

## ANALYZING CUSTOMER SATISFACTION TOWARDS BTNPROPERTI - REAL ESTATE ONLINE SHOP PORTAL

Josua Saut Mangaraja Baringbing and Hardius Usman

Universitas Indonesia

Email: josua.saut@sbm-itb.ac.id

*Abstract. This research aims to identify and analyse the key determinants influencing customer satisfaction of the real estate online shop portal users in Indonesia. This is one of the preliminary study dealing with customer satisfaction towards online real estate shop in Indonesia. The literature concerning major attributes of website functionality, perceived of usability, information quality and customer satisfaction in real estate online shop portal. The website functionality and perceived of usability was taken from previous research, while the scale of information quality was added and focusing on physical attribute, non-physical attribute and customer service. Data were collected from 306 respondents who used real estate online shop portal for examining the constructs. The model was empirically tested using structural equation modeling (SEM). The study reveals that perceived of usability and information quality have a significant positive impact on real estate online shop portal users' satisfaction. In other hand, website functionality is revealed to have a positive but not significant impact on real estate online shop portal users' satisfaction. This research will help real estate online shop portal especially real estate online shop portal to attract and motivate new customers. Online retailers with high involvement products can improve post-use satisfaction and eventually increase online customers.*

*Keywords: Online Real Estate; Customer Satisfaction; Website Quality;*

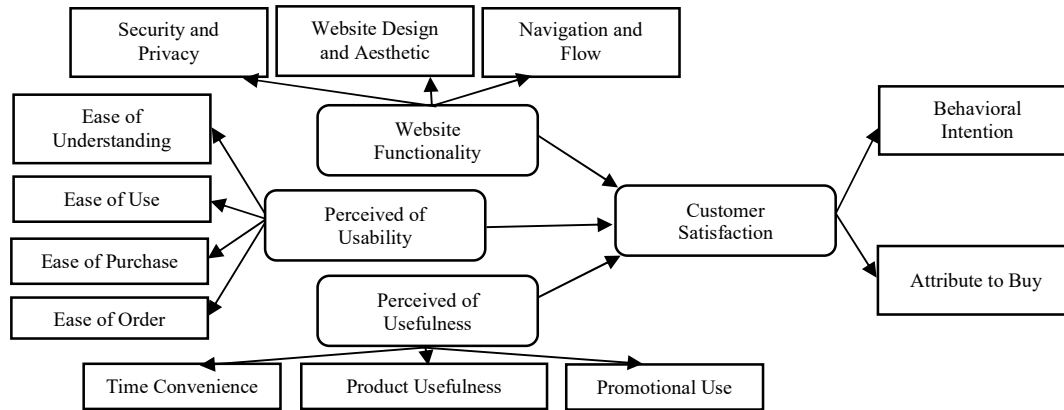
### INTRODUCTION

The internet phenomenon is a global phenomenon that has been exploited globally for daily needs. At the end of 2016, Indonesian Internet Service Providers Association (APJII) announced the survey results of internet users. Internet users in 2016 amounted to 132,7 million users. The biggest internet users are in Jawa with a total user of 86.339.350 users or around 65% of the total use of Internet applications (APJII, 2016). Nowadays every company is moving into the Internet, developing e-commerce as their main channel. E-commerce is a concept that provides an overview of the process of buying and selling or exchanging products, services and information through internet networks. The development of e-commerce makes almost everything can be sold via internet from the low valued objects to high valued objects like houses. Therefore the researcher conduct this research to study the customer satisfaction of real estate online shop portal to have insights about their customer satisfaction in order to be a market leader.

In 2017, Tandon, Kiran, and Sah already develop a model that study customer satisfaction toward retail e-commerce in India. The research contain three factors which are: perceived of usefulness, perceived of usability and website functionality. The researcher find out that the object study between Tandon's and real estate online shop portal is different due to the products that the website sell. Tandon, Kiran, and Sah study about retail e-commerce which the products are low involvement products while real estate online shop portal sells houses; which are high involvement products. In retail store, the buyers may buy the products as they click the order button, meanwhile in website property the buyers will apply mortgage. While in mortgage application, the banks still needs to analyze the buyers' profile in order to determine the credit ability. In retail store, the buyers may browse many products that they might unknown before. Website property only sells homogenous housing products. Therefore the buyers surely know about the usefulness of the products they are looking for.

