

ASSESSMENT OF PRIVATE STUDENTS' HOSTEL INVESTMENT AROUND THE FEDERAL POLYTECHNIC, ADO-EKITI, NIGERIA

Sulaiman, Doyinsola Khadijat¹, Ogungbe, Mayowa Adedapo² & Jejelola, Olajumoke Folasade³

¹Research Scholar, Department of Estate Management, Federal Polytechnic, Ado-Ekiti, Nigeria

²Research Scholar, Department of Estate Management, Federal University of Technology, Akure, Nigeria

³Research Scholar, Department of Estate Management, Adekunle Ajasin University Akungba Akoko, Ondo State, Nigeria

ABSTRACT

The dream of every young secondary school students has being to further their education career into the tertiary institution to become the person they have being dreaming or hoping for. As a result of this, every nation of the world have being experiencing a proliferation in the number of student that are being enrolled into the tertiary institution on yearly basis. Sequel to the increase in the number of enrolment per year and couple with the deficit in the number of students un-accommodated into the on-campus hostel per year has being a major issue in satisfying student housing accommodation, hence the need for private investors to invest in private student hostel in tertiary institutions. This research examined private student hostel investment around Federal Polytechnic, Ado-Ekiti with a view to ascertaining the risk involved and the level of profitability of private student Hostel Investment. The target population of the study was the owners of private student hostels around the Federal Polytechnic Ado-Ekiti. The sampling frame of the private hostel investment around the Federal Polytechnic was derived by means of a census covering Demola Junction, Aba and Afe Babalola axis. The study examined five different hostel type which include; a single room, self-contained, one bedroom flat, two bedroom flat and three bedroom flat. The research revealed that, though all the hostel types seems to be profitable to invest upon, but an investment in self-contained hostel room is more profitable to invest in because of its low level of risk and also because of its profitability index. The study therefore recommend among others that investors should endeavour to invest more on private student hostel with more concentration on self-contained hostel investment which is less risky and profitable type of investment. Therefore, the importance of this study is to advice investors on the type of hostel type to invest in the study area.

KEYWORDS: *Assessment, Profitability, Private Student Hostel, Investment, Ado-Ekiti*

Article History

Received: 10 Dec 2020 | Revised: 15 Dec 2020 | Accepted: 17 Dec 2020

INTRODUCTION

Central to the functioning of any effective tertiary institution is providing for the various needs of the student body. This not only refers to tuition, but also to the accommodation and well-being of students. Students are the main target for the establishment of any tertiary education system (Alaka, Pat-Mbano and Ewulum, 2012). Ajayi, Nwosu and Ajani (2015) also posited that students are the single most important stakeholders in the Nigerian Tertiary Education System. Further, Nigerian tertiary institutions over time have experienced a significant rise in student enrolments over the past decades. According to Bello and Adebisi (2014), Nigeria has the biggest tertiary education system in sub-Saharan Africa with over 114 accredited

tertiary institutions. What's more is that more than 50 % of these tertiary institutions have a student body of over 20,000 students. Having such a large and increasing number of tertiary education students across the country presents challenges in terms of providing the necessary infrastructure and services to facilitate the education of these students. As a result of these challenges, the increased surge in students' enrolment has not been matched by a corresponding growth in student accommodation. Figures from the National Universities Commission (2004) show that the provision of student housing is less than 30 % of demand. Ubong (2007) asserted that the vast majority of students live off campus in privately rented accommodation. Statistically, over 60 % of students in most of the tertiary institutions are non-residents meaning they live in privately rented apartments because of inadequate residence hall or on campus accommodation (Asare-Kyire, Appienti, Forkuoh, & Osei, 2012).

The fast emergence of student enrolment into tertiary institution with limited accommodation as reported by Bello and Adebisi (2014) creates opportunities for the development of student hostel by private investors in many cities in Nigeria (Ubong, 2007). The emergence and growth of privately developed off campus student accommodation around Nigerian tertiary education institutions has been driven by the dual factors of increased student populations and the failure of the institutions to adequately respond to the growing housing needs of the student population. (Akinpelu, 2012).

