

Factors Affecting Commercial Property Value

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Abstract: Commercial property in real estate is an asset that makes commercial profits, including shops, malls, office buildings and industrial parks. The objective of this study is to determine the factors that affect the value of the commercial property. It determines the factors that affect the value of the commercial property, whether the value of the commercial property rises or falls. The findings show that economic factors, transport, land use, quality design requirements, energy efficiency, etc., have an impact on the price of commercial property. In order to do these, market changes will have an impact on the value of commercial properties and require further action to overcome and accommodate them, i.e. policy review further research.

Index Terms: property value, factor, commercial, determine, land value, market price, micro, macro

1. INTRODUCTION

In real estate, commercial property is property used to make commercial profits, including shops, malls, office buildings and industrial parks. Commercial Property is divided into several types of offices, shops and industrial property. There are different categories with their own purpose. Offices used for the conduct of business, the provision of professional services or other administrative and government activities. Shops are either a shopping complex or a retail outlet for consumption purposes. Industrial property is used for the production process. (Ball, M., Lizieri, C., & MacGregor, B., 2012) According to Dan Nduti and Mr. Wambugu, commercial property value is developing an opinion on the value of the property in market value. There are several methods for the valuation of commercial property. Firstly, the capitalization approach is one of the methods of valuation of commercial property. The capitalization approach is a traditional method that is easy to implement compared to other techniques such as Discounted Cash Flow (DCF) and is useful when market information is lacking because it is based on rental income. Second, the comparative approach is also one of the methods used to value commercial property. Normally, it is used to value retail or a shop. The comparative approach is a basic one for the other methods. However, a comparative approach is difficult to execute when there is a lack of market information. In other words, a comparative approach is effective when there is a high level of data transparency, which means that the possibility of obtaining sales evidence is high. In addition, a cost approach can be used to value commercial property, such as a shopping complex that is considered to be a special property. Cost approach is used if there is a rare transaction, or if there is no transaction of a particular property. (McParland, C., Adair, A., & McGreal, S., 2002) In order to do so, a change in the market will have an impact on the value of commercial property and will require more research to prove it in the future.

Some factors will have a positive effect on commercial property, while the value of commercial property will increase. In other hands, the value of the commercial property also decreases the negative effect of some of the factors. For that, the aim of the study is to determine the factors affecting the value of commercial property.

The remaining sections are Methods (Section 2), Findings and Discussions (Sections 3-4) and Conclusions and Recommendations (Section 5).

2 METHODS

The literature review (literature survey, content analysis, thematic coding and inductive reasoning) (Ayob, 2005; Bluhm et al., 2011; Denzin & Lincoln, 2000) was used to identify factors affecting the value of commercial property. These methods have also been used previously by researchers in this field of study, i.e. Chong et al. (2019), Onuoha et al. (2018), Rahman et al. (2015a), Rahman et al. (2015b). This was done through a comprehensive search for publications related to the value of commercial property factors. The following databases have been searched: Google Scholar, ScienceDirect, Emerald, Scopus, SpringerLink, and SAGE. The publications contain a variety of literature on the factors used to determine the value of the commercial property. In the search for such literature, the following keywords are used: factor, commercial property value, land value, determinants and market price. The review period is from 1994 to 2017. After a thorough review, the literature with redundancy and considered improper was filtered out. There are a total of 20 journals with publications on the determinants of the value of the commercial property. Factors that influence the value of the commercial property extracted from the 20 journals generated a total of 19 factors, as indicated in the following sections. These factors are then grouped into macro and micro factors

3 MACRO FACTORS

3.1 Economy factor

The economy is one of the main factors contributing to the determination of the price of commercial property. According to Robert Cervero and Michael Duncan, the economy is one of the price-related factors, such as "Spikes in land values could be attributed to other factors, such as an upswing in the regional economy, improved road conditions, or better schools." The author explains that the regional economy also contributes to the price, just like other factors. "In addition, while the owners of a business property are legally liable to pay non-domestic taxes, they may be able to transfer some of the tax burden to other economic agents such as consumers (via higher output prices), employees (via lower wages) and landlords (via lower rents). This is explained by the fact that a business that operates in a commercial property can make the exception of paying the tax by lowering the cost of the customer's output prices, paying a lower salary to the worker