For the research, researcher conduct a sample questionnaire as a primary data that will be spread among the users of real estate online shop portal. The study reveals that perceived of usability and information quality have a significant positive impact on real estate online shop portal users' satisfaction. In other hand, website functionality is revealed to have a positive but not significant impact on real estate online shop portal users' satisfaction.

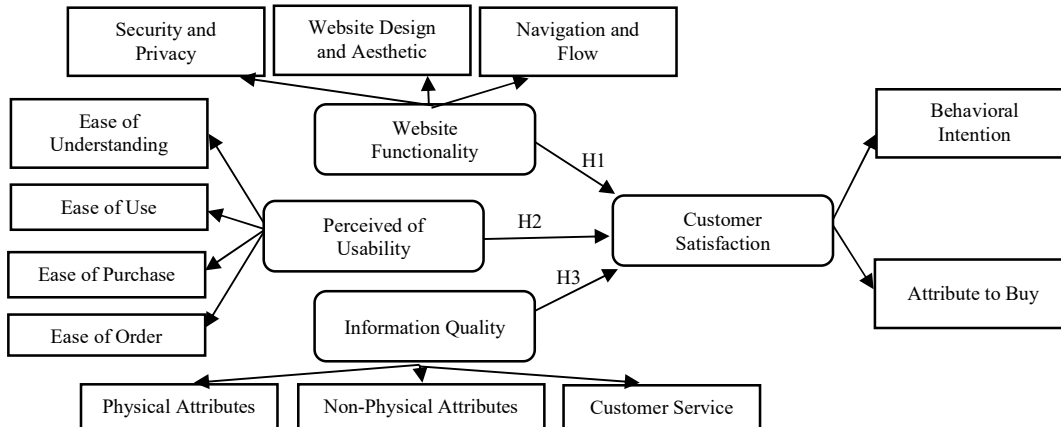
## LITERATURE REVIEW



**Figure 1. Tandon's Research Model**

Source: Tandon, Kiran, and Sah (2017)

In 2017, Urvashi Tandon and her two friends; Ravi Kiran and Ash Sah, conducted a research to identify and analyse the key determinants influencing customer satisfaction towards online shopping. The research was conducted in India. The research is designed to outline of how three main variables of customer satisfaction are conducted. An overview of the research model has been presented through Figure 1. Online shopping is a consequence of customer satisfaction. The research found that website functionality, perceived of usability and perceived usefulness lead to customer satisfaction. Website functionality is driven by security and privacy, website design, and navigation. Perceived usability is driven by ease of understanding, ease of purchase, ease of use and ease of ordering. Perceived of usefulness is driven by time convenience, product usefulness and promotional usefulness.



**Figure 2. Research Model**

Source: Proposed by Author

Tandon's research model are focused on retail e-commerce with low involvement products. While in other hand Real Estate Online Shop Portal products are houses which is a high involvement products. Consumer may be highly involved when the product is expensive, risky, purchased infrequently, and highly self-expressive. Typically, the consumer has much to learn about products category. (Kotler and Armstrong, 2014). Behaviours on the purpose of housing purchase for living or for investment are less differences. Marketers could focus the same marketing plans and campaigns for customer who purchase for own living or for investment. In addition, similar high-involvement behavioral campaigns can equally apply to different customer segmentation variables as no significant differences also are found for various demographic variables. (Sorawit, et al., 2016).

Mendfora, et al. (2016) define home attributes that form the basis of consumer preferences in buying a house can be divided into two categories: physical attribute and non-physical attribute. A good website can defining and measuring online quality from the beginning to the end of the transaction, including information search, website navigation, ordering, customer service

interactions, delivery and satisfaction with the ordered product (Wolfenbarger, 2003). Therefore, customer service is needed by customer to get information that not available directly on the website. Rahadi (2014) finds that the physical qualities of housing product are the first attribute to be noticed by the consumer when buying a house. Physical qualities are reflected from type of the house, land area, building area and the physical condition of the house. Location is highly influential for a customer when they select a housing product. The location factors are include accessibility to social facility and public facilities. The example of public facilities is green open space, hydrant, street light, and dump. Other hand the example of social facilities is police station, fire station, and hospital.

