

Comprehensive Framework of Customer Loyalty in Fixed Broadband Industry

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Abstract. The use of internet has been growing rapidly over the last decade. One of the developments of internet technology is broadband which provides its users with higher speed than the dial-up technology. Previous researches showed that broadband technology has positive effects on productivity and economic growth which makes it to become an important structure especially in developing countries such as Indonesia. Indonesia's fixed broadband industry has been facing slower penetration rate compared with mobile broadband and suffering from high customer churn rate. This condition causes companies struggling to maintain their customer loyalty. There have been many researches about broadband customer loyalty but only a few focused on fixed broadband industry and this area still needs a comprehensive study on internal and external factors affecting its customer loyalty. This study was developed to fulfil those gaps. This study aims to evaluate factors affecting fixed broadband customer loyalty both from company's internal and external environment. The originality of this study resides in security and privacy, customer demography and switching barriers as additional factors to the model proposed by previous studies. This study concludes four internal factors and two external factors affecting fixed broadband customer loyalty with customer value as mediating factor.

Keywords: Broadband, Fixed Broadband, Customer Loyalty, Customer Churn

1. Introduction

The rapid growth of internet gives opportunity to telecommunication companies to provide high quality products and services. One of the most utilized internet technologies is the broadband technology which accommodates its users with high speed internet access. The previous studies showed that the use of broadband technology gives positive effects to a country's productivity, economic growth, and reduction of unemployment and poverty rates [1]. It causes the broadband technology to become as an important factor as highways, roads, electricity access, etc. [2]. Generally, there are two classes of broadband technology i.e. fixed broadband and mobile broadband. Despite its importance, the penetration rate of fixed broadband services is much lower than mobile broadband, especially in developing country such as Indonesia. Based on Telkom Indonesia's 2018 Annual Report, the penetration rate of fixed broadband in Indonesia at the end of 2018 were only 12% of population while mobile broadband's penetration rate has reached 96%. Although fixed broadband users are increasing every year, it is still much lower than the government's Indonesia Broadband Plan (IBP). The IBP states that the penetration rate of fixed broadband at 2019 is targeted to reach 71% of households, 100% building, 30% of population for urban area and 49% of households and 6% of population for rural area. Besides that, the penetration rate of fixed broadband in Indonesia is also considered low compared to those in developed country such as South Korea (41,6%), United States (35,61%), and Netherland (43,08%). Along with low penetration

rate, fixed broadband industry in Indonesia is also faced with high customer churn. There are seven fixed broadband providers in Indonesia i.e. IndiHome, First Media, Biznet Home, MNC Play, CBN, MyRepublic, and GIG Indosat. IndiHome is the market leader with 80% of market share, but it also has the highest customer churn rate that reach 7,2% from 2,4 million of total customers in 2017. High customer churn is a sign of low customer loyalty and causes at least two losses to the company, the loss of revenue and the loss of customer acquisition investment [3-4]. One of the approaches to decrease customer churn is by increasing customer loyalty.

While many researches have been conducted in broadband industry over the last 10 years, only a few were focused on fixed broadband and only considered specific aspects of the company. Study from [8] proposed a more complex model of fixed broadband customer loyalty in Indonesia than other previous studies. But it has not yet considered company's external factors i.e. customer demography and switching barriers. This study is intended to fulfill those gaps. Customer demography and switching barriers need to be considered to affect customer loyalty because they influence customer's behavior and decision to switch to other providers. Studies from [9-11] proved that switching barriers along with customer satisfaction are important factors to customer loyalty. Meanwhile, studies from [12], [13], and [3] showed that customer demography holds significant role in influencing customer's decision to continue or switch services despite their satisfaction with their current provider.

This study aims to provide more complete and comprehensive understanding regarding fixed broadband customer loyalty and to fulfill the lack of study in fixed broadband services in Indonesia. This study is still a theoretical study, but an empirical study will be carried out in the future to validate the proposed model. The remainder of this paper is organized as follow: Section 2 reviews related literatures. Section 3 presents and discusses the proposed conceptual model while Section 4 provides conclusion and implication of this study for both practitioners and researchers. Finally, Section 5 suggests future works and extension for this study.