Alaka *et.al* (2012) asserted that in Nigerian universities generally, the on-campus students accommodation has remained grossly inadequate, leading to the readjustment of the previous bed space arrangements into bunk spaces, and previous room spaces into bed spaces, without actually reducing the rent charged per space readjusted. This therefore affects the satisfaction derived from the students and thus their intention to seek other accommodation facilities. They thus seek same one outside the campus. Alaka (2010) thus posited that this situation has rather intensified the land development and conversion of land uses around institutions of higher learning. No matter how many hostels schools provide, they are never enough for the teeming students that are admitted every year. This explains why those who build houses close to the higher institutions keep increasing the prices for rents and hence making more profits through extortion. The increasing rate of this kind of development thus, requires evaluation of the profitability of such investments (Akinpelu, 2012).

The crowded population of learner and graduate students makes the demand in lieu of accommodation in the area, portly and constant. This demand has invariably inflated the rents and makes renting to students a preferred option in lieu of other person as a result of the high rent been paid by the students. Perhaps accommodate on the increasing costs that become associated with tertiary education. Making it even more prohibitive to the population. Making tertiary education unaffordable to the vast majority of the population is a significant issue for many countries.

In the light of the above discussion, this study therefore tends to assess the private student hostel investment around Federal Polytechnic Ado-Ekiti with a view to ascertaining the risk involved and level of profitability of private student hostel investment. The study adopted the use of standard deviation to determine the risk inherent in each hostel type. Also profitability index was used to determine the profitability rate of each hostel type using an rate of 25% been the prevailing average interest rate on loan in Nigeria. The scope of the study was limited to Federal Polytechnic Ado-Ekiti because of several factors relating to its location such as the high population of students enrolment, limited number of available on-campus hostel, among others. The research focused on the private student's hostel investment around Demola Junction, Aba and Afe Babalola axis because private hostels in these areas are registered and recognized with the school Student affairs.

The Research Questions Are:

- What are the risks involved in private students' hostel investment?
- What is the level of profitability indices of private students' hostel investment?

LITERATURE REVIEW**Private Student Housing Development**

Student housing is an important and lucrative real estate segment (Mitra 2017). This is due to the ever increasing growth in higher education enrolment both in the developed and developing countries which has underpinned the demand for student accommodation. Over the past four years, international capital investment in student accommodation has accounted for about 40 percent of investment in the European real estate market (Europa Property, 2020). In 2017, Savills reported that the global investment into institutional student housing continued to surge up. This assertion is backed up with the record-breaking \$16.45 billion in 2016 which surpasses the previous annual record of \$15.6 billion set in 2015. Furthermore, Chong (2017) affirms that the global student housing sector, now worth about US\$180bn (€165bn), as operators push new boundaries beyond the established markets. In the world student housing market, the US and the UK continue to be the dominant players (Garg, Gupta & Jha 2014) due to the level of maturity of the market and the fact that the demand for studying in these countries has been exceptionally high compared to other countries (Boussia & Papadimitriou 2016). Other top five countries include Germany, France, Spain, the Netherlands, and Australia. For instance, the US went up from \$5.96 billion in 2015 to \$9.82 billion of investment in 2016 – a 65 % increase and stands as a new record for the country. A survey carried out by Student House Business (2017) in 2015 alone, revealed that there are over 167 student housing properties undergoing construction comprising 97,045 beds. Similarly, the UK market secured \$3.84 billion investment, its second highest volume ever, after record-breaking volume of \$7.24 billion in 2015. In European countries like France, student housing investment increased by 245 % from €49 million in 2015 to €169 million in 2016 and by 380 % in Germany from €154 million in 2015 to €741 million in 2016 (Savills World Research 2017). Prasad (2006) and Prasad (2008) stated that the important reason for the involvement of the Private Sector in the provision of private student hostels is that most governments find themselves facing deep budget deficits and public finance crisis. According to Europa Property (2020), interest in investments in the private student housing sector in Poland is constantly growing. Investors see this market as highly absorptive, which currently satisfies less than 10 percent of the demand for student accommodation. Significant advantages include forecasts concerning the constantly growing number of foreign students in Poland and attractive rates of return on investment

Likewise, in Australia, Singapore and India the experience seems to be surging considerably within their student housing sectors, though the market is considered 'immature' when compared to that of the UK and US (Karpinski 2015; Garg, Gupta & Jha 2014). The investment, according to Mitra (2017), gains prominence mainly because of the higher yield rate it generates more than commercial yield rates. The market is only considered matured in the advanced nations like the USA, the UK, and Germany and less matured in developing nations but it offers rental returns and growth [Savills World Research 2014]. Methods used in calculating investment analysis includes: Profitability assessment and Investment Risk

Student Housing Profitability Assessment

The investment, according to Mitra (2017), gains prominence mainly because of the higher yield rate it generates more than commercial yield rates. The market is only considered matured in the advanced nations like the USA, the UK, and Germany are less matured in developing nations but it offers rental returns and growth.

