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**EVALUATING THE VALUE OF REAL ESTATE AFTER NATURAL DISASTER  
(CASE STUDY OF CITRALAND MANADO)****EVALUASI NILAI PERUMAHAN SETELAH BENCANA ALAM  
(STUDI KASUS PADA CITRALAND MANADO)**

by

**Wulan Pricillia Palit<sup>1</sup>  
Frederik G. Worang<sup>2</sup>**

<sup>12</sup>Faculty of Economics and Business, International Business Administration, Management Program  
Sam Ratulangi University Manado

E-mail:

<sup>1</sup>[wulanpricilliaa@gmail.com](mailto:wulanpricilliaa@gmail.com)<sup>2</sup>[frederikworang@gmail.com](mailto:frederikworang@gmail.com)

**Abstract:** Changes in the values of real estate could have unpredictable consequences. Many factors enter real estate market and affect the market price, one of the price-setting factor also flood risk zone (FRZ) to which more attention is paid in relation to the market value. Natural disaster is the occurrence of an extreme hazardous event that impacts on Citraland real estate causing damage, disruption and leaving the affected communities unable to function normally without outside assistance. The main purpose of this research is to evaluate the value according to consumer perception of the houses in Citraland Manado. This research uses qualitative research with an exploratory approach through in-depth interviews. By using purposive sampling eight informants has been selected in order to collect the data. Based on the results there are several factors that influencing the value of Citraland Manado before and after natural disaster, most influencing factor are the brand and facilities and there are also several factors like security, environment and also location that influencing the value of Citraland but also maintain the value after natural disaster hit Citraland Manado in 2014. And the effect of natural disaster to the value of real estate is just temporary.

**Keywords:** *value, natural disaster, real estate*

**Abstrak:** Perubahan nilai real estat bisa memiliki konsekuensi yang tidak dapat diprediksi. Banyak faktor memasuki pasar real estat dan mempengaruhi harga pasar, salah satu faktor penetapan harga juga zona risiko banjir (FRZ) yang lebih banyak perhatian dibayar dalam kaitannya dengan nilai pasar. Bencana alam adalah terjadinya suatu peristiwa yang sangat berbahaya yang berdampak pada Citraland real estate yang menyebabkan kerusakan, gangguan dan meninggalkan komunitas yang terkena dampak yang tidak dapat berfungsi secara normal tanpa bantuan dari luar. Tujuan utama dari penelitian ini adalah untuk mengevaluasi nilai menurut persepsi konsumen terhadap rumah-rumah di Citraland Manado. Penelitian ini menggunakan penelitian kualitatif dengan pendekatan eksploratif melalui wawancara mendalam. Dengan menggunakan purposive sampling delapan informan telah dipilih untuk mengumpulkan data. Berdasarkan hasil terdapat beberapa faktor yang mempengaruhi nilai Citraland Manado sebelum dan sesudah bencana alam, faktor yang paling mempengaruhi adalah merek dan fasilitas dan ada juga beberapa faktor seperti keamanan, lingkungan dan juga lokasi yang mempengaruhi nilai Citraland tetapi juga menjaga nilai setelah bencana alam melanda Citraland Manado pada tahun 2014. Dan efek bencana alam terhadap nilai real estat hanya sementara.

**Kata Kunci:** *nilai, bencana alam, perumahan*

## INTRODUCTION

### Research Background

In human's life shelter is very important, that's why shelter is included in human needs. Shelter does not mean a house, in the true sense, it is a home. It is a place that can make people feels comfortable and safe after spending a hectic day, support in the economic sense, and also protect the people for all the climatic conditions. In this modern life, we can live in ordinary house, apartment, real estate, etc.

