/stable business (namely business through adapting interaction models using online application platforms are education and delivery service company). The second was the declined business (namely business based on visits or the presence of consumers in places

heavily affected by the Covid-19 pandemic, such as public transportation, tourism, hospitality, offline retail, shopping centers, transportation of people and goods). The third was growing business (namely businesses that develop due to market dynamics and adaptation of interactions using online application platforms such as telecommunications, online shopping, pharmaceuticals, and health products).

Nowadays, Information and Communications Technology (ICT) is a tool that cannot be separated from public life and has become one of the essential elements to support daily activities, such as the ability to communicate without the limitations of distance and time, being able to obtain the latest information and working to support business activities (Rayana, 2015). Therefore, data service and Internet access are widely chosen for use by customers. In the era of globalisation, advances in ICT have changed the way people look at both the environment around them and the wider world; it raises the intensity of competition through the use of more advanced ICT (Rachmawati & Mohaidin, 2017).

In the mobile telecommunications industry, there are five basic parameters that serve as references. These are coverage, network quality, service quality, value-added services, and price (Nurfarhana, 2012; Oodan et al., 2009). Cellular operators need to pay attention to the bandwidth used by customers since the greater the bandwidth, the better the quality of the network. The elements contained in Telecommunications industry are divided into the following four elements, namely: First, Network (Broadband Network Generation, such as: 4G LTE, 3GS, 3G, 2G, Edge); Second, Services (for example: Data Package, SMS, Telephony/Voice call); Third, Applications (for instance: Instant messaging including Whats app, Instagram, Telegram, Line, etc; Productivity including Qur'an, Bible, Adobe acrobat, Faster scan, Microsoft office, Mobile banking, Online shopping, etc; Content including Maps, Social media, Web browser, Internet search engine, etc); Fourth, Devices

(including iPad/Tablet, Mobile phone, Laptop, etc). As stated by Kemkominfo (1999), Cellular operators fall into the category of network and services.

During the pandemic of COVID-19, Indonesia government issue the regulation regarding of work from home and study from home, hence the demand for internet using is getting higher (Untari, 2020). During this condiiton, cellular operators become the fastest-growing companies in Indonesia telecommunications sector. (Fauzan, 2020). This points to a growing demand for telecommunications technology in terms of both quality and quantity, which is leading to competition in the telecommunications industry becoming more stringent (Riadi, 2020).

Utami (2020) found that there were several negative impacts on cellular operators due to COVID-19 pandemic, including the company's stock has decreased, the allocation of investment to meet the needs of user traffic, coverage and bandwidth capacity significantly increased, average revenue per user (ARPU) has tended to fall along with the churn rate is getting higher. Average Revenue Per User (ARPU) is the measurement used primarily by customer communications and networking companies and is defined as the total revenue divided by the number of subscribers (Arofianto & Krisnadi, 2015). For a cellular operator, ARPU includes not only the revenues billed to the customer each month per usage, but also the revenue generated from incoming calls which are payable within the regulatory interconnection regime (Rouse, 2007).

A phenomenon seen among Indonesia cellular operators is increasing customer numbers at the same time as decreasing ARPU. This reflects the tight competition among mobile carriers and the fact that customers have freedom of choice among a number of different operators due to low switching barriers (IndoTelko, 2015). Another reason is the effect of market expansion (namely in the stage of market penetration, a provider can reach first-priority customers who have a high intention to use the service and are willing to pay a premium price). In contrast, there will also be different characteristics in the stage of market expansion, in which the aim is to capture non-first-priority users who do not have a high intention to use the service and wish to pay a lower price. On the other hand, ARPU may be increased by prioritising the corporate image from the users' perspective (Arofianto & Krisnadi, 2015).

In facing the competition between Indonesia cellular operators, in a market with more mobile cellular users but also declining customer growth and ARPU, a company can obtain competitive advantage and retain customer loyalty by observing the users' experience and satisfaction for the products/services provided by their current cellular operator and then enhancing their own positive corporate image in the minds of customers, to gain a higher level of loyalty. The user experience is critical in service businesses as it constitutes not only a means by which to create satisfaction, it can also become a source of competitive advantage and affect a customer's barriers to switching, which consequently has the effect of increasing customer loyalty (Fitzsimmons & Fitzsimmons, 2011). The occurrence of users dissatisfaction because they felt a discrepancy between the performance and importance of the product or service, thus encouraging them to respond through attitudes, both positive and negative attitudes towards the operators (Rachmawati & Mohaidin, 2019).

In accordance with Han and Hyun (2012), customer loyalty can be enhanced when customer had good experience, felt satisfy, and faced there would be too many barriers to switch from their current provider. Besides, company need to maintain service quality and enhance corporate image in customer mind, hence customer would be reluctant to switch to another provider or customer retention would be achieved (Elpita, 2018).