## METHODOLOGY

Researcher using purposive sampling questionnaire as a primary data that will be spread among the users of Real Estate Online Shop Portal. The data spread via email and online. The questionnaire consist of demographic questions and main questions. The questionnaire consist of 40 questions that represent 5 (five) variables that being studied. For screening test, the author put he question rather the respondents have ever use Real Estate Online Shop Portal or not. If the answer is not, the questionnaire will end. The total respondents' data processed by author is 306 respondents.

**Table 1 Research Variables**

No.	Variable	Dimension	Code	Indicator	Source
1	Website Functionality (WF)	Security and Privacy (SP)	SP1	Respondents believe Portal BTNProperti has an sufficient security system	Tandon, Kiran, and Sah (2017)
			SP2	Respondents believe the Portal BTNProperti will not provide personal information to other parties without permission	Tandon, Kiran, and Sah (2017)
			SP3	Respondents felt comfortable with the login member feature	Tandon, Kiran, and Sah (2017)
		Website design and Aesthetic (WD)	WD1	The attractive colour scheme of online retailing websites facilitates shopping.	Tandon, Kiran, and Sah (2017)
			WD2	The graphics displayed in websites provide ease for ordering product	Tandon, Kiran, and Sah (2017)
			WD3	Shopping online is an exciting experience	Tandon, Kiran, and Sah (2017)
		Navigation and Flow (NF)	NF1	Respondents felt the pictures on the BTNProperty were quickly downloaded	Tandon, Kiran, and Sah (2017)
			NF2	Respondents felt that the search features on the Portal BTNProperti was very helpful	Tandon, Kiran, and Sah (2017)
			NF3	Respondents find it easy to go back to the previous page	Tandon, Kiran, and Sah (2017)
2	Perceived of Usability (PEU)	Ease of Use (US)	US1	It was easy for respondents to learn shopping using Portal Portal BTNProperti	Tandon, Kiran, and Sah (2017)
			US2	Respondents felt the BTNProperty is easy to use	Tandon, Kiran, and Sah (2017)
			US3	Respondents felt that the User Interface on the Portal BTNProperti was convenient to use	Tandon, Kiran, and Sah (2017)
		Ease of Purchase (PU)	PU1	Portal BTNProperti enables to accomplish shopping more quickly than traditional way	Tandon, Kiran, and Sah (2017)

**Table 1 Research Variables (Cont)**

No.	Variable	Dimension	Code	Indicator	Source
2	Perceived of Usability (PEU)	Ease of Purchase (PU)	PU2	Portal BTNProperti helps consumer to find product information within the shortest time frame	Tandon, Kiran, and Sah (2017)
			PU3	Successful initial purchasing builds respondent's confidence for further purchasing	Tandon, Kiran, and Sah (2017)
		Ease of Understand (UN)	UN1	Language used by Portal BTNProperti is easy to understand	Tandon, Kiran, and Sah (2017)
			UN2	Display pages of Portal BTNProperti lead to further detailed information	Tandon, Kiran, and Sah (2017)
			UN3	Process of transaction on Portal BTNProperti is easy to understand	Tandon, Kiran, and Sah (2017)
			UN4	Respondents felt easy to place orders online	Tandon, Kiran, and Sah (2017)
		Ease of Order (EO)	EO1	Respondents find it easy to track orders	Tandon, Kiran, and Sah (2017)
			EO2	Respondents find it easy to change orders	Tandon, Kiran, and Sah (2017)
			EO3	Respondents find it easy to cancel the orders	Tandon, Kiran, and Sah (2017)
			EO4	It is easy to give a detail order	Tandon, Kiran, and Sah (2017)
3	Information Quality (IQ)	Physical attributes information (PA)	PA1	Respondents felt Portal BTNProperti gives an ample information about house location and position	Mendfora, et al (2016)
			PA2	Respondents felt Portal BTNProperti gives an ample information about physical condition of the house	Mendfora, et al (2016)
			PA3	Respondents felt Portal BTNProperti gives an ample information about product public facility	Mendfora, et al (2016)
		Non-Physical attributes information (NP)	NP1	Respondents felt well informed about developer / seller credibility	Mendfora, et al (2016)
			NP2	Respondents felt well informed about installment and pricing details	Mendfora, et al (2016)
			NP3	Respondents felt well informed about promotion / discount available using Portal BTNProperti	Mendfora, et al (2016)
		Non-Physical attributes information (NP)	NP4	Respondents felt Portal BTNProperti gives an ample information about product legality	Mendfora, et al (2016)
		Customer Service (CS)	CS1	The company is willing and ready to respond to customer needs	Wolfinbarger, M, et al(2003)
			CS2	The website shows a sincere interest in solving the problems	Wolfinbarger, M, et al(2003)
			CS3	Inquiries are solved promptly	Wolfinbarger, M, et al(2003)