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and paying a low rent to the landlord. This may have an impact on the commercial property in terms of the cost of running the building business. The economic factor is also mentioned by Bruno Giussani, Marshall Hsia and Sotiris Iosifidis (1992) who said, "Although the study does not clarify the precise relationship between the owner-occupied and rented markets, it suggests that changes in the cost and return on capital affect the overall purchase / rent decision in line with the interest rates in four regions of the United Kingdom." So we can say that the owner's decision to rent or buy a commercial property is also affected by the rented market. Next, according to the author, E. Philip Davis and Haibin Zhu said the higher property prices facilitate the expansion of bank lending to the real estate sector. On the other hand, the increase in bank credit tends to boost the property market in the short term, but the impact will turn negative in the long run due to an oversupply of new construction. "The explanation is the relationship between the economy and the property price in terms of the bank lending outlook. The author is trying to simplify the idea that higher property prices will increase bank lending to the property sector, but will increase the impact of bank credit and will have an indirect impact in the future due to oversupply. The price will soon increase due to the supply while the demand is still low. In addition, the research carried out by S. Mr. Dobson and Mr. J. A. Goddard tells us that rents and prices in both locations (model research) must increase in order to reduce demand and stimulate supply until market clearing is restored in all cases. The result explains that, in order for the market to be stable in a certain place, the rent and the price of the property must be increased. This action is quite risky because the increase in price and rent of property will have an impact on the consumer to find other properties for rent. However, the plan is well said that if rent and price increase, demand and supply will be returned to order. So, we can say that an increase in rent and property prices can have an impact on the market to be in good order. Demand on the market will influence the price of property, which is a factor highlighted by the economic factor. Growth in business services employment is linked to increased demand for office space, increased consumer spending leads to increased demand for retail space, and increased production output is linked to demand for industrial space, said Ball, M., Lizieri, C., & MacGregor, B. (2012).-Yes. The author explains that the demand for office space has been influenced by the growth of employment in business services, while increasing demand for consumer spending will also influence retail space for industrial demand. This is because demand has had a huge impact on property prices, especially when the supply offer is low. According to J Flaherty's research (2014) "The capital return indices of the Australian commercial property markets (Aus Composite, Retail and Industrial Property) have significant positive correlations with inflation (CPI), the demand side of the economy (GDP and NCE) and the supply side of the economy (APV and CMC)." The author explains that the economic factor, such as inflation, demand and supply, has a significant positive relationship with the return on commercial capital of the property, because, when inflation occurs, the price of the property tends to increase due to high demand while the supply of the property is low, resulting in a higher return on capital of the commercial property.

3.2 Policy Intervention

Political intervention can influence the value of commercial

property. (Nelson, 1999 A. C.). To illustrate this, the intervention of public policy enhances accessibility to certain amenities of public transport. One of the policy criteria is supply restriction. To illustrate this, if there is a policy to restrict the development of commercial properties around certain stations, such as the railway system, it could have an impact on property value as commercial property value will be high if it is close to the railway system that will also be discussed in our findings.

3.3 The density factor

Density factor is one of the determinants mentioned by Robert Cervero and Michael Duncan in their article on Transit's Value Added Effects Light and Commuter Rail Services and Commercial Land Values. Research found that there were also significant numbers of employed residents clustered around commercial properties, with an average of almost six employed-residents per gross acre within a 1-mile radius of sampled parcels (or a total of 11,795 employed-residents within a 1-mile radius). Generally, commercial parcels were in desirable neighborhoods, reflecting average building value of more than \$70/ft² and average household income of more than \$68,000, according to Robert Cervero and Michael Duncan. Research shows that there is an increasing number of densities in the location of commercial property due to the worker who works in the area. This is because the worker tends to stay near their place of work. The reason workers stay close to their place of work is because they reduce the cost of transport.

