IMPACT: International Journal of Research in Business Management (IMPACT: IJRBM)
ISSN (P): 2347–4572; ISSN (E): 2321–886X
Vol. 7, Issue 12, Dec 2019, 17–22

THE IMPACT OF FLOODING ON PROPERTY VALUES

Ebiwari Wokekoro

Department of Estate Management, Faculty of Environmental Sciences, Rivers State University, Port Harcourt, Nigeria

Received: 09 Dec 2019 **Accepted:** 17 Dec 2019 **Published:** 24 Dec 2019

ABSTRACT

This study reviewed existing literature on the impact of flooding on property values. The review found that flooding impacts property values negatively. However few studies revealed a positive impact. A flooded property is a risk to the occupier and investor. The study concludes that flooding is a negative externality to property investment. The study recommends that floods prone areas should be upgradedto ameliorate the negative impact on property values and environment.

KEYWORDS: *Flooding, Property Values, Recreational Environments*

INTRODUCTION

Flood impacts human beings, animals, plants, the natural and the built environment. The consequences of flooding include loss of lives, destruction of properties and reduction in the value of properties, loss of livestock, destruction of infrastructure such as roads, bridges, airports, water and electricity, communication, displacement of families, poor health conditions due to water borne diseases, loss of livelihood and psychological effects. Flooding also impact the environment positively. The environmental benefits of flooding include increased fish production, recharge of groundwater resources, and maintenance of recreational environments. This paper reviewed the impact of flooding on property values.

LITERATURE REVIEW

Eves (2002) studied sales of residential house in flood prone areas and compared price movements of these houses with similar houses in immediate adjoining flood proof areas from1984 to 2000, which includes the last major floods in Sydney during 1990. This study period determines what impact a major flood has on residential housing prices and whether this effect is ongoing or decreases, the longer the area is free from flood affectivity.

Palagi, Patzlaff, Stumps and Kern (2014) analyses the impact of flooding on the real estate value in limeade city, Brazil for single-family homes. The results indicated that property values were lower by 16% for residential properties located in flood-prone areas than properties located outside these areas.

Rajapaksa, Zhu, Lee, Hoang, Wilson and Managi (2017) in order to explore the linear relationship the study analysed spatial and temporal variation impacts of the Brisbane flood 2011 on property markets using semi-parametric estimation. The results show that most environmental variables impacts on property values nonlinearly, and in particularly distance to the river, indicating that the amenity value of being close to a river outweighs the flood risks. The estimation of the combined impact of elapsed time and neighbourhood income indicates that the flood risk impact on property markets disappears over time.

Ebb water consulting (2014) carried out a study on the impact of flood hazard on real estate values and found that actual occurrence of flood and preparation of flood map reduced property values marginally.

Global (nd) research was conducted in Boulder, Coloradoto to examine the after effects of September 2013 severe flood on the average sales price of homes before and after the Flood between 2009–2014 were compared. The study found that the average price of home inside the floodplain was consistently higher than the homes outside the floodplain. Homes located inside the flood plains were 8.25% higher on the average.

The same research study also examined Ljubljana, Slovenia. Ljubljana, a city that has experienced major flooding on a consistent basis, was studied based on a flood that took place in September 2010. The average prices were studied between 2008-2014 for homes both inside and outside the floodplain. In the case of Slovenia, the average prices were higher outside the floodplains.

Kummer (2019) conducted a study on the impact of sea level rise on property values in New Jersey shore towns and found that property values along the New Jersey Shore are increasing but there was a reduction in property values in the shore towns such as Ocean City, Miami Beach, Sea Isle City, Atlantic City, Avalon, Brigantine, North Wildwood, and Mystic Island due to shrinking shorelines, flooding and storm surges

Eves & Brown (2002) examined the impact of flooding on residential property values in England. The study revealed the degree of flood effect across counties, the effect of flooding on residential property values, the impact of flooding on building insurance premiums and possible difficulties in obtaining finance to purchase residential property in known flood areas.