**Table 1 Research Variables (Cont2)**

o.	Variable	Dimension	Code	Indicator	Source
4	Customer Satisfaction (SAT)	Behavioral Intention (BI)	BI1	Respondents felt satisfied with product range offered by Portal BTNProperti	Tandon, Kiran, and Sah (2017)
			BI2	Respondents felt satisfied with product quality of product offered by Portal BTNProperti	Tandon, Kiran, and Sah (2017)
			BI3	Respondents made the Portal BTNProperti as a reference for residential prices	Tandon, Kiran, and Sah (2017)
		Behavioral Intention (BI)	BI4	Respondents would recommend Portal BTNProperti to other people	Tandon, Kiran, and Sah (2017)
		Attitude to Buy (AB)	AB1	The BTN Property Portal makes me want to have a house	Tandon, Kiran, and Sah (2017)
			AB2	Products purchased at Portal BTN Properti have measured up to my expectations	Tandon, Kiran, and Sah (2017)
			AB3	Respondents felt satisfied with the way Portal BTNProperti carry out transactions	Tandon, Kiran, and Sah (2017)

Source: Tandon, Kiran, and Sah(2017), Mendfora, et al (2016), and Wolfinbarger and Gilly (2003)

This research requires primary data, which obtained directly from the survey results. The research questionnaire will use available measuring instruments from previous studies using fixed-response alternative questions. This question format requires respondents to choose answers from available answer choices (Malhotra, 2010). The scale used in the research questionnaire is a Likert scale to determine the value of each variable. This scale consists of six answer choices, namely (1) Strongly disagree (2) Disagree, (3) Disagree, (4) Somewhat Agree and (5) Agree and (6) Strongly agree.

The research continued by spreading the questionnaire to people who already tried Portal BTNProperti. Data obtained from respondents will be selected and processed using the Microsoft Excel 2013 program. Next AMOS application will be used to do some structural equation modeling (SEM) analysis, which includes confirmatory factor analysis (CFA), structural model match analysis, and analysis of causal relationships.

CFA is an analysis of the measurement model carried out by analyzing the observed variable as a reflection or measure of the latent variable (Wijanto, 2015). Author through CFA can see the reliability and validity of the models of each research variable including through the standardized loading factor (SLF), construct reliability (CR) and variance extracted (VE) (Wijanto, 2015).

## FINDINGS AND ARGUMENT

Table 2. Demographic

Variable	Variable Indicator	Frequency	%
Gender	Male	189	61,76%
	Female	117	38,24%
Age	18 - 24	32	10,46%
	25 - 30	201	65,69%
	31 - 35	48	15,69%
	36 - 40	5	1,63%
	41 - 45	4	1,31%
	46 - 50	13	4,25%
	>50	3	0,98%
Variable	Variable Indicator	Frequency	%
Latest Education	D3	38	12,42%
	S1	244	79,74%
	S2	21	6,86%
	Others	3	0,98%
Monthly Spending	< 4.000.000	57	18,63%
	4.000.001-10.000.000	187	61,11%
	10.000.001-15.000.000	34	11,11%
	>15.000.000	28	9,15%