Real Estate is could be an option for people who living in urban areas. Same like an ordinary house and apartment, real estate is refers to things that are not moveable such as land and improvement permanently attached to the land for example house or any other building (Messah, 2011). Which may act strongly or weakly. In terms of segmentation it is a residential market with family houses. When specified like this, price-setting factors for the segment can be addressed. It holds true that properties are always unique productions and they are immovable. Changes in the values of real estate could have unpredictable consequences. Invest in real estate is a major source for saving for retirement. Many factors enter real estate market and affect the market price, thus location is supposed to be the most significant factor that can affect the market value and property condition is another strong price-setting factor, these two affect not only the price but each may displace the other. This can be best explained on an example of a house in very poor property condition in a prime location as compared with a house in a great condition and very unprofitable and unattractive location (Kropp, 2012). One of the price-setting factor also flood risk zone (FRZ) to which more attention is paid in relation to the market value.

In full-year 2017 a total of 2,341 natural disasters occurred in Indonesia according to the country's National Disaster Mitigation Agency (in Indonesian: *Badan Koordinasi Nasional Penanggulangan Bencana* or BNPB).

### Natural Disasters in Indonesia 2013-2017:

**Table 1. Natural Disasters in Indonesia from 2013 until 2017**

	2013	2014	2015	2016	2017
Number of Natural Disasters	1,674	1,967	1,732	2,342	2,341

Source: National Mitigation Agency (BNPB)

Natural disaster such as floods, earthquakes, landslides risks seriously affects the value of real estate or business property in Manado, flooding is the most common natural disaster. Currently, flood risk can be considered as the most serious threat, mainly in areas and countries where hardly any other natural risks occur. The risk of flooding has always been present for buildings close to rivers or coasts. But it has been growing in recent years. In 2014, Manado's was hit by flash floods and landslides, actually this is not the first time but this is the worst in 13 years. The floods and landslides has destroyed homes, vehicles, public facilities, clean water, electricity and communications, making the economic activity stalled. After the disasters people has to start again, re-build the city but there are several problems after that. One of them is the real estate value.

Flooding also soaked the elite residential area, Citraland Manado. In fact, Citraland Manado is a residential area that is claimed to have implemented the principles of pro-environment development. However, still, housing area of 150 hectares consisting of 36 clusters are still not flood-free. Floods and landslides in this housing, not just in 2014. Precisely mid-February 2012, not only the floods that occur, but also accompanied by landslides around the Cluster Eden Bridge. In 2014, floods are also not absent, even worse condition, due to collapse of the bridge across this housing. Floods and landslides disaster that soaked Citraland Manado, due to the intensity of high rainfall that occurred and also overflow of river water. The floods came suddenly and crushed the bridge over it. As a result spill over into residential areas. There are two clusters on the edge of the river that are most significantly affected.

According to Ciputra Development, they claimed that they already built Citraland Manado according to the principle of sustainable development. Approximately 40 percent of the total area, dedicated as a supporting facility and green open spaces. Much more, 60 percent is developed into residential and commercial properties. Citraland manado lead the real estate business in this city because of the luxurious type of houses and facilities, but once again, it still not flood-free because there is a river that crosses this housing. Based on this research

background the title of this paper is “*Evaluating The Value Of Real Estate After The Natural Disaster (Case Study Of Citraland Manado)*”.

### **Research Objective**

The main purpose of this research is to evaluate the value according to consumer perception of the houses in Citraland Manado. To identify the value of citraland manado according to consumer perception at Citraland Real Estate Manado after the natural disaster

## **THEORETICAL REVIEW**

### **Marketing**

According to the definition by Kotler and Armstrong (2010; 3), marketing is the social process by which individuals and organizations obtain what they need and want through creating and exchanging value with others. The definition is based upon a basic marketing exchange process, and recognizes the importance of value to the customer. Kotler and Armstrong (2010;3) also mentioned about the process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return. Kotler and Armstrong develop their original definition to recognize the importance of the longer-term relationship with the customer. Marketing is the management process for identifying, anticipating and satisfying customer requirements profitably.

### **Consumer Behavior**

Consumer behavior is simply defined as the study of psychological, social and physical actions when people buy, use and dispose products, ideas, services and practices. Also as the process of decision making and physical activity involved in acquiring, evaluating, using, and disposing of goods and services to satisfy needs and want (Peter and Olson, 2008; 13). Similarly, Belch (2001; 19) quoted that consumer behavior is the process and activities of people engage when searching for selecting, purchasing, using, evaluating and disposing of products and services as if satisfy their need and desires. Consumer behavior consists of ideas, Feeling, experiences with additional environmental factors such as price, comments and ads. Also, because of the continuous changes in ideas, perceptions and activities of consumer as an individual or as a group, the consumer behavior is considered as a dynamic process. There are various explanations for consumer behavior.