Donnelly (1989) used hedonic price analysis to examine the effect of floodplain on property values in a small mid- western town and found that home buyers do adjust the purchase price for houses within a floodplain with over 12% on the average. Lamond University of Wolverhampton, School of Engineering and the Built Environment, Wolverhampton, UK Correspondencej.lamond@wlv.ac.uk, Proverbs University of Wolverhampton, School of Engineering and the Built Environment, Wolverhampton, UK & Hammond University of Wolverhampton, School of Engineering and the Built Environment, Wolverhampton, UK (2010) carried out a study on the impact of flooding on the price of residential property, a transactional analysis of the UK market and found the impact of flood events to be highly variable and temporary and no effect of flood designation.

Montz and Tobin (1992) in their study found that houses in the subdivisions along the Trinity River are of lower value than non flood prone houses. They further stated that there is a distinction, both economically and socially, between flood prone and non flood prone properties in Liberty County, and both public and private actions have served to perpetuate that distinction.

Yeo (nd) reviewed the effect of flood disclosure on property values and found contradictory nature of the studies. Some studies have concluded that flooding or floodplain designation negatively influences property values, while others have demonstrated the opposite. The magnitude, spatial extent and duration of any effects are also seen to vary substantially.

Bin and Landry (2009) found that location within a floodplain lowers property value anywhere from two to twelve percent on the average. Kropps (2012) stated that even if some studies did not show an influence on the price of real estate, results of most studies revealed a negative influence on the market value of real estate caused by flooding.

Bin, O. and Polasky, S. (2004) conducted a study on the effects of flood hazards on property values: evidence before and after hurricane Floyd and found that on average, property values are reduced by an estimated 5.8% when located in a floodplain. The estimated discount for the floodplain for post-Floyd sales (8.4%) is larger than the discount for pre-Floyd sales (3.8 %).

Eves (1999) research confirms the results of earlier studies that flood liable property has a lower value than similar property that is not flood liable. Bartosova, Clark, Novotny and Taylor (2000) used GIS to evaluate the effects of flood risk on residential property values and that increases in flood risk decrease values for residential properties within the 100-year floodplain.

Ayedun, Durodola, Oni, Oluwatobi and Ikotun (2018) evaluated the impact of flooding on residential property value using Shogunro Residential Estate, Agege, Lagos State and the major cause of flooding in the estate is the construction of illegal structures across drainage channels. The study further revealed that flooding does not have considerable impact on the prices of properties within the estate.

Yeo, Rocheand McAneney(2015) reviewed international and local literature on the impact of flood risk information on residential property values and found that properties located in flood-prone land are often discounted; actual flood occurrence discounted property values and floodplain designation and its disclosure initiated or increased discounting, or have no effect, or even reduced discounting.

Aliyu, Garkuwa, Singhry, Muhammad and Baba (2016) reviewed literature on hedonic price models of the floodplain real estate market and found that the understandable concerns of owners of resisential property on the impact of flood risk on long term loss of property value are largely unfounded. Price discounts were observed for some recently flooded areas but they are temporary.

Tobin and Newton (1986) examined the impact of flood event on residential land values and opined that land values vary spatially across the flood plain and temporally depending on the frequency, severity and spatial characteristics of the flood event. They also stated that the negative aspect of flood hazard are capitalised in the value of the property.

METHODOLOGY

Several literatures were reviewed to reveal the impact of flooding on real property values. The internet was largely utilized in this review. Over fifteen studies were reviewed to examine the impact of flooding.

FINDINGS

The paper reviewed the impact of flooding on property the values. The investigation revealed that flooding largely has a negative impact on property values except for few studies with positive impact on property values in flood prone areas. The review found that actual flood occurrence and flood plain designation reduce property values considerably.

CONCLUSIONS

The paper examined the impact of flooding on property the values. Several studies were reviewed on the impact of flooding on property values. The study found that most of the studies agreed that flooded properties experience a reduction in value, while non flooded properties increased in values. The paper concludes that flooding impacts on property values negatively. Flooding will also lead to vacant properties as occupiers of such properties move out. Flood occurrence would likely detract buyers..