(Savills World Research, 2014). Raimi, Ibisola, & Abdul 2019 opined that private developers / investors are encouraged to take advantage and pool more resources in student housing investments in order to maximize profits and meet the growing demand in the global world. According to Aol Real Estate Contributor (2008) report revealed that student enrolment has raised from 98 million in 2000 to 165 million in 2011 globally with an average increase of 6 million yearly. Following that trend of growth, it is expected to increase have an estimated number of around 195 million students by 2020. Student housing investments continue to gain the attention of real estate investors in the world. Raimi, Ibisola, & Abdul 2019 opined that private developers / investors are encouraged to take advantage and pool more resources in student housing investments in order to maximize profits and meet the growing demand in the global world. According to Levisauskait (2010) return is any profit that comes with an investment which is usually determined by the historical return of such investment over a period of time. In estimating the return, arithmetic average return or sample mean of the returns (\bar{r}) can be used:

$$\bar{r} = \frac{\sum_{i=1}^n r_i}{n} \quad (1)$$

r_i - rate of return in period i ;

n - Number of observations.

Student Housing Risk Assessment

Risk can be defined as a chance that the actual outcome from an investment will differ from the expected outcome. Obvious, most investors are concerned that the actual outcome will be less than the expected outcome. The more variable the possible outcomes that can occur, the greater the risk (Levisauskait 2010). Variance and the standard deviation are similar measures of risk and can be used for the same purposes in investment analysis; however, standard deviation in practice is used more often. So, the total risk of investments can be measured with such common absolute measures used in statistics as standard deviation. In this case the arithmetic average return or sample mean of the returns (\bar{r}) is used instead of expected rate of return; sample variance (δ^2r) can be calculated:

$$\delta^2r = \frac{\sum_{t=1}^n (r_t - \bar{r})^2}{n-1} \quad (2)$$

$n-1$ Sample standard deviation

(δr) consequently can be calculated as the square root of the sample variance: $\delta r = \sqrt{\delta^2r}$. Levisauskait (2010)

Private Student Housing Investments in Nigeria

There has been a sporadic increase of student enrolment into higher institution of learning in the last three decades (Ghani and Suleiman 2017). Raimi, Ibisola, & Abdul (2019) affirmed that the there has been an increase in the demands for student housing need become widened as a result of the number of enrolling students in tertiary Institution in Nigeria and thereby opening investment opportunities for prospective investors. he study recommends that private developers/investors be encouraged to take advantage and pool more resources in student housing investment in order to maximize profits and meet the growing demand in the global world (Raimi, Ibisola, & Abdul 2019).

Alaka, Pat-Mbano and Ewulum (2012) reported that the private hostel investors within the neighbourhood market currently contribute 25 percent of the accommodation provision for the Imo State University, IMSU students at a room occupancy ratio of two to a room, within the layout. Similarly, Adewunmi (2012) supports the assertion that figures provided by the National Universities Commission (NUC) show that the provision of student housing is less than 30% of its demand

which means that the property market has found it difficult to kept up with the increasing growth. This led the Nigerian government in 2014 to encourage private hostel providers to develop more hostel accommodation to ease student accommodation pressure (Pat-Mbano, Alaka & Okeoma 2012). Using a case study approach, both probability and non-probability sampling designs were employed. From the financial analysis, it was found out that using a discounting factor of 20 percent which is the going interest rate on loans by banks, none of the hostels under study was viable within a period of 30 years as their Benefit Cost Ratio's(BCR's) were less than one and their Net Present Value's(NPV's) were also negative. The study has however succeeded in proving wrong the research in that all the hostel type investment considered in the analysis were all profitable, this could be as a result of variations in factors which include the area of study or the nature of demand for accommodation used in the projections.

Ogungbe, Olukolajo and Binuyo, (2018) carried out a financial assessment of Private Student Hostel in Nigeria Tertiary Institutions: A Case of FUTA Campus Findings arising from sensitivity analysis indicated that a decrease of 35 percent in the demand for a room self-contain at a discounting factor of 25 percent shows the project not viable. The study identifies that investment in student hostel off-campus is very sensitive to student demand even at eight (8) percent reduction. It was recommended that investors should consider the option of investing on-campus rather than off-campus; a means towards this is Public Private Partnership.