### **Consumer Buying Behaviour**

Consumer buyer behavior is considered to be an inseparable part of marketing and Kotler and Keller (2011; 4) state that consumer buying behavior is the study of the ways of buying and disposing of goods, services, ideas or experiences by the individuals, groups and organizations in order to satisfy their needs and wants. From marketers' point of view issues specific aspects of consumer behavior that need to be studied include the reasons behind consumers making purchases, specific factors influencing the patterns of consumer purchases, analysis of changing factors within the society and others. Consumer buying behaviour is itself is a complex, dynamic issue which cannot be defined easily and commonly but also describes consumer buying behavior as a process of choosing, purchasing, using and disposing of products or services by the individuals and groups in order to satisfy their needs and wants that consumers express when they select and purchase the products or services using their available resources in order to satisfy their needs and desires. Therefore, the concept of consumer buying behavior has been defined in different ways by different researcher, it is clear that better understanding the consumer buying behavior through studying and identifying their needs leads to huge long term benefits to the businesses.

### **Consumer Perception**

According to (Wang, 2014) Perception is the process of selecting, organizing and interpreting information inputs to produce a meaning. A person receives information through, senses sight, taste, hearing, smell and touch. How and, what consumer perceive strongly affect their behavior towards products, prices, package designs, salespeople, stores, advertisements and manufacture. Perceptions vary from person to person by stating that every perception involves a person who interprets through the senses something, event, or relation which may be designated as the percept. That perception occurs when sensory receptors receive stimuli via the brain, code and categorize them and assign certain meanings to them, depending on the person's frame of reference. A person's frame of reference consists of all his previous held experiences, beliefs, likes, dislikes, prejudices, feelings and other psychological reactions. Different people perceive different things about the same situation.

But more than that, we assign different meanings to what we perceive. And the meanings might change for a certain person. One might change one's perspective or simply make things mean something else.

### **Perceived Value**

Value can be conceptualized as the overall evaluation of the service consumption experience and can be encounter specific or a more enduring global evaluation. Value perception may also different according to the usage situation. Value is a function of the overall quality and price of the firm's products and services compared to the competition, value as function of product features, quality issues, delivery, service and price also always determined by consumer, in his or her own terms, timing and testaments and that value is a perception, a view, or understanding made up of measurable components. Perceived value is a comprehensive form of customer evaluation of service (Anckar and D'Incau, 2002).

### **Perceived Risk**

The concept of perceived risk was introduced by Tzeng (2005), he proposes that risk be conceived in terms of the uncertainty and consequences associated with consumer actions, the result of which may or may not be pleasant. Perceived risk is defined as the uncertainty that consumers face when they cannot foresee the consequences of their purchased decision. This definition highlights two relevant dimension of perceived risk: uncertainty and consequences. When a consumer make a purchase decision, 'risk' implies 'great consequences of making a mistake' and 'degree of inconvenience of making a mistake'.

### **Perceived Quality**

Zeithaml (1998) said that perceived quality is not the actual quality of the brands or products, rather, it is the consumers' judgment about an entity's or a service's overall excellence or superiority. Consumers often judge the quality of a product or service on the basis of a variety of informational cues that they associate with the product. Some of these cues are intrinsic to the products, whereas others are extrinsic that are intrinsic concern physical characteristics of the products itself, such as product's performance, features, reliability, conformance, durability, serviceability and aesthetics.

### **Natural Disaster**

According to (Shank, 2002) a natural disaster is the occurrence of an extreme hazardous event that impacts on communities causing damage, disruption and casualties, and leaving the affected communities unable to function normally without outside assistance.