Competition in the telecommunications industry has become increasingly fierce as the number of cellular operators has increased. This competitive landscape has led to companies adopting a variety of means to attract customers by providing a different experience, due to the fact that the user experience affects customer loyalty (Kotler & Keller, 2016). The better the experience that is perceived by the users, which is strengthened by the corporate image, the greater the level of satisfaction and switching barriers that will be created, in turn impacting on the rising value of loyalty (Kotler & Armstrong, 2016; Solomon et al., 2018).

Customer loyalty is found in the conative and action phases, which are preceded by the cognitive and affective phases (Dick & Basu, 1994; Fishbein & Ajzen, 1975; Oliver, 1999; Schiffman & Kanuk, 2004). The cognitive phase is formed through the user experience and corporate image. This is followed by the affective phase, which is formed by satisfaction and switching barriers (Blut et al., 2014; Calvo-Porral & Levy-Mangin, 2015; Chang & Chen, 2008, 2009; Deng et al., 2010; Kim et al., 2014; Venkat, 2007).

Based on the prior research, it can be concluded that user experience is often defined as the achievement of a product or service in terms of being considered a success or failure by its users, prior to them forming an emotion of like/dislike or satisfied/dissatisfied, so that the users will have the intention and action to be loyal. Therefore, the better the perceived user experience, the higher the level of loyalty. In addition, Prior literatures affirmed that user experience is the antecedent of customer satisfaction and switching barriers that tend to build customer loyalty.

User experience dimensions included in this study, namely functionality, social, monetary, trustworthiness, and perceived service quality that supported by Oodan et al. (2009), Cerejo (2012), and 32 previous authors as seen in Table 1.

Table 1.
The Taxonomy of User Experience Dimensions

No.	Researcher	Functionality	Social	Monetary	Trustworthiness	Perceived Service Quality
1.	Sheth et al. (1991)	v	v			
2.	Cronin and Taylor (1992)					v
3.	Woodruff (1997)	v	v	v		
4.	Soteriou and Chase (1998)					v
5.	Cronin et al. (2000)					v
6.	Gerpott et al. (2001)			v		v
7.	Lee and Turban (2001)				v	
8.	Sweeney and Soutar (2001)	v	v	v		
9.	McKnight and Chervany (2002)				v	
10.	Gefen et al. (2003)				v	
11.	Kim et al. (2004)			v		
12.	Kassim and Abdullah (2008)				v	v

Table 1. *(Continued)*
The Taxonomy of User Experience Dimensions

No.	Researcher	Functionality	Social	Monetary	Trustworthiness	Perceived Service Quality
13.	Deng et al. (2010)	v	v	v	v	v
14.	Tseng and Lo (2011)			v		
15.	Amin et al. (2012)					v
16.	Andrews et al. (2012)	v	v			
17.	Adeleke and Aminu (2012)			v		v
18.	Tarus and Rabach (2013)		v			v
19.	Floh et al. (2014)	v	v	v		
20.	Mishra et al. (2014)	v	v			
21.	Giovanis et al. (2014)	v				
22.	Calvo-Poral and Levy-Mangin (2015)					v
23.	Rahhal (2015)	v				v
24.	Ayodele and Esiti (2016)				v	
25.	Kao and Lin (2016)	v				
26.	Kim et al. (2016)	v				
27.	Al-Hashedi and Abkar (2017)	v				v
28.	Mumuni et al. (2017)					v
29.	Selelo and Lekobane (2017)					v
30.	Baba (2018)					v
31.	Meesala and Paul (2018)					v
32.	Solimun et al. (2018)					v
	Total	**12**	**8**	**8**	**6**	**17**

Source: Data Processed (2020)

The basic parameters from Oodan et al. (2009) were used in this study, the first of which is coverage and network quality that is measured in the dimension of functionality due to the fact that quality of coverage area and network are a reflection of the function quality of a service provider (Deng et al., 2010; Giovanis et al., 2014; Kim et al., 2016). The second is service quality and value added service that are measured in the dimension of perceived service quality since this reflects customers' overall impression of the relative efficiency of the service provider (Amin et al., 2012; Gijon et al., 2013), while value added service is also included in the dimension of Trustworthiness (Deng et al., 2010; Mumuni et al., 2017).

The third is price, as measured in the dimension of Monetary and which consists of a comparison between the price that the customer has already paid and the benefits they receive (Gerpott et al., 2001; Kim et al., 2016). This study is also supported by the dimensions of Cerejo (2012), such as functionality, social and trustworthiness. Functionality (Dimension 1) - refers to the practical or technical benefits that users can obtain when using the operator (Andrews et al., 2012; Deng et al., 2010; Kim et al., 2016). Social (Dimension 2) – defined as the benefits that a user can feel when they are connected to other users in their community (Woodruff, 1997; Mishra et al., 2014).