METHODOLOGY

A survey research design was adopted for this study and this is because it enables samples to be selected from the entire population in order to analyze data.

Both primary and secondary sources of data was adopted towards achieving the aim and objectives of the research which is to assess the private student hostel investment around Federal Polytechnic Ado-Ekiti with a view to ascertaining the risk involved and level of profitability of private student hostel investment.

The primary data was derived through the use of questionnaires administered randomly to the owners of private student hostels in the study area, while the secondary data information such as the total number of rooms, rent, location and address of the owners was derived from the records with the office of the Dean of student of registered private hostels located within the Federal Polytechnic, Ado-Ekiti. The target population of the study were the owners of these registered private student's hostels around the Federal Polytechnic Ado-Ekiti. This is because the Federal Polytechnic, Ado-Ekiti which had a pioneer student enrolment of 350 (full-time National Diploma) and 95 academic staff in 1978 now has over 10,000 students (full-time and part-time National Diploma and Higher National Diploma, Certificate and Professional programmes) and a total staff strength of about 1,500 and with insignificant on campus accommodation to cater for the housing needs of both the students and staff of the institution. Hence the need for the school to accommodate private student hostel establishment.

The sampling frame of the private hostel investment around Demola Junction, Aba and Afe Babalola axis, Federal Polytechnic was gotten from the records of registered hostels with the school. The School record revealed that there are forty (40) purposely built private students' hostel buildings in the area and this was used as the sample size.

With stratified sampling, the sample population was divided into a number of strata based on the type of property and a sample was drawn from each stratum. This approach was adopted from Asare-Kyire et al 2012 and Lydia et al 2016. This was used to stratify the hostels into types – single room, self-contained room, one bedroom flat, two bed room flat and three bedroom flat. A self-contain accommodation is a room equipped with private toilet, bath and kitchenette whereas

occupants of single-room accommodation share such facilities with other tenants.

The study examined the risk inherent in hostel investment using standard deviation to determine the risk. Standard deviation is a measure of the amount of variation or dispersion of a set of values and standard deviation is used because it helps determine the market volatility or the spread of asset prices from their average price.

The Formula for Calculating Standard Deviation Is

$$SD = \frac{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2}}{N} \quad (3)$$

Where;

SD= Standard deviation

\sum = sum of

x_i = each value in the data set

\bar{x} = mean of all values in the data set

N= number of value in the data set

The risk of the various investment options which is the different hostel type was derived using standard deviation. The yield of the various hostel types was gotten from estate surveyors and valuers in the study area. A yield of 10 % was ascribed to a single room and a self contained hostel type, while a yield of 8 % was ascribed to one bedroom flat, two bedrooms flat and three bed room flat. This is because the higher the yield the lower the price or value of the building. The yield was used to calculate the return using the formula in equation 2. This was further used to determine the standard deviation of the various hostel type using equation 1.

$$((CV_{\text{present}} - (CV_{\text{past}} + NI)) / CV_{\text{past}}) * 100 \quad (4)$$

In order to determine the profitability of the various types of hostel investment, the growth rate was determined using equation 3 which is rent of the current year divided by rent of the preceding year minus 1 This shows the various growth rate of the hostel type.

Table 1 shows the sample population been divided into a number of strata based on the type of property and a sample was drawn from each stratum. Are preventative of the various hostel type was picked for a single room, a room self-contain, one bedroom flat, two bedroom flat and three bedroom flat.

Table 2 shows a typical hostel type that was picked for the study representing the various hostel types showing the total number of units per building and average rental value. These buildings were picked because they have the average number of unit and rental value in the study area, hence the justification for selecting them.

The Following Assumptions Were Made in Order to Determine the Profitability Index of the Various Hostel Investments

- That all the rooms were fully let during the study period of this study.
- That the source of capital of the captured hostels was through mortgage loans which attracted an average interest rate of 25 percent. Interest rate of 25 percent was used been the average interest rate on loan in Nigeria.
- Outgoings would be deducted from the total benefits. (management fee at 10 % of gross rent, and repairs at 5% of net rent which will be deducted at every 3 years)which is the common practice of most of the landlords in the study area.