Natural disasters are caused by hydro-meteorological, climatological, geophysical and biological phenomena which adversely impact on the natural and built environment of affected regions. Their effects in terms of victims and material damage exceed the capacity for self-recovery of local communities, making external assistance necessary.

Natural disasters in many ways serve as lightning rods for national and international security problems, highlighting characteristics of both donors and recipients of disaster relief, and may indeed elicit taking a fresh look at the definition of security itself.

### **Previous Research**

Kim, Park, Yoon, and Cho (2016) are trying to understanding the trade-off between the amenity and hazard effects of nature parks is key to successful landscape and urban planning, for both open spaces and disastermanagement, but little is known about the effect of nature parkson property values, particularly in the context of a mountain naturepark. In order to understand the trade-off between the amenity and hazard effects of nature parks, this study explores the case of the Woomyeon NaturePark (WNP) in Seoul, Korea, which experienced a catastrophic landslide disaster in 2011 by using difference-in-difference approach with a random coefficient model. The study showed the continuing negative hazard effect of the WNP after the landslide damage had been repaired could be a result of awareness of the the disaster risks.

Wang (2014) examined the background of the earthquake geological disaster emergencies in Sichuan region and the states' acroeconomic tightening monetary policy, this research trying to analyzes the impacts on the real estate investment decision making in Sichuan region by using quantitative analysis and bellman equation. The impact of geological disaster emergencies and the tight monetary policy, on investment decision of real estate enterprises in earthquake area, using an empirical analysis to verify the practicability of the model, The results show that the impact of geological disaster emergencies on the real estate market is temporary.



Lamond, Proverbs, and Hammond (2010) analysed the increase in frequency and severity of flood events in the UK has highlighted the question of the impact of flooding on the value of property. In order to improve the available evidence base, a variation of the repeat sales methodology has been used to measure the impact of flooding on the price of transacted residential property for thirteen locations in the UK. In order to analyze the impact of flooding on the price of transacted residential property this research using quantitative analysis based on perceptions and behaviours of property stakeholders. The result show the flood impacts on property prices are small and temporary.

Kropp (2012) discussed about flooding that has been claimed as one of the most common natural disasters in the world. Price theory predicts that buyers will attempt to discount property prices for flood risk if they are aware of it. Home owners are not alone in their concerns about the value of their property. The purpose of this research is to find out the possibilities that influence of flooding in the real estate valuation process by using qualitative method. Most of the findings of investigations see a negative influence on the market value of real estate by flooding. This research has shown how the fact of flooding can or rather have to be considered in the real estate valuation process. The general conditions on the value of the property market at the valuation date and the relevant property status at the quality date have to be considered. Flooding itself, location in a floodplain area or the risk of recurrent flood events affects the value of real estate.

### Conceptual Framework

This framework of this research is about the condition the real estate value of Citraland Manado before and after the natural disaster.



**Figure 1 Conceptual Framework**

*Source: Data Processed 2018*

## RESEARCH METHOD

### Research Approach

This research used qualitative research methodology to find out the value of real estate after natural disaster in Citraland Manado. Shank (2002) defines qualitative research as “a form of systematic empirical inquiry into meaning” and claim that qualitative research involves an interpretive and naturalistic approach: “This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them”. This research is exploratory research. Exploratory research is constructed to answer "what" questions and in many cases includes new studies which can be result of the appearance of new phenomena or insufficient knowledge on the subject of any study. Saunders (2003) states usage of this approach especially for understanding the problem expressing the main steps to conduct an exploratory research: searching and studying the literature and talking to experts in the subject through interviews. This concept is characterized as flexible and adaptable to daily changes as result of new information upcoming or new hypothesis appearing. Exploratory studies are used in this research to explore and identify the value of real estate after the natural disaster in Citraland Manado.

### Population, Sample and Sampling Technique

A population is “the collection of all individuals, families, groups, or organizations, communities and events that will participate in the study”. A sample was a subset of the population being studied that included the process of selecting a few samples from a bigger group the sampling population to become the basis for estimating or predicting a fact, situation or outcome regarding the bigger group (Kumar, 1996). Purposive sampling can be more realistic than randomization in terms of time, effort and cost needed in finding informants (Korengkeng, 2018). Purposive sampling as a type of sampling in which, “particular settings, persons, or events

are deliberately selected for the important information they can provide that cannot be gotten as well from other choices”.