Monetary (Dimension 3) – the monetary amount that one has to pay to use the service provider that including the comparison price to the competitor, offers value for money, fairly priced, and justifies the costs (Floh et al., 2014; Gerpott et al., 2001; Tseng & Lo, 2011). Trustworthiness (Dimension 4) – viewed as trusting belief and trusting intention. Trusting belief refers to the user's perception of the service operator's attributes while trusting intention describes the user's willingness or intention to depend on the trustee (Ayodele & Esiti, 2016; Deng et al., 2010; Gefen et al., 2003; Lee & Turban, 2001; McKnight & Chervany, 2002). Perceived service quality (Dimension 5) – referred to as cognitive and thus followed by satisfaction (Oliver, 1999); therefore, providing a high level of service quality is very important for service operators to gain a competitive advantage (Kassim & Abdullah, 2008; Meesala & Paul, 2018; Mumuni et al., 2017; Sheth et al., 1991; Shin & Kim, 2008; Yoo & Park, 2007).

Satisfaction refers to the phase of affective evaluation in purchasing and using a product or service (Edvardsson et al., 2000; Eshghi et al., 2007; Johnson & Fornell, 1991; Kim et al., 2016). Users feel satisfied when their needs and wants are met. Consequently, they will continue to reuse the product or service (Oliver, 1999). If a user feels satisfied, it could be the result of an emotional response based on their experience of the purchase and use of the product/service, or it could be based on a cognitive evaluation between the level of expectation and the actual experience (Babin & Griffin, 1998; Kim et al., 2016; Mumuni et al., 2017; Oliver, 1999). It can be concluded that satisfaction indicates customers' overall evaluation of a company and is developed by a comparison between perception and expectation.

Previous researchers used switching costs as the element to measure switching barriers and several researchers have also added lack of alternative attractiveness when measuring switching barriers (Deng et al., 2010; Kim et al., 2016). It has been confirmed that switching barriers able to mediate the influence of user experience towards loyalty, which means that people who face there are too many barriers to switch to another operator hence they will become loyal. According to the explanations from previous authors, it can be concluded that the good relationship between service quality and switching barriers need to be developed by the service providers since it is able to decrease the probability of customer defection and increase loyalty. Even though customers may not be fully satisfied, they will be less inclined to switch to another service provider if there is a lot of alternatives attractiveness or superior competition in the marketplace. In this study, the switching barriers are considered as mediator on the relationship between user experience and loyalty. There are two indicators to measure switching barriers including lack of alternative attractiveness and switching costs.

Corporate image is thus a crucial factor in customers' overall service evaluation. The corporate image is the perception of an organisation held in customers' memory that works as a type of filter influencing the perception of how the company operates (Gronross, 1988; Keller, 2012; Taylor et al., 2004). According to Gerpott et al. (2001); Lukiarti (2014), users' willingness to continue a contractual relationship with a mobile service (such as cellular operator) company is strongly affected by the extent to which they have a positive image. Based on the previous research, it can be concluded that corporate image may be considered as an element of brand image in which the brand name refers to the organisation as a whole rather than to its products/services. As such, corporate image is a crucial driver of satisfaction and switching barriers, along with loyalty. Corporate image is a combination of customers' perception and their perspectives of a corporation; when they think of a company, everything that then comes to mind is part of the corporate image.

The contributions of this study for cellular operators During COVID-19 Pandemic, include the following. Firstly, the suggestion to pay attention to customer loyalty based on user experience, satisfaction, switching barriers, and corporate image in order that the company can gain a competitive advantage, attain a higher profit, increase market share, and reduce customer churn. Secondly, the advice that operators need to understand that the phenomenon of increasing customer churn and declining loyalty can be improved by conducting a survey to elicit customers' needs. Thirdly, the provision of information to the operator that satisfaction is a factor necessary for improving customer loyalty. As such, customer satisfaction is established via the user experience; when the customer's perception derived from using a product or service exceeds their expectations, they will be satisfied.

Fourthly, it is recommended that operators enhance their corporate image and consider switching barriers in order to increase the loyalty of their customers. Finally, The contribution also to standardise and enhance the indicators of service excellence for cellular operators based on user needs, user wants, and the quality of the operating providers in terms of their network and service. Aside from this, users need to consider the functionality, social, monetary, perceived service quality, and trustworthiness of operators with regard to fulfilling their needs and wants. In addition, a user needs to consider the corporate image and switching barriers prior to forming an intention to switch to another operator. In order to make a generalisation in managerial contributions, hence can be analysed based on Importance and Performance Matrix Analysis (IPMA).

Research Methodology

Type of this study is suitable for basic research as opposed to applied research. Basic research is conducted with the intention to expand the limits of knowledge and not to become directly involved in finding a solution to a pragmatic problem. It seeks to deliver findings of significance and value to society in general (Churchill, 1987; Zikmund et al., 2009). On the other hand, applied research aims to improve the understanding of a particular business or management problem and results in a solution to the problem, new knowledge limited to the problem and findings of practical relevance and value to a manager in the organisation (Churchill, 1987; Zikmund et al., 2009).