Reference: AMOS Processed

Table 3. The Measurement Model

Variables	Dimension	Items	Standard Loadings	SE	CR	Composite Reliability	AVE
Website Functionality	Security and Privacy	SP1	0,715	0,086	11,396	0,711	0,531
		SP2	0,719	1			
		SP3	0,578	0,100	9,341		
	Website Design	WD1	0,736	0,065	13,552	0,824	0,741
		WD2	0,808	0,981	15,375		
		WD3	0,798	1			
	Nafigation and Flow	NF1	0,737	0,070	13,672	0,806	0,707
		NF2	0,792	1			
		NF3	0,757	0,066	14,086		
Perceived of Usability	Ease of Understand	UN1	0,681	0,059	12,349	0,839	0,749
		UN2	0,759	0,063	13,918		
		UN3	0,802	0,066	14,975		
		UN4	0,768	1			
	Ease of Use	US1	0,759	0,065	14,214	0,814	0,723
		US2	0,801	1			
		US3	0,753	0,066	13,933		
	Ease of Purchase	PU1	0,723	0,071	12,353	0,756	0,613
		PU2	0,705	0,074	12,112		
		PU3	0,713	1			
	Ease of Order	EO1	0,816	1		0,887	0,840
		EO2	0,816	0,061	16,171		
		EO3	0,792	0,061	15,628		
		EO4	0,835	0,058	17,001		
Information Quality	Physical Attributes Information	PA1	0,74	0,06	14,492	0,834	0,759
		PA2	0,788	0,058	16,238		
		PA3	0,844	1			
	Non-physical Attributes Information	NP1	0,719	1		0,797	0,660
		NP2	0,672	0,074	11,532		
		NP3	0,707	0,079	12,073		
		NP4	0,717	0,076	12,31		
	Customer Service	CS1	0,829	1		0,836	0,763
		CS2	0,76	0,059	15,114		
		CS3	0,792	0,058	16,043		
Customer Satisfaction	Behavioral Intention	BI1	0,554	0,046	21,09	0,888	0,847
		BI2	0,870	0,044	22,135		
		BI3	0,914	1			
		BI4	0,891	0,058	10,45		
	Attitude To Buy	AB1	0,818	0,064	14,126	0,823	0,740
		AB2	0,790	0,06	15,693		
		AB3	0,732	1			

Notes: RMSEA = 0,059; NFI = 0,845; RFI 0,832; IFI = 0,914; TLI = 0,906; CFI = 0,913  
 Reference: AMOS Result

Table 4. The Structural Model

First Order	Second order latent variable	Standardised estimate	SE	CR	p
Website functionality	Security and Privacy	0,887	0,079	10,785	***
	Website Design	0,961	0,080	12,535	***
	Nafigation and Flow	0,973	1		***
Perceived of usability	Ease of Understand	0,978	1		***
	Ease of Use	0,939	0,067	14,351	***
	Ease of Purchase	0,990	0,079	12,521	***
	Ease of Order	0,885	0,072	13,578	***
Information Quality	Physical Attributes Information	0,948	1		***
	Non-physical Attributes Information	0,998	0,071	13,570	***
	Customer Service	0,939	0,060	15,443	***
Customer Satisfaction	Behavioral Intention	0,601	0,068	11,924	***
	Attitude To Buy	0,966	1		***

Notes: RMSEA = 0,086; IFI = 0,815; TLI = 0,799; CFI = 0,814; \*\*\* p<0,001

Reference: AMOS Result

Table 5. Hypothesis Summary

Hypothesis	Independent Variable	Path	Dependent Variable	Path Coefficient	P	Result
H1	Website Functionality	==>	Customer Satisfaction	0,141	**	Reject
H2	Perceived of Usability	==>	Customer Satisfaction	0,473	***	Accept
H3	Information Quality	==>	Customer Satisfaction	0,797	***	Accept

Notes: \*\*\* p<0,001; \*\*p< 0,01

Reference: AMOS Processed

Table 6 Antecedents of WF

			Estimate
SP	<---	WF	0,887
WD	<---	WF	0,961
NF	<---	WF	0,973
SP1	<---	SP	0,582
SP2	<---	SP	0,703
SP3	<---	SP	0,727
WD1	<---	WD	0,786
WD2	<---	WD	0,819
WD3	<---	WD	0,737
NF1	<---	NF	0,747
NF2	<---	NF	0,776
NF3	<---	NF	0,768

Table 7 Antecedents of PEU

			Estimate
UN	<---	PEU	0,978
US	<---	PEU	0,939
PU	<---	PEU	0,990
EO	<---	PEU	0,885
UN1	<---	UN	0,689
UN2	<---	UN	0,761
UN3	<---	UN	0,801
UN4	<---	UN	0,761
US1	<---	US	0,760
US2	<---	US	0,808
US3	<---	US	0,746
PU1	<---	PU	0,721
PU2	<---	PU	0,717
PU3	<---	PU	0,703
EO1	<---	EO	0,818
EO2	<---	EO	0,817
EO3	<---	EO	0,795
EO4	<---	EO	0,829