3.4 Land use

One of the factors that will influence the value of commercial property is the type of land use. Four authors have identified and agreed that the land use factor would have an impact on the value of commercial property, namely Robert Cervero & Michael Duncan and Chris Huffman & Stanley D. Longhofer. Robert Cervero and Michael Duncan argued that the type of land use within 1 mile of commercial property could affect the value of commercial property. They also said that if a commercial property located near public land use, such as a university, hospital and police station, the value of a commercial property would increase. Other than that, Chris Huffman and Stanley D. Longhofer carried out separate statistical analysis for different types of land use, such as retail, industrial, vacant lot and office land use, since different types of land use will have different effects on different factors. The authors used the regression analysis to calculate the coefficient for each land use. For example, the land area coefficient for office land use is 0.225. This means that if the size of the land increases by 1%, the value of the office will increase by 0.225 per cent. Apart from that, the gross building area coefficient for retail land use type is 0.511, which means that if the gross building area increases by 1%, the retail land value will increase by 0.225 per cent. Normally, when there is public land use in the area, there will be a lot of labor and residents crowded around public land use, such as the hospital and the university. By increasing the density of labor and residents in this area, commercial property will benefit from many potential customers and potential employees. As a result, the value of commercial property will be increased.

3.5 Supply of new properties or convert existing properties to alternative uses

Supplying new properties or converting existing properties to alternative uses is also a factor that influences the value of the commercial property. This factor explains that the value of the commercial property may change if new residential properties are built in the surrounding area of the commercial property. This has a positive effect on the price of commercial value, as there will be a large number of neighborhood residents who will increase the rate of visitors to commercial properties. In addition, the conversion of existing properties to alternative uses has a positive or negative impact on the commercial property value. For example, if the residential area is converted to an industrial area at the end of the lease term, the value of the commercial property will decrease as potential buyers (residents) are lost. On the other hand, if a commercial property is built in an area where the conversion from industrial property to residential property takes place, the price of a commercial property will increase because there will be more buyers (future residents). Bond, Denny, Hall, and McCluskey (1996) argued that rental of commercial properties is subject to change when new properties are constructed or existing properties are converted to alternative uses. Thus, when the supply of new properties or the conversion of existing properties to alternative uses increases the value of the commercial property, either negatively or positively affects the value of the property.

3.6 The Non-Domestic property tax factor

The non-domestic property tax factor is the other determinant mentioned by Stephen Bond, Kevin Denny, John Hall and William McCluskey in the article entitled Effect of non-domestic rates on commercial property rents: an empirical study. The author points out that the value of commercial property is indirectly affected by the non-domestic rate. Stephen Bond, Kevin Denny, John Hall and William McCluskey (1995) argued that the impact of non-domestic rents on property markets could be to bridge the gap between the 'demand value' charged by the owner of the property and the 'offer price' provided by the owner of the property by Commercial Property Rent tends to change due to market demand and supply. The tax change is also reflected in the change in property prices, according to Stephen Bond, Kevin Denny, John Hall and William McCluskey (1995) "This change in the tax rate will result in a combination of an increased rent paid by the tenant and a lower rent received by the landlord." The author also mentions that economic theory suggests that changes to non-domestic rate bills may lead to changes in commercial property rents in the opposite direction. In addition, the impact of rate bills on property markets may vary, both over time and between different sectors of the property market.

Figure 1 provides an overview of all the factors collected.

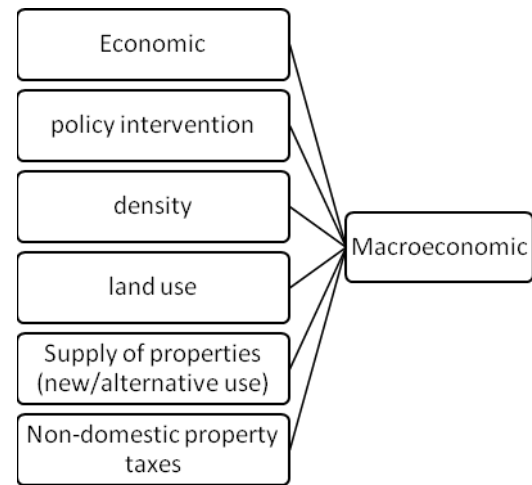


FIG. 1: FACTORS AFFECTING COMMERCIAL PROPERTY VALUES (MACRO)

4 MICRO FACTORS

4.1 Traffic volume

In addition, the traffic volume can be one of the determinants of the value of the property. It tends to have an impact on certain commercial properties which are retail but not office properties. According to Chris Huffman and Stanley D. Longhofer, a 1 per cent increase in traffic volume will increase retail property sales prices by 0.287 per cent. This is because, when the volume of traffic increases, the visibility of commercial property increases.