Table1: Sample Size Determination

Hostel Type	Sample Size of Property Owner	Percentage
Single room	13	32.5
Self-contain	18	45
1 bedroom flat	4	10
2 bedroom flat	3	7.5
3 bedroom flat	2	5
Total	40	100

Table 2: A Representative of the Various Type of Hostel Type Showing the Total Number of Units per Building and Average Rental Value

Hostel Type	Total No of Units	Average Rental Value
Single room	20	35,000
Self-contain	15	75,000
1 bedroom flat	12	85,000
2 bedroom flat	8	130,000
3 bedroom flat	4	200,000

ANALYSIS AND DISCUSSION

Risk Analysis of the Various Hostel Type

Risk can be defined as a chance that the actual outcome from an investment will differ from the expected outcome. However, standard deviation is often used by investors to measure the risk of an investment Levisauskaite (2010). The idea is that standard deviation is a measure of volatility, hence the more investment returns vary from the investment average returns, the more volatile the investment Levisauskaite (2010). Standard deviation was therefore used to measure the level of risk of the various hostel types.

Table 3 revealed the rate of return and the risk involved in private students' hostel investment. The results shows that the investment in student hostel has a negative rate of return in the study area with self-contained apartment having the highest negative return of -6, followed by a one bedroom flat with -4 rate of return. It must also be pointed out that the level of the total rate of return is mainly determined by the capital based rate of return. Comparing this result with other study on profitability of investing in residential units: the case of real estate market in poland in the period from 1997 to 2011, Trojanek and Trojanek (2012) opined that investment in residential units in Poznan in the years 1997-2011 showed positive rates of return, except for 2001, 2008, 2009 and 2011.

For the risk involved in student private hostel, the result shows that; for a single room hostel investment, the standard deviation is 7.84. Also, for a self – contain hostel investment, the standard deviation is 2.95. While for a One-bedroom flat, Two- bedroom flat and Three-bedroom flat the standard deviation is 3.35, 7.08 and 4.65 respectively. The interpretation of these results is that a lower standard deviation indicates that the values tend to be close to the mean or the

expected value while a high standard deviation indicates that the values are spread out over a wider range. The implication of these result to the study is that self contained apartment and one bedroom flat are less risky investment option and better for a risk averse investor. Ignoring the negative sign of the returns from these investments, the result shows that investments in self contain has the highest return which implies that a self-contain investment is a risk adverse investment and most suitable and profitable investment option. However, this result is in line with the work of Ogungbe et al, (2018) which revealed that investment in a self-contain hostel is a profitable type of investment and risk averse. To compare with other development types in Nigeria these findings agrees with that of Nwosu (2019). The study dealt deeply into the returns of real estate investment, inflation hedging of real estate investment types and the relationship that exists between inflation rate and real estate investment returns. The result of the investigation shows that the returns of real estate investment types for residential and commercial property that represent the direct real estate performed well with positive rate of returns while indirect property investments exhibited an average negative return.

Table 3: Risks Involved in Private Students’ Hostel Investment

Single room (₦ 000)	Capital value (CV=NI+Y P) YP@10% (₦ 000)	Return (X)	(X-X)^2	Self-con (₦ 000)	Capital value (CV=NI +YP) YP@10 % (₦ 000)	Return	(X-X)^2	One bed room flat (₦ 000)	Capital value (CV=NI +YP) YP@8 % (₦ 000)	Return	(X-X)^2	Two bed room flat (₦ 000)	Capital value (CV=NI +YP) YP@8% (₦ 000)	Return	(X-X)^2	Three bed room flat (₦ 000)	Capital value (CV=NI +YP) YP@8 % (₦ 000)	Return	(X-X)^2
300	3,000			750	7,500			720	9,000			640	8,000			400	5,000		
360	3,600	8	81.00	750	7,500	-10	16.00	780	9,750	0	13.44	720	9,000	-4	42.25	480	6,000	10	129.96
400	4,000	0	1.00	825	8,250	-1	25.00	780	9,750	-8	16.00	760	9,500	-3	0.01	520	6,500	0	0.44
500	5,000	13	182.25	870	8,700	-5	0.83	840	10,500	-1	9.47	800	10,000	-3	0.02	560	7,000	-1	0.01
500	5,000	-10	81.00	900	9,000	-7	0.80	840	10,500	-8	16.00	800	10,000	-8	25.00	600	7,500	-1	0.18
560	5,600	1	3.24	900	9,000	-10	16.00	900	11,250	-1	6.61	960	12,000	10	179.56	600	7,500	-8	49.00
600	6,000	-4	6.61	975	9,750	-3	12.25	960	12,000	-2	4.55	880	11,000	-16	160.44	640	8,000	-2	0.75
700	7,000	5	36.00	1,005	10,050	-7	1.51	1,020	12,750	-2	3.06	960	12,000	0	11.31	680	8,500	-2	1.56
700	7,000	-10	81.00	1,050	10,500	-6	0.00	1,020	12,750	-8	16.00	960	12,000	-8	25.00	720	9,000	-3	2.52
700	7,000	-10	81.00	1,125	11,250	-4	5.90	1,020	12,750	-8	16.00	1,040	13,000	0	7.11	800	10,000	2	10.38
	Average	-1	61.46			-6	8.70			-4	11.24			-3	50.08			-1	21.65
	Std. Dev		7.84				2.95				3.35				7.08				4.65