2. Method

The method used in this study is literature review which means this research is still a theoretical study. The research method was begun by observing the symptoms and root causes in fixed broadband business in Indonesia. One of them is high customer churn rate which forces fixed broadband operators struggles to increase their customer loyalty. A preliminary study showed that customer loyalty is strongly impacted by customer satisfaction [5-7]. On the contrary, the data from 2015 to 2017 show that customer satisfaction index in fixed broadband industry had increased but customer churn rate also kept increasing [8]. It raises a possibility of other factors affecting customer loyalty in fixed broadband industry. Then, literature review was carried out on 13 relevant previous studies to determine factors that allegedly affecting customer loyalty. The models and results from each study were compared and analysed to determine the state of the art of this research. The summary of literature review of relevant and significant publication is presented in Table 1 and Table 2 below. Table 1 shows the summary of factors originated from outside of the company that are considered to affect customer loyalty in fixed broadband business while table 2 shows factors originated from inside of the company. Although this study is still a theoretical study, an empirical study will be carried out in the future to validate the proposed model.

Customer loyalty has become an important factor in a product continuity, especially with high customer acquisition cost and high customer churn rate [14]. It is stated in [15] that 2% increase in customer retention is equal to 10% decrease in customer acquisition costs in telecommunication industry. New customer acquisition cannot ensure company's long-term success if they could not retain and maintain their current customers [14]. It means maintaining customer loyalty is more profitable than acquiring new customers. In [10] mentioned two types of customer loyalty i.e. behavioural loyalty and attitudinal loyalty. Behavioural loyalty arises when the customer continues using current service even though they do not feel satisfied, usually it is due to habit or high switching barriers while attitudinal loyalty happens when customer feels satisfied with current services and commit to consistently use it [9-10].

Studies from [5-7] concluded that overall service quality is the key to attain customer loyalty. Studies from [18] and [7] also stated information quality and privacy also affect customer loyalty while [19] emphasized the importance of price and product quality in customer loyalty program. A few studies of broadband customer loyalty were also carried out in Indonesia both for mobile broadband and fixed broadband. One of them is from [8] which evaluated fixed broadband customer loyalty by using more complex model compare to other studies. The study from [8] evaluated internal factors of the company that affect customer loyalty and categorized them into three main categories i.e. customer relationship management (CRM), distinctive competency, and marketing mix. The model also used customer value as mediating factor between those internal factors and customer loyalty.

Table 1. Literature Study for External Factors

Author	Year	Area	External Factors		Customer Value
			Customer Demography	Switching Barriers	
Huang et al.	2012	Customer Churn	X		
Svendsen and Prebensen	2013	Customer Churn	X	X	
Thaichon et al.	2014	Customer Loyalty			X
Thaichon et al.	2014	Customer Loyalty			X
Giovanis et al.	2014	Customer Loyalty			
Thaichon and Jebarajakirthy	2016	Customer Loyalty			X
Quach et al.	2016	Customer Behaviour		X	X
Shafei and Tabaa	2016	ISP Service Quality		X	X
Chuah et al.	2016	Customer Loyalty		X	
Kim et al.	2017	Customer Churn		X	
Postigo-Boix and Melus-Moreno	2017	Customer Churn	X	X	
Frimpon and Adaku	2018	Customer Loyalty			
Sianipar	2018	Customer Loyalty			
This Research	2019	Customer Loyalty	X	X	X

3. Result and Discussion

This study suggests a conceptual model based on literature review to fill the gaps in the lack of a comprehensive framework of customer loyalty in fixed broadband business. As can be seen in Table 2 below, the suggested conceptual model has the closest correlation to the model proposed by [8]. The enhancement on this model resides on the addition of *Security and Privacy* as one of the internal factors and the additional external factors i.e. customer demography and switching barriers. The *security and privacy* are taken into account as previous studies from [5-6], [9] and [18] showed the significant role of security and privacy in customer value which can increase customer loyalty. As stated before, the customer demography factors and switching barriers are also deduced to determine customer loyalty because it can affect customer's behavior and decision to continue their current service or switch to other service regardless of their satisfaction.