Furthermore, from the viewpoint of the building blocks method in research, this study was considered to be deductive rather than inductive. The characteristics of a deductive study are that it begins with a theoretical framework prior to formulating a hypothesis and then logically deducing a result in what is known as the hypothetico-deductive method. Deductive reasoning works from the more general to the more specific, sometimes referred to informally as a top-down approach, and resembles quantitative study (Indrawati, 2015; Sekaran, 2003; Zikmund et al., 2009). Consequently, quantitative study was the method of this study. In contrast, with an inductive method that is closer to qualitative study, the reasoning works the other way round, moving from a specific observation to broader generalisations and theories. This method is known as a bottom-up approach.

Additionally, from the viewpoint of the research purpose, descriptive research was the types of this study. The aim of descriptive research is to explain the characteristics of a population or phenomenon and provide clear evidence statistically, with no hypothesis testing (Malhotra, 2004; Zikmund et al., 2009). Based on the study of obtaining data in a time horizon, it is divided into Cross sectional (one shot) and Longitudinal (Indrawati, 2015; Sekaran & Bougie, 2016). Cross sectional study is the most frequently used descriptive design in marketing research; it is a type of research design involving the collection of information from any given sample of population elements only once (Malhotra, 2004).

Unit of analysis in this study was the individual since it focuses on the behaviour of users when using a cellular operator, there were 385 respondents that responsed to the 75 questionnaire items with numerical scale via google forms. The sampling technique used in thi study was quota sampling during COVID-19 Pandemic.

In this study, there were four cellular operators divided into 46.4% Telkomsel, 23.72% Indosat Ooredoo, 16.28% Hutchison Three, and 13.6% XL Axiata, and if the total 385 respondents, then the quota sample were as follows: 179 Telkomsel users, 91 Indosat Ooredoo users, 63 Hutchison Three users, and 52 XL Axiata users. There was no age border among mobile phone users because cellular operators offer two types of SIM card (namely post-paid and pre-paid cards). Users in the age range 10–25 years mostly use pre-paid card while users over the age of 25 years tend to mostly use post-paid card. There was no gender barrier between men and women since they all use a mobile phone as part of their daily activities.

There was no geographic border and there was no distinction by ethnicity, religion or race in Indonesia since most Indonesian people nowadays use a cellular phone. There were 75 questionnaire items which were adapted from several previous studies that has the same research topic specifically in service industry as seen in Table 2 on Appendix. Functionality contained 13 items, social contained five items, monetary contained eight items, trustworthiness contained seven items, perceived service quality contained seven items, satisfaction contained nine items, switching barriers contained ten items, corporate image contained seven items, and loyalty contained nine items. In this study, expert opinion was conducted during two weeks in January 2020. Five experts were chosen based on their expertise as lecturers in the telecommunications field and as practitioners in the telecommunications industry.

Table 2.
Measurements of The Constructs

Construct	Source of Items	Number of Items
User Experience:		
Functionality	Adapted from Deng et al. (2010); Mishra et al. (2014); Kim et al. (2016).	13
Social	Adapted from Deng et al. (2010); Mishra et al. (2014).	5
Monetary	Adapted from Deng et al. (2010); Calvo -Poral and Levy -Mangin (2015); Kim et al. (2016).	8
Trustworthiness	Adapted from Chang and Chen (2009); Deng et al. (2010); Mishra et al. (2014).	7
Perceived service quality	Adapted from Deng et al. (2010); Mishra et al. (2014).	7
Satisfaction	Adapted from Chang and Chen (2009); Deng et al. (2010); Blut et al. (2014); Calvo -Poral and Levy -Mangin (2015); Kim et al. (2016).	9
Switching barriers	Adapted from Chang and Chen (2009); Deng et al. (2010); Han and Hyun (2012); Calvo -Poral and Levy -Mangin (2015).	10
Corporate Image	Adapted from Nguyen and Leblanc (2001); Calvo -Poral and Levy -Mangin (2015); Kim et al. (2016).	7
Loyalty	Adapted from Chang and Chen (2009); Deng et al. (2010); Blut et al. (2014); Calvo -Poral and Levy -Mangin (2015).	9
Total Numbers		75

Source: Self-Researcher (2020)

Table 3.
Expert Opinion

	Feedback		Action Taken
1	Suggested to improve grammar in cover letter and concern on the respondent profile lists.	1	Grammar has been fixed and discuss with supervisor for reaching the proper respondent profile lists.
2	Suggested to ask the subscriber status in post-paid or pre-paid.	2	The respondent profile list adjusted with the expert advice.
3	Suggested not to ask respondent name on screening question to keep anonymity.	3	The respondent profile list adjusted with the expert advice.
4	Suggested to ask user's current operator based on their residence to represent geographic in the respondent profile list.	4	The respondent profile list adjusted with the expert advice.
5	Improvement in grammar and statement in questionnaire items.	5	Grammar and statement in questionnaire items have been fixed.