4.2 Social amenities

Social amenities are one of the factors that will affect the value of commercial property. Dan Nduti & MsWambugu (2017) stated that although the social amenities are unobserved characteristics that could influence the value of the commercial property, the characteristics would be related to the geographical location of the residential property in the vicinity. As a result, the value of commercial property will increase as social amenities are provided in a good condition that people can easily access and get from the neighbourhood. In addition, people will go to commercial properties in the vicinity of residential properties that provide health and care facilities, educational institutions and so on.

4.3 Transportation/infrastructure

Transportation and infrastructure, such as the railway station, is one of the factors affecting the value of commercial property. This factor has been mentioned by many authors from 7 articles out of 20 articles that we found out, such as GhebreegziabiherDebrezion & Eric Pels&Piet Rietveld, Tao Xu, Ming Zhang b, Paulus T. Aditjandra, Kate ko&Xinyu, Dan Nduti&Mr Wambugu, Robert Cervero and Michael Duncan, Haixiao Pan and Ming Zhang, and Chris Huffman and Stanley D. Longhofer. First of all, Ghebreegziabiher Debrezion & Eric Pels and Piet Rietveld explained that the difference in the

value of the commercial property is measured by the accessibility of the commercial property to the transport station and the cost of transport. They also found that a higher quality railway station would have a greater impact on commercial properties located near the railway station. Dan Nduti and Mr. Wambugu also said that investors will be more willing to invest in that commercial property if the commercial property is located in an area with adequate transport facilities and thus increase the demand and value of the property. Robert Cervero and Michael Duncan argued that commercial property would benefit more from capital appreciation than residential property due to the transport factor. Other than that, Kate Ko and Xinyu said that if a commercial property is located far from the transport station, the value of the property will decrease. The reason for this is that the willingness to pay for the property decreases when the accessibility of the property to the railway station decreases. Tao Xu, Ming Zhang and Paulus T. Aditjandra found that the MRT station in Wuhan, China, had increased the value of commercial property in the vicinity of the station. They also found that commercial properties in the vicinity of the MRT station in Wuhan, China enjoy a 9.02 per cent increase in property prices. This happens when the accessibility of commercial property to the transport station increases, demand for commercial property will also increase and demand will increase the value of commercial property. Commercial property located near the railway station will benefit from shorter transport time and also travel costs, thus increasing the value of the commercial property.

4.4 Neighbourhood quality

Neighborhood quality will also be one of the factors affecting the value of commercial property. According to Robert Cervero and Michael Duncan (2002), commercial value is said to have an impact on household income when the commercial parcel is within a 1-mile radius. This article explains that when people stay around commercial property, the value of commercial property will increase as household income is high. As a result, the household will be able to buy the thing when they have a high purchasing power. It is therefore clear that the quality of the neighborhood will influence the increase in the value of commercial property.

4.5 Signalized corner lot

Signalized corner lot plays an important role in affecting the market value of commercial properties. Signalized corner lot refers to a piece of land that is located where two roads intersect. This type of land is more valuable because it has a frontage on two of its sides. Normally, commercial property developers tend to pick up a signposted corner lot so that the value of the property increases where a lot of people are aware of the existence of the property since it has two frontage sides. This is explained by Huffman and Longhofer (2016) by stating that the value of the signaled commercial property is more valuable than the signaled non-corner lot where the coefficient is between the signaled corner lot with a commercial property value and the signaled non-corner lot with a commercial property value. The result showed that the signaled corner lots had a higher coefficient of commercial property value than the signaled non-corner lots. As a result, the signaled corner lots have a positive impact on the commercial property value.

4.6 Age of property

Chris Huffman and Stanley D. Longhofer said that age is one of the factors that influence the value of commercial property. Both said that the age factor had a negative relationship with the value of commercial property. The result of the regression shows a positive age-square coefficient, which shows that when the age of commercial property increases, the value of the property will decrease. This has been led by the overall attractiveness and appearance of the property decreased and the cost of repair and maintenance increased when the property got older. All of the reasons will reduce the demand for old commercial property, thus lowering the value of commercial property.