### **Data Collection Method**

The data used in this research consists of two types of data, which are primary and secondary data. The analysis of primary data is a central source for this study. Primary data were collected from in-depth interviews and observation, and secondary data were obtained through textbooks, surveys, reports, newspapers, magazines, articles, and video recordings

### **Operational Definition of Research Variables**

Operational definition is a certain explanation about natural disaster issues that measured by certain terms. Researcher decided to choose Citraland real estate manado as the case study of this research. It is used to make an explanation about the value of real estate after the natural disaster in Citraland Manado.

### **Value**

Value as function of Citraland real estate features, quality issues, service and price. Value is always determined by consumer, in his or her own terms, timing and testaments and value is a perception, a view, or understanding made up of measurable components.

### **Natural Disaster**

Natural disaster is the occurrence of an extreme hazardous event that impacts on Citraland real estate causing damage, disruption and casualties, and leaving the affected communities unable to function normally without outside assistance.

### **Instrument Testing**

The main instrument of this research is the researcher itself. The researcher using qualitative method will argue that another human being is there only instrument that is sufficiently complex to comprehend and learn about human existence.

The researcher was equipped with a note book, a recorder, and a camera in order to conduct interviews.

### **Data Analysis Method, Validity and Reliability**

In qualitative research, researcher is the instrument to collect data themselves through examining documents, observing patterns, and interviewing informants hence the beliefs, feelings, values, and assumptions of the research become crucial as they may affect the research. Therefore a qualitative researcher needs skills and effort to analyze and present the findings as to prove the credibility and trustworthiness of the findings (Kotler and Armstrong, 2010). According to these author, the process of qualitative data analysis consists of six stages (steps), namely:

1. Defining and identifying data  
From the outset, it is crucial to obtain a clear understanding of the meaning of data, and fundamentally, even more importantly, the data required in accordance with the research question and aims.
2. Collecting and storing data  
When collecting data, most researchers start to form opinions and judgement, which result in theories being developed, in the mind of the researcher, and as such one has to consider not only ways to collect data, but also to store data to make them accessible for analysis.
3. Data reduction and sampling  
During the data collection process, reaching a point of saturation implies that all data were reduced, filtered and sampled through the process of analysis.
4. Structuring and coding data  
Structuring and coding of data underpin the key research outcomes and can be used to shape the data to test, refine or confirm established theory, apply theory to new circumstances or use it to generate a new theory or model, or even in the case of this study, develop a new measurement instrument
5. Theory building and testing  
In building and testing theory, it is important to view the reactions of respondents and whether they correspond or not, and also to ensure that a point of saturation of data is reached.
6. Reporting and writing up research

In brief, the reporting and writing up of research entails to put words on paper, in the form of a report, constructing an argument based on the findings of what you have done, what you have seen and heard, participants you interviewed and the information that comes forth from the process of data analysis. Ultimately, the conclusions drawn from the information should contribute to the body of knowledge and represent new meaning and insight in the research question.

## RESULTS AND DISCUSSIONS

### Results

This first section will perform the interview result and then the discussion of the result will be explain more through data analysis process in order to evaluate the problem and objectives through qualitative research.

#### Informant 1

Informant is a female, she knew that the owner of Citraland Development is Ciputra who running his business property successfully that is why he owned a lot of property in Indonesia including at Citraland Manado. She owned two houses in Citraland which is at cluster Royal Gallery and cluster The Peak. She says after natural disaster Citraland is already fixed the facilities, roads, and make a lot of water channels. She think because they already make an improvements that is why she choose to stay and buying another house in Citraland again. she live in Cluster Royal Gallery and moved to her new cluster The Peak because The Peak is already claimed a flood-free by Citraland. She says the condition (facilities, security, brand) after natural disaster had decreased but then returned to normal until now the price of the houses in citraland increasingly rising

#### Informant 2

Informant 2 is female, she knew that Citraland is a very famous real estate with so many facilities. Before she decide to buy a house in Citraland she should discuss with her parents first and spent several months before finally deciding to buy a house in Cluster Greenwood Citraland. She says Citraland development make an improvement recently by creating a water channel because it is almost near the rainy season. Because they always tried to make innovations, she decided to stay and not selling this house. She also wanted to buy a house again in Citraland if there is a nice new cluster. About the condition of Citraland after natural disaster until now I think it still can be manage well by Citraland that's why now the price of Citraland houses already increased and continues to rise.