Switching barriers also has significant effects to customer loyalty, as showed by [9-11]. Recent studies also showed that customer satisfaction is no longer adequate to ensure customer loyalty which also enhanced the importance of switching barriers [9]. In their study, [9] also stated three types of switching barriers i.e. financial (costs, time and efforts needed to switch services), social (for example, the customer has interpersonal relation to competitor's employee), and psychological (for example, the customer was attracted to another brand or promotion).

The proposed conceptual model divides the factors into two general categories i.e. internal factors and external factors as shows by Figure 1 below:

a. Internal Factors, consists of:

1. Marketing mix is considered to influence customer loyalty because it affects customer expectation and satisfaction with received service [8]. This study uses 7Ps marketing mix concept from [20] which includes:
 - *Products*, including network quality, network reliability, value added services and service guarantee.
 - *Price*, including costs to attain service [19], the affordability [8], the precision of service cost [8] and prices of value-added services.
 - *Place*, including location and access to provider office [8].
 - *Promotion*, including the attractiveness of advertisement, direct selling, promotion program and service bundling [21]
 - *People*, consists of employee's capabilities and knowledge, attractiveness and hospitality of the employees [8]
 - *Physical facilities*, including network coverage [21], the completeness and comfort of the office [8].
 - *Process*, including easiness to get the service, standardized customer service, and standardized service operation time [8].

The study from [8] proved that marketing mix has significant and positive effect on customer loyalty. This is because as service quality holds important role in customer loyalty as showed by previous researches while fixed broadband providers generally have large resources that can be utilized to optimize their services such as reliable connection, competitive prices, capable employees, intensive promotion, etc. [8]. By enhancing their products and services, the operator can make the customer's costs worth the benefit received and optimize the customer value which can increase customer loyalty.

2. Customer Relationship Management (CRM), which has been proved in various prior researches to have significant effect in customer's decision to repeat purchase or continue their service which can increase customer loyalty. CRM in this study includes:
 - *Complain handling* [8-11], [14-16], [19]
 - *Rewards* [8]
 - *Psychological benefits* [6], [8-9]
 - *Information Support* [5-7], [18]
 - *Easiness* [6], [8-9]

As concluded in [5], CRM relies on how the company handles and responds to customer's inquiries. CRM has significant association with service quality, since the characteristic of fixed broadband service is complex with problems both on software and hardware which makes customer service as critical aspect [7]. Besides that, information support also an important factor in customer relation. The customers of internet service providers are enthusiastic information seekers and tend to confide to web surfing for the information they needed [5]. This makes the availability and quality of information provided on company's website is important to customer service quality. In [8] showed easiness and rewards give considerable effects on CRM. Easiness in process and rewards through various loyalty programs can give economic and psychological benefits to the customers and also shows that the company can provide superior value to its customers which can result in customer retention.

Table 2. Literature Study for Internal Factors

Author	Year	Area	Internal Factors														
			Marketing Mix					CRM				Brand Image		Security and Privacy			
			Product	Price	Place	Promotion	People	Physical Facilities	Process	Complain Handling	Rewards	Psychological Benefits	Information Support		Easiness	Corporate Image	Distinctive Competence
Huang et al.	2012	Customer Churn															
Svendsen and Prebensen	2013	Customer Churn													X		
Thaichon et al.	2014	Customer Loyalty	X						X				X				X
Thaichon et al.	2014	Customer Loyalty	X						X				X				X
Giovanis et al.	2014	Customer Loyalty	X		X			X	X			X	X	X	X		X
Thaichon and Jebarajakirthy	2016	Customer Loyalty											X				X
Quach et al.	2016	Customer Behaviour ISP	X			X		X			X		X				X
Shafei and Tabaa	2016	Service Quality	X	X				X			X						
Chuah et al.	2016	Customer Loyalty	X	X					X			X		X			
Kim et al.	2017	Customer Churn	X	X					X								
Postigo-Boix and Melus-Moreno	2017	Customer Churn															
Frimpon and Adaku	2018	Customer Loyalty	X	X				X			X						
Sianipar	2018	Customer Loyalty	X	X	X	X	X	X	X	X	X	X		X		X	
This Research	2019	Customer Loyalty	X	X	X	X	X	X	X	X	X	X		X	X	X	