Source: field survey, 2019

Profitability Analysis

$$g = \frac{R_t}{R_{t-1}} - 1 \tag{5}$$

R_{t-1}

where:

R_t Rent of the Current Year

R_{t-1} Rent of the preceding Year

g : Growth Rate

Table 3 shows the rent passing of the different hostel types for the private student hostel investment around the Federal Polytechnic Ado-Ekiti, Ekiti. It was observed that rents were being reviewed every three years with few exceptional cases where rent was reviewed in the second year. However, this study is in tandem with the work of Dabara, Uwaezuoke, Omotehinshe, Lawal, and Ebenezer, (2018) which found that there was a significant increase in the rental values of

residential properties in the neighbourhoods around the Federal Polytechnic Ede, Nigeria. The table also shows the trend in the growth of the rents of these Hostel investments.

Figure 1 shows the graphical display of the growth rate, this was achieved by using trend lines. The trend lines were used to graphically display the growth rate of the rental values of the various hostel type used for this study. The result shows that; for a single room, the prevalence growth rate increases and decrease slightly over time. Also, for a two bedroom flat the growth rate increase and decrease over time with a sporadic increase in 2015 to 2016 and a drastic fall in 2017. The spontaneous increase in 2016 was attributed to consistent increase in students enrolment between 2007 to 2016 (Dabara et al, 2018) and the high demand for two bedroom flat by the students and also by some staff of the institution who want to settle down with their family. For a room self- contain, there was a prevailing increase and decrease in growth rate over time but not enough to be a significant linear change, and then levelled off. The same applies to a one bedroom flat. Comparing these findings with the trends in the rental values of residential properties in close proximate to tertiary institutions, Dabara et al, 2018 was of the opinion that there was a significant increase in the rental values of residential properties in the neighbourhoods around the institution.

The dwindling or irregularity in the pattern of rental growth agrees with the findings of Ogunge et al 2018 which revealed the sensitivity of off- campus student hostel to changes in demand. This is peculiar to Federal polytechnic Ado-Ekiti, because of the building of more on-campus hostels in recent times to accommodate more student on-campus.

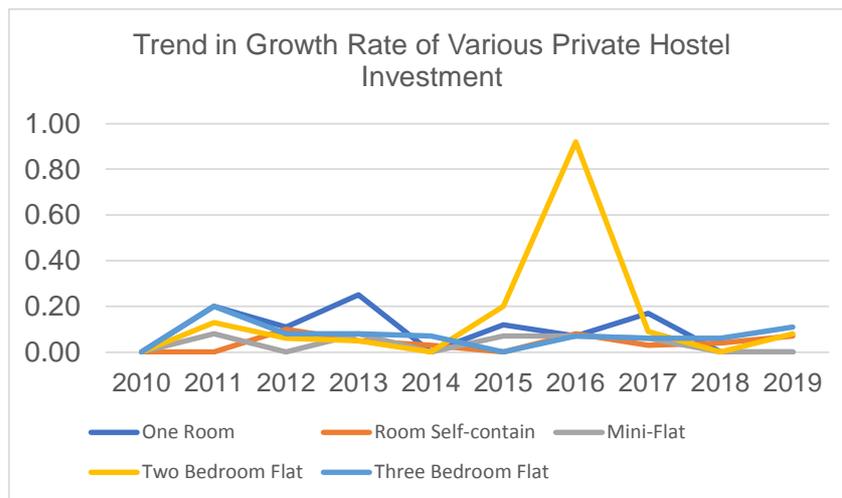
Again, the profitability index of the investment was considered in order to determine the financial viability of this hostel.