#### Informant 3

Informant 3 is a male, he bought a house in Citraland since it was opened for the very first time. When Natural Disaster hit Citraland, his cluster hit by a little landslides and also floods. He think Citraland already tried their best to help the victims although he admit it is a bit slow. Despite of the disaster he already has 2 houses at Citraland. He says that the brand of Citraland dropped when a natural disaster occurred. But then it back to normal again maybe because of their good marketing strategy. House price of Citraland is always increase year by year despite of the natural disaster issue so he think it is not really matter.

#### Informant 4

Informant 4 is a female, she loves to invest in business property and she think Citraland is the right choice in every aspect like the location, the environment, security, and of course the brand because of their brand that's aspects make property in Citraland getting higher. And because of all the aspect I feel more confident and comfortable living here. She bought three houses, she rent out two of her three houses. She prefer to stay in Citraland because compared to the other real estates, Citraland still the best. That's why she bought her two house after natural disaster, because despite of natural disaster issue, Citraland can still maintain the house price. So she can say that the condition of Citraland getting better year by year.

#### Informant 5

Informant 5 knew that Citraland is an elite housing with so many facilities. She prefer to buy a new house in Citraland again, because Citraland always choose the best contractor to build the house and she is so excited because her cluster is so good and comfortable, she think the natural disaster that hit citraland in 2014 is not very influential to the value of Citraland, because the condition is still good until now, the prices is getting



higher like she said now there are new clusters in Citraland so she think people still interested buying a house at Citraland despite of the natural disaster issue.

#### **Informant 6**

Informant 6 Informant is a female, she is an entrepreneur and also a politician. She knew that citraland development is one of the best development in Indonesia. In Manado itself, she says Citraland is very qualified to be called as an elite housing because of their quality. When natural disaster hit her cluster which is Cluster Crystal Park, it was very terrible but she cannot blame Citraland's management because it is pure a natural disaster. After natural disaster she bought a new house in Cluster Diamond Hill and then lived in that cluster because she think the her new house is more safe. She admit after the disasters until now Citraland is already make an improvements to make Citraland better. That's why she prefered to bought a new house and lived in Citraland again, like I said before there is no housing in Manado that have so many facilities like all the facilities in Citraland. She says the power of their business management strategy makes Citraland successful.

#### **Informant 7**

Informant 7 she is a career woman. She knew that Citraland is famous development. She choose to live in Citraland because it is near to her workplace, so the location is very strategies for her family. There is another factor to be considered like how good the facilities and the neighborhood and we think the condition is good so we lived here. She also feel more safe and comfortable living at Citraland. She says when natural disaster hit Citraland, they cleaning the roads and houses but they not did the evacuate well, the hotel vouchers are not distributed well, so it is very disappointing at the time. But she still choose to stay here because Citraland is so much better than the other housing. She will selling her house if there is a better housing in Manado.

#### **Informant 8**

Informant 8 knew about Citraland because Citraland is a very famous development when they first launched in Manado, the people is very excited. She says she feel so happy because finally she can live in a good place. she feel more better and comfortable living in Citraland because she can enjoyed all the facilities that she never got in her old neighborhood like security, jogging track, club house, playground, waterpark, etc. She says when Citraland hit by natural disaster it was very horrible but Citraland trying their best to help the victims, like giving a hotel vouchers, repair the damaged. After disasters they make a river normalization, river embankments and gabion walls to protect the river. She think it is effective. That's why she bought again another house in Cluster Diamond Hill and move from Cluster Victoria Park to Cluster Diamond Hill. She says the condition of citraland now is getting better. The sport hall that falls down to the river during disasters has already fixed, and now the security is has been improved like if there is a guest who wants to enter the cluster, their identity will be check and it will be return again when they leaving the cluster. So, she think the disaster that happened before did not affect the condition of Citraland within long term period. The proof is when I bought another house which is in Cluster Diamond Hill the price has increased.