REFERENCES

1. *Aliyu, Garkuwa, Singhry, Muhammad and Baba (2016). Impact of flooding on residential property values: a review and analysis of previous studies. Proceedings of the Academic Conference of Nightingale Publications & Research International on Sustainable Development Vol. 2 No. 2. 31st March, 2016 – Federal University of Technology, Minna, Education Resource Centre Conference Hall, Niger State, Nigeria.*
2. *Ayedun, C. A., Durodola, D. O., Oni, S. A., Oluwatobi, A. O. and Ikotun, O. T. (2018). The Flooding Effect on Residential Property Values: A Case Study of Shogunro Residential Estate, Agege; Lagos State Nigeria. International Journal of Civil Engineering and Technology, 9(6), 489–496. http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=9&IType=6.*
3. *Bartosova, A., Clark, D. E., Vladimir Novotny, V. and Taylor, K.S.(2000). Using GIS to Evaluate the Effects of Flood Risk on Residential Property Values .The proceedings of the Environmental Protection Agency (EPA) Conference, January 10th 2000.*
4. *Bin, O. and Landry, C. E. (2019). Property Values and Flood Risk: What Happens to Risk Premiums over Time? Department of Economics, East Carolina University*
5. *Bin, O. and Polasky, S. (2004). Effects of flood hazards on property values: Evidence before and after hurricane Floyd. Land Economics, 80(4), 490–500.*
6. *Donnelly, W. A. (1989). Hedonic price analysis of the effect of a floodplain on property values. Journal of the American Water Resources Association. 25(3), 581–586.*
7. *EbbWater Consulting (2014). The Impact of flood hazard on real estate Values. http://www.ebbwater.ca/wp/*
8. *Eves, C. (1999).Long Term Impact of Flood Affectation on Residential Property Prices. International Real Estate Society Conference '99, Khuala Lumpur, 26–30 January 1999*
9. *Eves, C. (2002).The long-term impact of flooding on residential property values. Property Management, 20(4), 214–227 https://doi.org/10.1108/02637470210444259.*
10. *Eves, C. & Brown, S. K (2002) the impact of flooding on residential property values in England. In Proceedings of 9th European Real Estate Society Conference, Glasgow, Scotland.*
11. *Global, S. (nd) does Flooding Affect Property Values?*
12. *Kropp, S. (2012). The Influence of Flooding on the Value of Real Estate FIG Working Week 2012 Knowing to manage the territory, protect the environment, evaluate the cultural heritage Rom, Italy, May 6–10 2012.*
13. *Kummer, F. (2019). The impact of sea level rise on property values in N.J. Shore towns. iucr.org.*
14. *Lamond, J., University of Wolverhampton, School of Engineering and the Built Environment, Wolverhampton, UK Correspondencej.lamond@wlv.ac.uk Proverbs, D. University of Wolverhampton, School of Engineering and the Built Environment, Wolverhampton, UK &Hammond, F. (2010). University of Wolverhampton, School of Engineering and the Built Environment, Wolverhampton, UK The Impact of Flooding on the Price of Residential Property: A Transactional Analysis of the UK Market Journal of Housing Studies 25(3) 335–356.*

https://doi.org/10.1080/02673031003711543

15. *Montz, B. E. and Tobin, G.A.(1992). Market gatekeepers: Their impact on property values following flooding in Liberty, Texas. Louis de la Parte Florida Mental Health Institute (FMHI),University of South Florida, Scholar Commons, FMHI Publications*
16. *Palagi, S., Patzlaff, J., Stumpf, M. and Kern, A(2014). Analysis ofthe impact of flooding in the real estate value in lajeado city, brazil - case study for single-family homes Revista Ingeniería de Construcción, 29 (1), 87–97 www.ricuc.cl Pages 335–356 Received 01 Nov 2008, Published online: 27 Apr 2010*
17. *Rajapaksa, D., Zhu, M., Lee,B., Hoang,V-N., Wilson, C. and Managi, S. (2017). The Impact of Flood Dynamics on property values. Land Use Policy, 69, 317–325 https://doi.org/10.1016/j.landusepol.2017.08.038.*
18. *Tobin, G.A. and Newton, T.G. (1986). A theoretical framework of flood induced changes in urban land values. Water Resources Bulletin, 22(1), 67.*
19. *Yeo, S. (nd) Effects of disclosure of flood-liability on residential property values. Risk Frontiers-NHRC Macquarie University.*
20. *Yeo, S., Roche, K. and Mc Aneney, J.(2015). Effects of disclosure of flood-liability on residential property values: an update. Floodplain Management Association National Conference, 2015.*