The net cash flow was discounted after necessary outgoings such as management fees, and repairs have been deducted. The net cash flow was discounted at 25% interest rate to get the present value and this was used in calculating the profitability index of the various hostel types. For the various Profitability Index (PI) of the hostels, a room self-contain has the highest profitability index of 0.2384, followed by a one bedroom flat which has a PI of 0.2051, next to it is a single room hostel investment which has a PI of 0.2029, and two bedroom flat which has PI of 0.1902 while a three bedroom flat has the least PI of 0.1691. For mutually exclusive projects, the decision rule is to accept the project with highest value of positive PI. Therefore, the implication of the result from table 5 is that self-contain is more profitable because it has the highest PI.

Table 4: Rent Passing and Growth Rate of Private Student Hostel Around Federal Polytechnic Ado-Ekiti

S/No	Area	Hostel Type	Rent passing									
			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1.	Private Student hostel around Federal Poly. Ado.	Single Room	15,000	18,000	20,000	25,000	25,000	28,000	30,000	35,000	35,000	35,000
		Growth Rate (1+g-1)	0.00	0.20	0.11	0.25	0.00	0.12	0.07	0.17	0.00	0.00
		Room self-contain	50,000	50,000	55,000	58,000	60,000	60,000	65,000	67,000	70,000	75,000
		Growth Rate (1+g-1)	0.00	0.00	0.10	0.05	0.03	0.00	0.08	0.03	0.04	0.07
		One bedroom flat	60,000	65,000	65,000	70,000	70,000	75,000	80,000	85,000	85,000	85,000
		Growth Rate (1+g-1)	0.00	0.08	0.00	0.08	0.00	0.07	0.07	0.06	0.00	0.00
		Two Bedroom Flat	80,000	90,000	95,000	100,000	100,000	120,000	110,000	120,000	120,000	130,000
		Growth Rate (1+g-1)	0.00	0.13	0.06	0.05	0.00	0.20	0.92	0.09	0.00	0.08
		Three Bedroom Flat	100,000	120,000	130,000	140,000	150,000	150,000	160,000	170,000	180,000	200,000
		Growth Rate (1+g-1)	0.00	0.20	0.08	0.08	0.07	0.00	0.07	0.06	0.06	0.11

Source: Field Survey, 2019



Source: Field Survey, 2019

Figure 1: Trend in Growth Rate of Various Private Student Hostel Investments around Federal Polytechnic Ado-Ekiti.

Table 5: Calculation of the Profitability Index of Private Students Hostel Investment

Year	PV@25%	Single Room Netcash flow	Present Value	Self-Contain Netcash flow	Present Value	One Bedroom Flat Netcash flow	Present Value	Two Bedroom Flat Netcash flow	Present Value	Three Bedroom Flat Netcash flow	Present Value
0	1.000	7000000	7000000	11250000	11250000	12750000	12750000	13000000	13000000	10000000	10000000
2010	0.800	270000	216000	675000	540000	648000	518400	576000	460800	360000	288000
2011	0.640	324000	207360	675000	432000	702000	449280	648000	414720	432000	276480
2012	0.512	340000	174080	701250	359040	663000	339456	646000	330752	442000	226304
2013	0.410	450000	184320	783000	320716.8	756000	309657.6	720000	294912	504000	206438.4
2014	0.328	450000	147456	810000	265420.8	756000	247726.1	720000	235929.6	540000	176947.2
2015	0.262	476000	124780.54	765000	200540.2	765000	200540.2	816000	213909.5	510000	133693.4
2016	0.210	540000	113246.21	877500	184025.1	864000	181193.9	792000	166094.44	576000	120796
2017	0.168	630000	105696.46	904500	151749.9	918000	154014.8	864000	144955.15	612000	102676.6
2018	0.134	595000	79859.548	892500	119789.3	867000	116366.8	816000	109521.67	612000	82141.25
2019	0.107	630000	67645.735	1012500	108716.4	918000	98569.5	936000	100502.23	720000	77309.41
		Sum	1420444.5		2681998		2615205		2472096.6		1690786
		PI	0.2029		0.2384		0.2051		0.1902		0.1691

Source: Field survey, 2019

SUMMARY OF FINDINGS

The research revealed that from the various hostel type, self-contain hostel investment is less risky, followed by a one bedroom flat and three bedroom flat respectively. This is due to the high demand for these hostel type, couple with the fact that there is less provision of on-campus hostel. Moreso, most students often prefer room equipped with private toilet, bath and kitchenette. From the analysis using the profitability index, the research revealed that self-contain apartments have the highest profitability index followed by the one bedrooms flat and single room respectively.