Source: Data Processed (2020)

As seen on Table 3, it can be seen that the experts provided suggestions with regard to the earlier questionnaire design and the suggestions included to improve grammar, make a clear statement in the questionnaire items and concern with regard to the respondent profile lists. All of these feedback points were fixed and adjusted in line with the expert advice. The experts were also requested to check on the questionnaire items in terms of relevance, arrangement, consistency, precision, and clarity to ensure the respondent could understand and respond accurately. Importance and Performance Matrix Analysis (IPMA) is beneficial to extend Smart PLS outcomes or findings through the use of the scored of latent variable (Ramayah et al., 2018).

IPMA is distinct from the total effects (importance) of structural model and the mean scores (performance) of the latent variables of a given endogenous construct to pinpoint the important aspects for the particular concentration of the research conceptual framework. In addition, IPMA is invaluable in facilitating further description and justification of the outcomes for managerial implications (Hair et al., 2017, 2018; Ramayah et al., 2018). Hence, if the plotting outcome reveals high significance importance and low performance, it will enable manager and marketer identify major areas of improvement. For comparative analysis, the values need to be rescaled to 1-100, where 0 is the lowest and 100 is the highest.
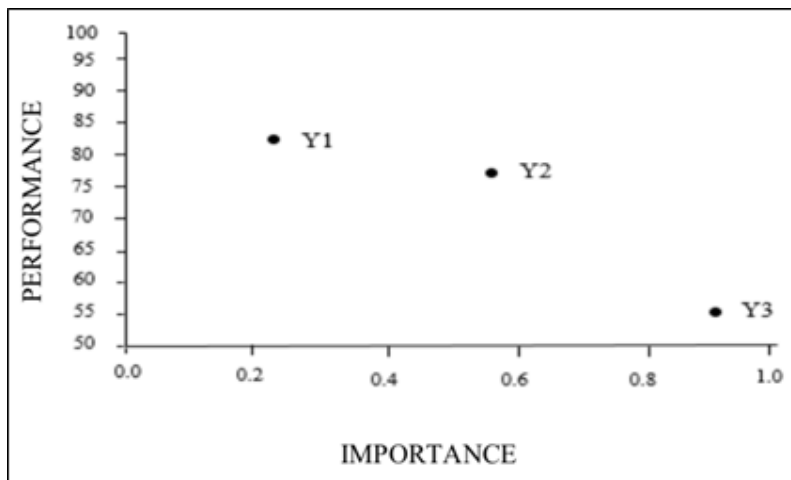

Figure 1.
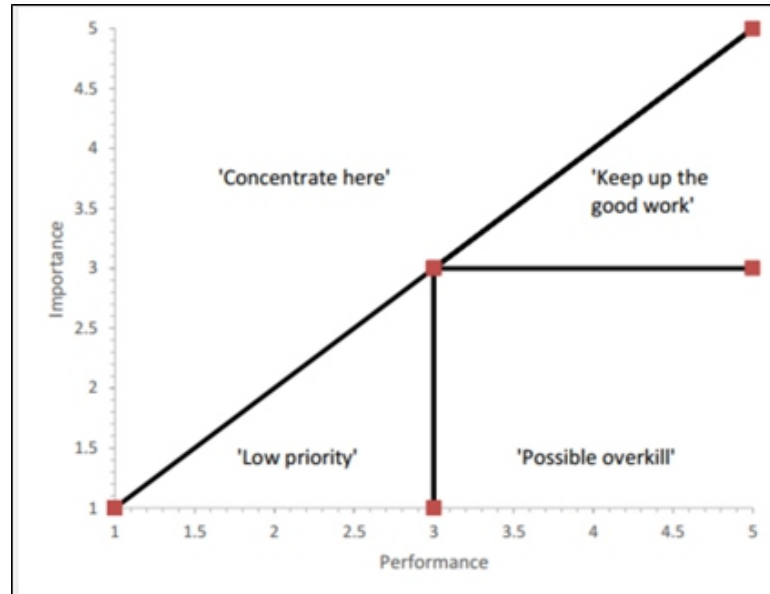Importance Performance Matrix Analysis in Smart PLS
Source: Hair et al. (2017)

Figure 2.
Importance Performance Matrix Analysis
Source: Ramayah et al. (2018)

As can be seen in Figure 1, constructs in the lower right area of the importance-performance map have a high importance for the target construct but show a low performance. So that, there is a particularly high potential for improving the performance of the constructs positioned in this area. Meanwhile, constructs with lower importance, relative to the other constructs in the importance-performance map, have a lower priority for performance improvements. For example, Y_3 is particularly important for explaining the target construct Y_4. At the same time, the performance of Y_3 is relatively low, so that there is substantial room for improvement. Consequently, in the PLS path model example, construct Y_3 is the most relevant for managerial actions. Conversely, the importance of Y_1 is low, hence it will possibly overkill in business. Additionally, the performance and importance of Y_2 is in the criterion of low priority when bringing impact to Y_4 (Hair et al., 2017).