#### **Discussion**

This research has been conducted in order to evaluate the value of real estate after the natural disaster, and Citraland Manado was chosen by researcher as a case study for this research. In business property it is very important to know the value of the properties itself in order to find out how success they run the business. The development of housing and real estate contribute to a major part of a country's economic development and gross domestic product (GDP). With the majority of the residential property, ranging from low to high end. Citraland Development is one of the high end development in Indonesia. It has been known as a good developer in business property. Changes in the values of real estate could have unpredictable consequences. Invest in real estate is a major source for saving for retirement. Various factors enter real estate market and affect the value. To estimate the value of residential properties it is crucial to determine the influence of factors that are associated with the housing characteristics and the influence of external factors on the value of residential properties (Ferland, Bastic, and Igor, 2013). Floods are natural phenomena that occur when streams, rivers, and lakes overflow their banks. In the context of natural disasters, floods are defined by the amount of damage they cause to people or property. According to Kropp (2012) there are a number of causes of flooding. Most commonly surface water flooding in times of heavy rain, river and coastal flooding will result in flooded property. In addition due to increase of global temperatures average sea level will raise. Property values are based on the bidding process and demand, which are driven by more, or less, attractive property characteristics .



The findings show there are several factors that influencing the value of Citraland Manado before and after natural disaster, most influencing factor are the brand and facilities and there are also several factors like security, environment and also location that influencing the value of Citraland but also maintain the value after natural disaster hit Citraland Manado in 2014. Based on these factors the result shows the value of Citraland is still can be maintain and the effect after natural disaster on the value is just temporary.

## CONCLUSION AND RECOMMENDATION

### Conclusion

1. Sea level rise, increase of storms and heavy rain that result in flooding and a general higher flood risk, this are the consequences of climate change we have to expect in the future.
2. There is influential factors that makes people prefer to live in Citraland but also stay in Citraland after natural disaster.
3. People tend to stay because of the quality and facilities that offer to them in order to make them satisfy.
4. The expectations of buyers when purchasing properties are constantly changing as a result of changes in the standard of living and lifestyle.
5. There are influential factors like the brand of Citraland, the facilities that offers by Citraland, high security to ensure the safety of people who lived in Citraland, a good and comfortable environment, location, price house, and the condition of Citraland after natural disaster in 2014 that determine the value of Citraland after disasters.
6. The effect of disaster on the value of Citraland is just temporary.

### Recommendations

Here are some recommendation proposed and found with this research for Citraland Manado and the next researcher.

1. To The Residential Property Development and Management of Citraland Manado  
Because there are several informants who felt a little disappointed about the respons of Citraland when natural disasters hit in 2014. Better to make an improvement about the services in unexpected situations. So in the future, it can be more responsive in facing such situations.

2. For next researcher

It is recommended to conduct research in wide areas of population, bigger sample, deep research about the value of real estate after natural disaster and also make some comparisons with some others housing that might also affected by natural disasters