4.7 Improved highway quality

Improved highway quality also plays an important role in the factor affecting the value of commercial property. Robert Cervero and Michael Duncan (2002) pointed out that not only will the rail service increase the land value of commercial property, but that it also includes a factor that influences land value. A highway of good quality will reduce accidents and ensure safety in the road due to its increased stability and reliability in the commercial area. In addition, residents will easily pass through the highway of good quality to the commercial area, which may increase the value of commercial property. Improved highway quality will therefore have a positive impact on the value of commercial property.

4.8 Flood zone

The flood zone is considered to be one of the determinants of the value of the commercial property. Today, floods are becoming a global concern. It's because people are affected by the flood. They lose their property, their clothes, their shelter, their food and their drinks, and even the one they loved because of the flood. This flood risk is increasing as the world is developing with so many buildings and less initiative to avoid the risk of flooding. Despite this, most of the buildings are subject to exposure to flood risk, and the value of the property is affected by such an incident. Commercial property is also not an exception in this case. Huffman and Longhofer (2016) run a regression model between the flood zone and the commercial property value where, as a result, the flood zone has been shown to have an impact on the commercial property value where the value decreases. In addition, before a developer builds a commercial property, he should carry out research on the location and surroundings of the flood zone. In addition, commercial property that is built within the flood zone is more likely to fall in value because people will not afford to go to a commercial property where a flash flood could occur at any time. Thus, the flood zone negatively affects the value of commercial property.

4.9 International airport

The international airport has an impact on the value of commercial property. To illustrate this, the value of trade will decrease as the distance to the airport facility increases. This scenario will be more obvious for commercial properties that are particularly used for aviation purposes. These international airports increase the importance of airport planning as well as the integrated metropolitan area. (Cohen, J. P., and Brown, M., 2017).

4.10 Design quality specifications

Design quality specification factor was stated in articles written by IlirNase, Jim Berry, Alastair Adair, Robert Cervero and Michael Duncan and Stephen Bond, Kevin Denny, John Hall and William McCluskey as factors affecting the value of commercial property. IlirNase, Jim Berry and Alastair Adair argued that the design quality specification included connectivity and building façade distinctiveness, the quality of materials used for commercial property construction. When the built environment of a commercial property has improved, the value of a commercial property will also improve. Buyer tends to purchase a commercial property with a good design and built with high quality building materials. Higher quality of commercial property had a higher level of amenity with capacity, which would increase the utility of the user. When the design and quality of commercial property increase the demand for commercial property will increase and increase the value of the property as the purchaser is more willing to purchase higher quality commercial property. Stephen Bond, Kevin Denny, John Hall and William McCluskey and Robert Cervero and Michael Duncan also said that the quality and design of the property would increase the rental price and market price of the commercial property. Design quality specifications that increase the price of commercial properties are, for example, fiber optic cable, building materials quality and modern design. Normally, investors or buyers tend to purchase commercial properties of higher quality because the cost of repair and maintenance will decrease as all parts of the property will run longer and then increase the price of commercial property.

4.11 Energy performance/energy efficiency

Energy performance and energy efficiency are one of the factors that have an impact on the value of commercial property. Two authors, Franz Fuers, Patrick McAllister and Markus Surmann, Wolfgang Brunauer, Sven Bienert, mentioned this factor. Both articles found that there is only a weak relationship between energy performance and the value of commercial property. The reason for the weak relationship between them is that the energy efficiency of the property is still not a key factor in considering the purchase of the property. The other reason is that the number of observations is less and too weak to prove the strong relationship between energy performance and property value.