As can be seen in Figure 2, IPMA consists of four quadrants. Quadrant I is 'keep up the good work' (contains high performance and high importance), this quadrant represents the opportunity to get or maintain a higher level of the construct.

Quadrant II is 'concentrate here' (contains high importance and low performance), which means the key element for improvement, because this construct is considered most important by the respondent. Quadrant III is 'low priority' (contains low importance and low performance), so that this variable does not need special attention or additional attention. Quadrant IV is 'possible overkill' (contains low importance and high performance), therefore, it is agreed to move resources to another place (Ramayah et al., 2018).

Results and Discussion

This study used the set of data (n=385) of GSM-based cellular operators users to demonstrate IPMA. The data comprise functionality (item 1-13), social (item 14-18), monetary (item 19-26), trustworthiness (item 27-33), perceived service quality (item 34-40), satisfaction (item 41-49), switching barriers (item 50-59), corporate image (item 60-66), and loyalty (item 67-75). Loyalty is the main construct in this study as it seeks to determine the responses of other variables to it using the importance and performance matrix.

Table 4.
Results of Importance-Performance Matrix Analysis (IPMA)

Construct	Importance (Total Effect)	Performance (Index Value)
Functionality	0.028	67.856
Social	0.018	58.377
Monetary	0.166	52.849
Trustworthiness	0.198	61.161
Perceived Service Quality	0.025	64.022
Satisfaction	0.490	66.282
Switching Barriers	0.121	55.875
Corporate Image	0.526	66.808

Source: Data Processed (2020)
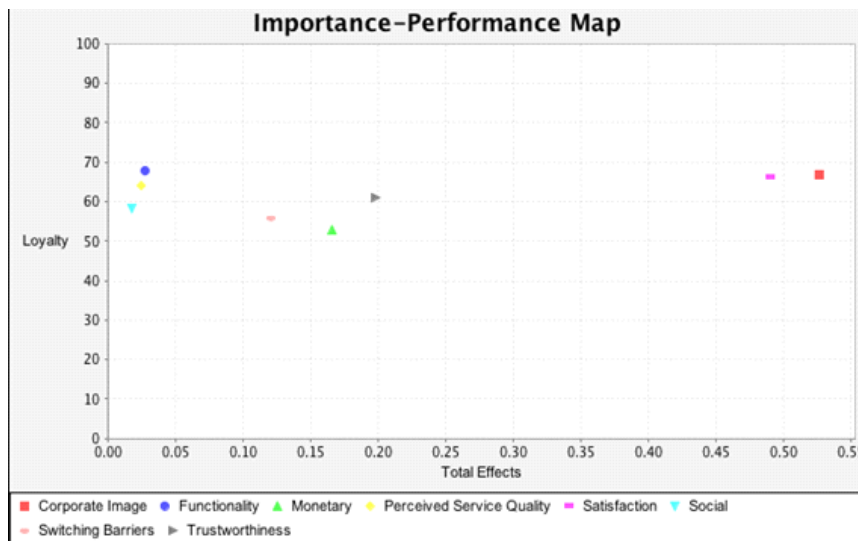
Figure 3.
Total Effects (Importance) and Loyalty (Performance)
Source: Data Processed (2020)

The assessment of IPMA indicated the influence of latent constructs which have high and low performance on latent variable of loyalty. The results of IPMA are displayed in Table 4, whereas Figure 3 portrays the results of IPMA for the key focus construct. As seen in Figure 3, The IPMA of loyalty reveals that the constructs functionality and perceived service quality had high performance but these were not the important variables in the prediction of loyalty. Hence, cellular operators should not focus on functionality and perceived service quality as these will possibly overkill in business when bringing impact to loyalty.

The three constructs that more important were corporate image, satisfaction, and trustworthiness. So that, it is essential for cellular operators to focus on these issues in order to importance user service. Moreover, the two other variables namely monetary and switching barriers had high importance and low performance. Thus, cellular operators should also focus on monetary and switching barriers. Conversely, cellular operators should not focus on social as it had low priority when bringing impact to loyalty.
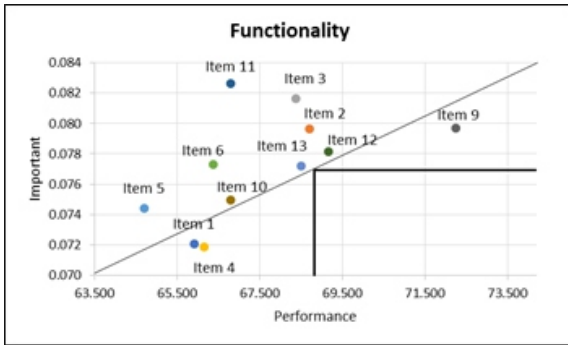
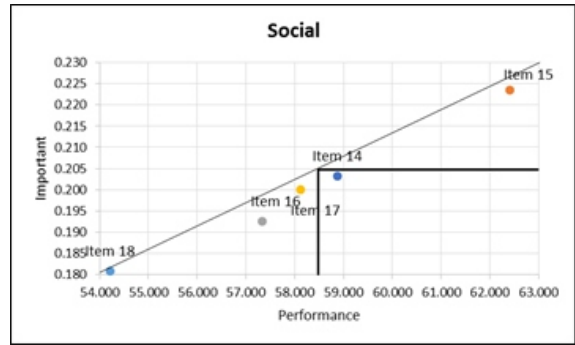*Figure 4.* IPMA-Functionality
Source: Data Processed (2020)