Table 8 Antecedents of IQ

			Estimate
PA	<---	IQ	0,948
NP	<---	IQ	0,998
CS	<---	IQ	0,939
PA1	<---	PA	0,728
PA2	<---	PA	0,790
PA3	<---	PA	0,853
NP1	<---	NP	0,728
NP2	<---	NP	0,657
NP3	<---	NP	0,705
NP4	<---	NP	0,723
CS1	<---	CS	0,838
CS2	<---	CS	0,750
CS3	<---	CS	0,791

## CONCLUSIONS

The biggest differences between Tandon model as the reference and author's model are located in information quality variable. In this research the Information quality variable only affected by physical attribute information, non-physical attribute information and customer service. While it has been proven that there's a relationships between information quality and customer satisfaction directly and indirectly, future research can be more explorative to define information quality variable. There are many item inside those variables that can be explored in further research to create a more precise result.

This research indicates that information quality to be the highest factor that influence customer satisfaction with estimates 0,797. Tandon model can be strengthen by adding information quality. This proving that the previous perceived of usefulness can be reflected in perceived of usability and information quality.

Based on the results of the research, there are some practical suggestions in the form of managerial implications for Portal BTNProperti so that it can improve better relationships with customers where this attachment will generate profits in the future. The managerial implications that can be extracted from the research are as follows:

1. **Safety and Privacy.** One crucial finding of the research which needs further discussion and research is service and privacy (SP1), which respondents believe that Portal BTNProperti has a sufficient security system. If we breakdown to its subvariable we will find that the customer still feel insecure of using Portal BTNProperti.
2. **Add a more detailed location of the products.** Based on the research, non-physical attribute Information has the highest influence compared to other information. Portal BTN Properti should states the distance between the house, and others point of interest in addition of give a map location.
3. **Add Developer Credibility.** One of the benefit of using Portal BTNProperti is because Bank Tabungan Negara have the largest connection all over Indonesia. The research reveal that information about developer/seller is one of the biggest of customer satisfaction influencer, but the mean of the answer are still low. This indicate that the user of Portal BTNProperti still confused in choosing developer because lack of developer information.
4. **Provide a tracking order system.** Ease of order variable are conducted by 4 items. Even though 3 of them are influencing more than 80% to ease of order, two of the items are having low mean with less than 4,600. This indicate a high gap that may resulting low customer satisfaction towards Portal BTNProperti. One of the solution to maximize the ease of order is to create a transparent system where customer can review and tracking their application. This tracking also good for keeping the processing time below the service level agreement (SLA).
5. **Attract more public seller.** As for now, there are only 258 properties sold by individual seller all over indonesia. Bank BTN should advertise Portal BTNProperti promptly in order to attract more individual seller. As for now most of Portal BTNProperti items are mostly from developer partnership, but in order to gain more market Bank BTN should attract more individual seller.

## REFERENCES

- APJJI, (2016). 'Survei Penetrasi Internet Indonesia 2016'
- Kotler, P. and Armstrong, G. (2014), 'Principles of Marketing 14th Edition', pp 150-152
- Mendfora, et al. (2016), 'Faktor-Faktor yang Berpengaruh Dalam Keputusan Pembelian Rumah Untuk Masyarakat Berpenghasilan Rendah'
- Rahadi, R.A., et.,al (2015), 'Factors Influencing the Price of Housing in Indonesia, International Journal of Housing Market and Analysis', Vol. 8 Iss 2 pp. 169-188
- Sorawit Biamukda and Chai Ching Tan, (2016), 'Factors Influencing High-Involvement Behaviors in The Real Estate Investment in Northern Thailand', *International Journal of Behaviorian Science*, Vol. 11, Issue 1, 31-44
- Tandon U, Kiran R, Sah AN (2017) 'Customer Satisfaction Using Website Functionality, Perceived Usability And Perceived Usefulness Towards Online Shopping in India. Inform'. *Development* Vol 32, no 5, 1657–1673.
- Wolfenbarger, M. and Gilly, C.M. (2003), 'eTailQ: Dimensionalising, Measuring and Practicing E-Tail Quality', *Journal of Retailing*, Vol 79 No.3 pp 183-198