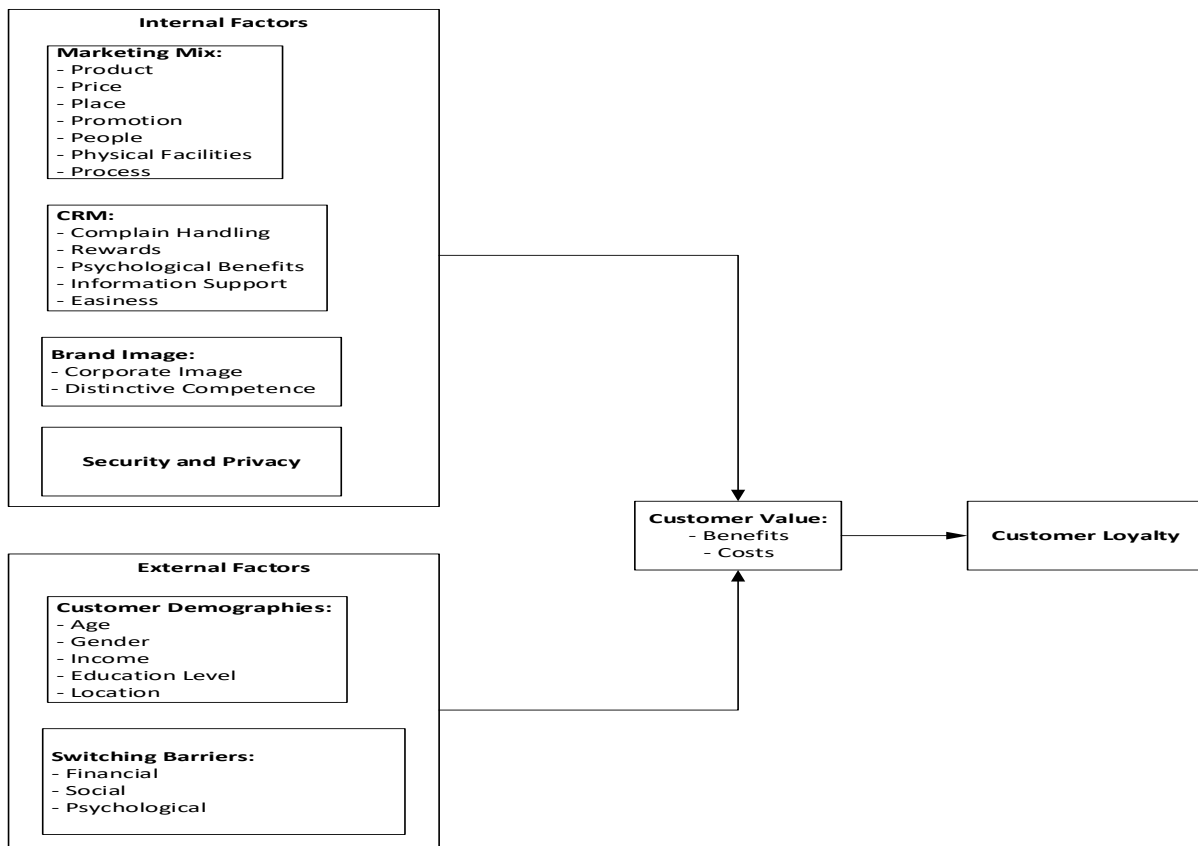


Figure 1. Suggested Conceptual Model

3. Brand Image, including corporate image and company’s distinctive competence, become important factors for customers to value a service from certain provider [8]. The study from [6] showed brand image influences behavioural and attitudinal loyalty. It also correlates with customer’s experience toward certain brand or company [6]. Customer with pleasant experience will have good association to the brand/company and vice versa. Brand image can help the company to earn trust from their customers and potential customers, with good brand image the customers would believe that the company is genuine and capable of delivering the service so they would have assurance of the service quality [5].
 4. Security and Privacy, related to sense of secure and protection for customers while using the broadband services. Security is important in broadband services because the network server holds important and sensitive data of the customers such as email information, banking information, etc. which make it vulnerable to cybercrime [7]. While privacy related to the use and protection of customer personal information including, therefore the provider companies should have clear procedures and policies regarding customer’s data safety [7]. The study from [5] revealed that customers tend to be less satisfied if their privacy is not protected or there is a breach of their online transaction.
- b. External factors: factors from outside the company and cannot be fully controlled by the company, consist of:
1. Customer demography, demography information shows customer clustering which can describe their behaviour, tendencies, and social network according to their groups [12]. Customer demography is considered to affects customer value toward received services and also affects customer’s decision to switch service. It includes age, gender, education level, and location. The study from [13] concluded that age give an influence on customer churn in

telecommunication business, the older customers tend to be more loyal to their service provider. It was explained that the older customers have low expectation to the received services as long as it was reliable and could meet their basic need, so they become easier to be satisfied. Another explanation was that the old customers were lack of efforts to search and switch for other service despite their satisfaction with current service [13]. This result pointed that customer demography could affect customer loyalty.