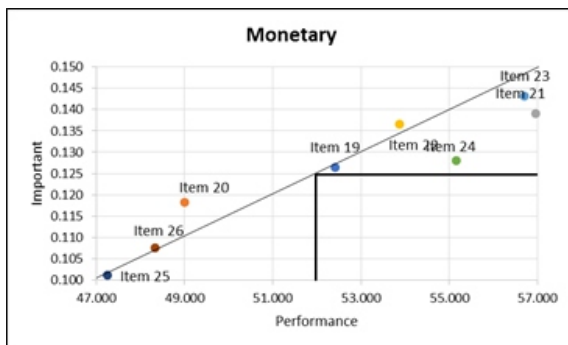*Figure 5.* IPMA-Social
Source: Data Processed (2020)

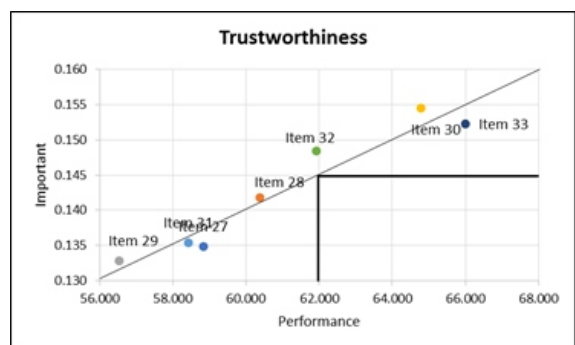*Figure 6.* IPMA-Monetary
Source: Data Processed (2020)

Figure 7. IPMA-Trustworthiness
Source: Data Processed (2020)

Figure 8. IPMA-Perceived Service Quality
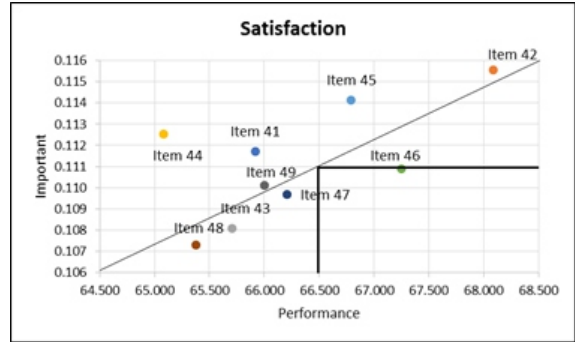*Source: Data Processed (2020)*

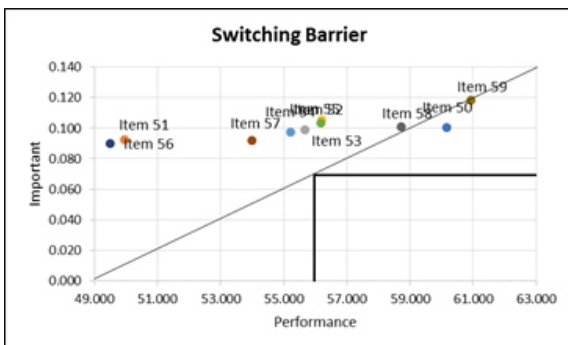*Figure 9.* IPMA-Satisfaction
Source: Data Processed (2020)

Figure 10. IPMA-Switching Barriers
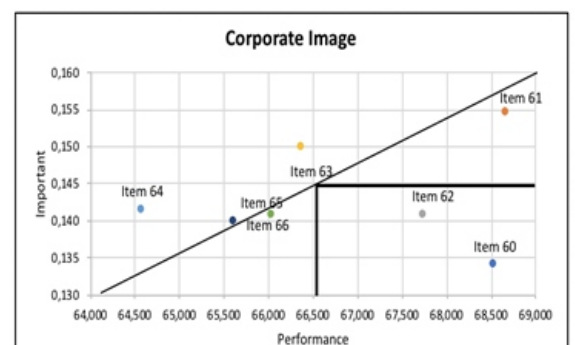*Source: Data Processed (2020)*

Figure 11. IPMA-Corporate Image
Source: Data Processed (2020)

Furthermore, Figure 4 up to Figure 11 show IPMA results for each study variables that consist of four matrix, such as: matrix "concentrate here" used to give suggestion for managerial contribution since it described high importance but low performance; matrix "keep up the good work" used to give suggestion for community contribution since it described high importance and high performance; matrix "low priority" described low importance and low performance; matrix "possibly overkill" described high performance but low importance.