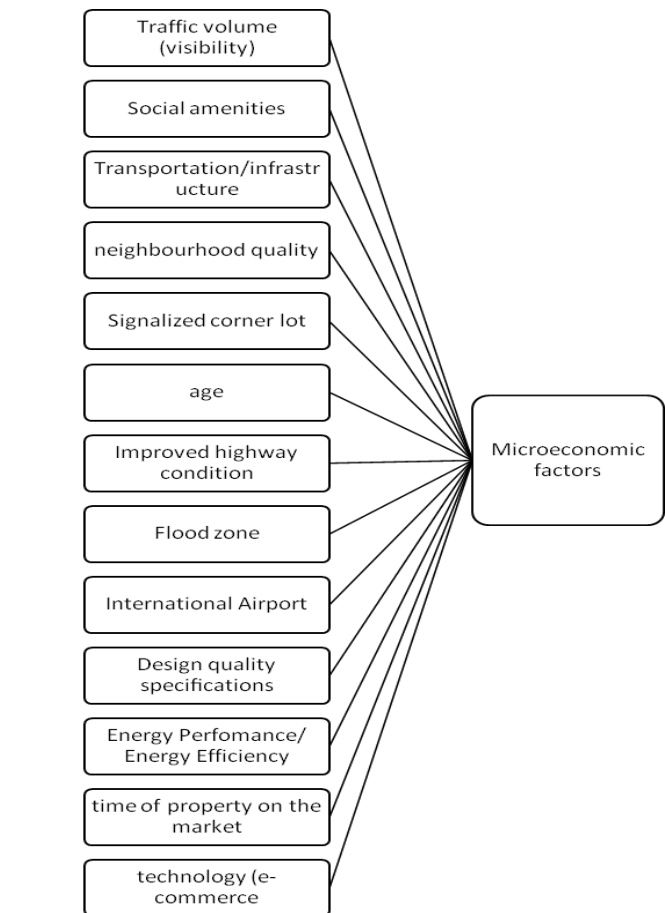


FIG. 2: FACTORS AFFECTING COMMERCIAL PROPERTY VALUES (MICRO)

In our opinion, energy performance will be a major factor affecting the value of commercial property. Property with higher energy performance, owners or tenants who stay in the property will benefit from lower operating costs as there is less electricity and water in the property due to solar panels and rainwater harvesting installed in the property. It will also increase the productivity of workers, as it will increase the satisfaction of workers and reduce the turnover of employees in commercial properties. As far as investors are concerned, investors will benefit from reduced holding costs. This is because when the energy efficiency of the building increases, the vacancy rate will decrease and the retention of tenants will increase. All of this will contribute to an increase in the value of commercial property.

4.12 Time of property on the market

Allison M. Orr, Neil Dunse and David Martin have stated in their article that the time of property on the property market is a factor affecting the value of commercial property. The time taken to sell the property usually takes a long time because of the buyer's consideration and the buyer's compromise on the price of the property. The property price decided by the seller shall determine the duration of the transaction of the property. Normally, the seller will set a competitive price to speed up the time of the property transaction. In order to speed up the process, the seller will lower the price of his property in order to sell his property more quickly. Higher property prices will increase the likelihood of a long property transaction. The

faster the seller wants to sell his property, the lower the price the seller is willing to accept. Some commercial property sellers may want to shorten the duration of the property transaction in order to release their mortgage liability, so that the seller is more willing to accept a lower property price.

4.13 Technology (e-commerce)

John S. Baen said that e-commerce technology would have an impact on the value of commercial property. E-commerce will cause a leak in the retail store as well as in other commercial properties. Nowadays, people tend to buy goods and stuff via online (e-commerce) instead of going to a retail store because of the convenience of e-commerce, which only needs a single click to buy something. In traditional commercial properties, e-commerce technology will result in lower sales volumes, lower profits, greater competition, and also higher vacancy in commercial properties. When fewer customers go to the traditional retail store to buy goods, most of the retail stores will be in vacant possession and will cause the demand for retail stores and commercial properties to decline, thereby reducing the value of commercial property. Overall, the discussion in section 4 can be summarized conceptually as shown in Figure 2.

5 CONCLUSION

The study was divided into two parts: macro-economic and micro-economic. The economic factor and the transport / infrastructure factor was mentioned by the majority of the authors who could influence the value of the commercial property. The value will be influenced by the three other authors who support the design quality specification. Next, energy efficiency / energy efficiency and land use will also have an impact on the value of commercial property mentioned by two authors. Whereas the other factors affecting commercial property value include policy intervention, density, supply of types of new properties that are converted for alternative use, non-domestic property tax, traffic volume (visibility), social amenities, neighborhood quality, signaled corner lot, age, improved highway conditions, flood zone, international airport, time on the market and property. In the study, we learn that the new factor will contribute to the value of commercial property: time on the market for property, technology (e-commerce), traffic volume, energy efficiency and non-domestic property taxes, which will either increase or decrease the value of commercial property. The study was intended to address the fact that the market would not follow the theory as we had studied, as there were many uncertainties that might arise. We had chosen only 20 journals or articles that were relevant to our study. In our opinion, the theoretical part of the factor affecting the value of commercial property requires more research to give a clear and detailed explanation of the factors involved.

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