2. Switching barriers, defined as barriers or drivers for customers to switch services. The traditional belief states that customer satisfaction is the main key to customer loyalty, but recent studies showed that customer loyalty is no longer adequate to ensure customer loyalty because it also depends on the presence of switching barriers [9]. Customer who feels satisfied with certain service, cannot be guaranteed to continue using those services if there is no existence or low switching barriers and vice versa. Even a well-constructed customer satisfaction program could fail to ensure retention without the existence of switching barriers [9]. Switching barriers used in this study are three types of barriers from [9] i.e. financial, social and psychological.
- c. Customer value, comparison of perceived benefits for customers and costs sacrificed by the customers [17]. In this study, customer value acts as intermediating factor between internal and external factors and customer loyalty. The internal and external factors will build customer value toward received services. A satisfied customer will have a positive value toward the received service because they feel that their costs and sacrifices to get the service are worth the benefit received [8]. Customer satisfaction results in high customer value and can lead to customer loyalty along with building exit barriers [17].
- d. Customer loyalty is the dependent factor in this study. In [10] mentioned two types of customer loyalty i.e. behavioural loyalty and attitudinal loyalty. Behavioural loyalty arises when customer continue using current service even though they are not satisfied, usually it is due to habit or high switching barriers while attitudinal loyalty happens when customer feels satisfied with current services and commit to consistently use it [9-10].

4. Conclusion and Future Work

Customer loyalty is not only affected by internal factors, but also by the factors outside the company such as customer demography and switching barriers. This study comprehensively summarized six factors both internal and external factors which can affect customer loyalty in fixed broadband market. The internal factors consist of marketing mix, customer relationship management, brand image, and security and privacy while the external factors consist of customer demography and switching barriers.

The framework proposed in this paper provides comprehensive conceptual basis for further empirical analysis and can be an implication for practitioners especially for fixed broadband provider as a guidance for maintaining their customer loyalty and also for the authorized parties to enhance fixed broadband penetration in Indonesia. This study is a theoretical study with six proposed variables that still need to be validated empirically. The empirical study is still on going as the future work carried out among fixed broadband customers in Indonesia where the customer churn rate is still categorized as high and fixed broadband penetration is still low. There is also possibility of extending this study with more variables or factors that have not been considered.

Acknowledgments

Thanks to Graduate School of Industrial Engineering, Telkom University.

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