According to IPMA results of each construct that can be seen in Figure 4 up to Figure 11. There were several things that can be highlighted, amongst are: (i) Functionality; namely users must find that their cellular operator well integrated, fulfils their needs, and has a good function. (ii) Social; including cellular operator enhances their social status. (iii) Monetary; specifically the tariffs of the cellular operator are economical and the credit price for Voice Call and SMS of the cellular operator is cheap. (iv) Trustworthiness; namely cellular operator is a secure service provider through which to send personal information, cellular operator cares about its users and not opportunist. (v) Perceived Service Quality; including cellular operator offers a number of additional services, cellular operator is innovative and provides a very good service. (vi) Satisfaction; specifically the service of my cellular operator meets my expectation, choosing this cellular operator is a wise decision of them and service of cellular operator fits their needs. (vii) Switching Barriers; meaning that if they change cellular operator, it will cause a lot of trouble and would take a lot of money to change to other cellular operators. (viii) Corporate Image; including they have always had a good impression of cellular operator and agreed that cellular operator is forward looking.

Based on IPMA of loyalty (namely concentrate here matrix) as seen in Figure 3 and Table 4, the discussions are as follows: Firstly, The factors with a significant impact of trustworthiness on loyalty appeared to cellular operator must be trustworthy, serve customer to feel secure when send personal information, operator should be care on customer through honestly and not opportunistic. Secondly, it is very important to increase their satisfaction by make sure users feel that subscribing to their cellular operator is the right decision, the service of cellular operator fits their needs, The service of cellular operator meets their expectation, and choosing their cellular operator is a wise decision. Thirdly, The cellular operator should focus on users' perception of corporate image, for instances: the cellular operator is forward looking, ensure them to had a good impression of the cellular operator and the products that are provided of the cellular operator have a good image in the minds of users. Fourthly, since Indonesian users were price-sensitivity, hence the cellular operator needs to be focus on the current price level, tariffs of cellular operator are affordable, and tariffs of cellular operator are economical for SMS, voice call, data service, and internet access.

Fifthly, users concern on switching barriers and keep loyal to the current operator based on the benefit they get, for examples: cellular operators should explain several information sources before they selected cellular operator, make sure that if they change cellular operator hence it will take a lot of time to learn, it would be a hassle changing from their cellular operator to the others, and it would take a lot of effort to change the cellular Operators. Sixthly, users want to be accepted in the community because they are social creature, hence cellular operator must continuously maintain user social community, namely gives them a sense of belongings to other users, makes them feel acceptable in their group, and enhance their social status. Seventhly, the cellular operators ought to provide high service quality, offers a number of additional services, reliable in complaint handling, delivers a very good service and innovative. Finally, cellular operators should concern on stable quality, high performance, fulfill user needs, functions of cellular operator are well integrated and properly.

The limitation in this study was this study only focuses on Indonesia cellular operators in the recent time, no comparative study was made between cellular operators because the objective of this study was to expand a conceptual model. Further study can invertigate the relationship among the nine variables with the moderation effect of corporate image in using cellular operators (Rachmawati & Mohaidin, 2019).

Conclusion

COVID-19 pandemic has an impact on decreasing conventional (offline) business activities, but it can leverage innovative business activities based on online platforms, one of which is the use of cellular operators.

Cellular operators are part of the telecommunications-oriented industry and have become important in people's daily activities. The investigation conducted in this study can improve understanding of the impact made by user experience, satisfaction, switching barriers, and corporate image on loyalty.

This study highlighted that cellular operator should maximise satisfaction and switching barriers in order to enhance loyalty. In particular, they should focus on trustworthiness, perceived service quality, functionality, and monetary to heighten satisfaction. At the same time, social and monetary to raise switching barriers must build a long-term relationship with users.

It can be concluded that if users have good value for money, they will remain loyal, even if they do not feel satisfied or do not find switching barriers. Moreover, if users are enjoying a good experience from their current cellular operator, they will feel satisfied that can lead to loyalty; moreover, if they feel there will be high barriers to switching afterwards they will become loyal.

In addition, increasing loyalty is also accelerated by corporate image, if users have a good experience, specifically in terms of value for money, have a good image of the corporate, and feel that the switching barriers are too high or too many, hence they will become loyal. This also occurs in the internet service provider industry, of which the highest importance is perceived service quality. Customers will recommend their Internet Service Provider when they perceived all service quality variables are in accordance with their expectations, especially network quality with an indicator of internet upload speed, the internet is always well connected and download speeds must be fulfilled.

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