## REFERENCES

- Anckar, B., and D'Incau, D. 2002. Value creation in mobile commerce: Findings from a consumer survey. *The Journal of Information Technology Theory and Application*, Vol. 4, pp 13-16. <https://aisel.aisnet.org/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1187&context=jitta>. Accessed on February 11<sup>th</sup>, 2018.
- Belch, S. 2001. *Advertising and promotion: an integrated marketing communications perspective*. 6<sup>th</sup> ed. McGraw-Hill, Boston.
- Ferlan, N., Bastic, M., and Psunder, I. (2017). Influential Factors on the Market Value of Residential Properties. *Journal of Engineering Economics*. Vol. 2 No. 28. <http://inzeko.ktu.lt/index.php/EE/article/download/13777/>. Accessed on February 23<sup>th</sup>, 2018.
- Kim, J., Park, J., Yoon, D.K., Cho, G. 2016. Amenity or hazard? The effects of landslide hazard on property value in Woomyeon Nature Park area, Korea. *Journal of Environmental Engineering*, Vol. 5, No. 7. Available from: [www.elsevier.com/locate/landurbplan](http://www.elsevier.com/locate/landurbplan).
- Korengkeng, M.R.E., and Tielung, M.V.J. 2018. Consumer Perception and Buying Decision for Indonesian Cosmetics Product in Manado. *Jurnal EMBA*. Vol. 6 No. 2. Accessed on June 27<sup>th</sup>, 2018.
- Kotler, P., Armstrong, G. 2010. *Principles of marketing*. 5<sup>th</sup> edition. Pearson Prentice Hall, Boston.

- Kotler, P., and Keller, K. 2011. *Marketing Management*. Global Edition. Pearson, Education Limited London.
- Kropp, S. 2012. The Influence of Flooding on the Value of Real Estate. *Journal of Environmental Factors*, Vol. 7, No.13. [https://www.fig.net/resources/TS06H\\_kropp\\_5729.pdf](https://www.fig.net/resources/TS06H_kropp_5729.pdf). Accessed on February 23<sup>th</sup>, 2018.
- Kumar, R. 1996. *Research Methodology*. 1<sup>st</sup> edition. Longman, Australia.
- Lamond, J., Proverbs, D. and Hammond, F. 2010. The impact of flooding on the price of residential property: A transactional analysis for the UK. *Housing Studies*. Vol. 2 (3). pp. 335-356. ISSN 0267-3037 Available from: <http://eprints.uwe.ac.uk/16219>.
- Messah, O.B. (2011) Factors That Influence the Demand for Credit for Credit among Small-Scale Investors: A Case Study of Meru Central District, Kenya. *Research Journal of Finance and Accounting*. Vol. 2, pp 7-10. [http://www.scirp.org/\(S\(351jmbntvnsjt1aadkposzje\)\)/reference/ReferencesPapers.aspx?ReferenceID=1742263](http://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=1742263). Accessed on February 7<sup>th</sup>, 2018.
- Peter, J. P., Olson, J. 2008. *Consumer behaviour and marketing strategy*. 8<sup>th</sup> edition. McGraw-Hill, Boston
- Saunders, P. 2003). Climate change, Flood risk, and property values: Evidence from New York City. *Journal of Environmental Economics and Management*. 65(3):361–376. <https://www.umass.edu/economics/sites/default/files/Mullins.pdf>. Accessed on May 13<sup>th</sup>, 2018.
- Shank, B. 2016. Modelling the impact of earthquake activity on real estate values: a multi-level approach. *Journal of European Real Estate Research*, Vol. 10 Issue: 1, pp.73-90. <https://www.emeraldinsight.com/doi/full/10.1108/JERER-03-2016-0014>. Accessed on February 23<sup>th</sup>, 2018
- Tzeng J. 2005. Understanding Factors That Influence House Purchase Intention. *Journal of Technology Management and Business*. Vol. 03, No. 2. <https://onlinelibrary.wiley.com/doi/abs/10.1002/col.20086>. Accessed on February 11<sup>th</sup>, 2018.
- Wang, X. 2014. The Impact Analysis of Geological Disaster Emergencies on the Real Estate Business Investment Decision-making. *Journal of Finance and Economics*, Vol. 10 Issue 9. <http://www.jocpr.com/articles/the-impact-analysis-of-geological-disaster-emergencies-on-the-real-estate-business-investment-decisionmaking-wenchuan-sam.pdf>. Accessed on March 23<sup>th</sup>, 2018
- Zeithaml, V. A. 1998. Consumer perception of Price, Quality, and Value: A Means-end Model and Synthesis of Evidence. *Journal of Marketing*. Vol. 2, pp 2. <http://dx.doi.org/10.2307/1251446>. Accessed on February 11<sup>th</sup>, 2018.