CONCLUSIONS AND RECOMMENDATION

The sporadic increase of student enrolment into higher institution of learning which does not commensurate with the available on-campus hostel gave room for investors to invest in private hostel investment off campus. Hence the need for this study to assess the private hostel investment. This research has assessed private student hostel investment around the Federal Polytechnic Ado-Ekiti with a view to advice investors on the risk and profitability of the various type of hostel investment. The study has adopted the use of standard deviation to determine the risk inherent in each hostel type. Also profitability index was used to determine the profitability rate of each hostel type using a rate of 25% been the prevailing average interest rate on

loan in Nigeria. The study revealed that, though all the hostel type seems to be profitable to invest upon, but a room self-contain hostel investment is more profitable because of its low level of risk and also because of its profitability index. The study therefore recommend that investors should endeavour to invest more on private student hostel with more concentration on self contain hostel investment which is less risky and profitable type of investment. However, investors should be careful to note that earlier works of Ogungbe et al, (2018) on private hostel investment reveals the sensitivity of self-contain hostel to changes in demand. A decrease in demand by 8 percent decrease in students' population off-campus will affect the viability of a room self-contain accommodation.

REFERENCES

1. Adewunmi [2012] dewunmi, F. (2012). *Student Accommodation in Nigeria. An Opportunity for Investors, How we made it in Africa, Business Article.* (Accessed May 10, 2010)
2. Ajayi, M., Nwosu, A., and Ajani, Y. (2015). *Students' Satisfaction with Hostel Facilities in Federal University of Technology, Akure, Nigeria. European Scientific Journal, 7-10.*
3. Akinpelu, O.P. (2012): *Students' Housing Satisfaction in Selected Tertiary Institutions in Oyo State Nigeria. M.Sc. Thesis submitted to Obafemi Awolowo University, Ile-Ife, Nigeria*
4. Alaka, I. N. (2010). *Model Development on the Evaluation of Rent Variation of Students Hostel Investments in Owerri, Nigeria. M.Sc Dissertation, Department of Estate Management, Abia State University.*
5. Alaka, I. N. Pat-Mbano, E. C. and Ewulum, N. J. (2012). *Contributions of Private Hostel Providers to Housing Needs of Imo State University Students, at Ugwuorji-Owerri Nigeria. Canadian Social Science Vol. 8, No. 2, 2012, pp. 180-186 DOI:10. 3968/j.css.1923669720120802.2755*
6. Aluko, O. E. (2011) *The Assessment of Housing Situation among Students in the University of Lagos. International Multi-Disciplinary Journal, Ethiopia Vol. 5 (3), Serial No. 20, May, 2011 ISSN 1994-9057 (Print) ISSN 2070-0083 (Online)*
7. *Aol Real Estate Contributor (2008)*
8. Asare-Kyire, L., Appienti, W. A., Forkuoh S. K., and Osei, A. (2012). *The Economics of Private Hostels in Ghana: A case of Private Hostels on Knust Campus. International journal of Social science Tomorrow, 1(8)*
9. Bello, V. A., & Adebisi, O. (2014). *Impact of the Federal University of Technology, Akure on Residential Property Values in Akure, Nigeria. FIG Congress. Engaging the Challenges, Enhancing the Relevance (pp. 1-16). Malaysia : Kuala Lumpur.*
10. Boussia, M., & Papadimitriou 2016]. Boussia, N., Papadimitriou, P. (2016). *In Focus: Student Housing – General Overview and the Greek Reality.* <https://www.hvs.com/article/7809-in-focus-student-housing-general-overview-and-the-greek-reality>, [accessed May 11 2020].
11. Chong F., (2017). *Student Housing: International studies.* <https://realassets.ipe.com/markets-/sectors/alternatives/student-housing-international-studies/10018848.article>, [accessed May 11 2020].

12. Dabara D. I., Uwaezuoke I. N., Omotehinshe O. J., Lawal O. K., and Ebenezer O. O., (2018). *Trends in the Rental Values of Residential Properties Proximate to Tertiary Institutions: The Case of Federal Polytechnic Ede, Nigeria. European Journal of Business and Management. 10(24) 17-23*
13. Garg, M., Gupta, K., & Jha, R. (2014). *An empirical study on market research of organized students' housing industry in India. International Journal of ICT and Management, 2(2), 143–154.*
14. Ghani Z. and Sulieman N. (2017), "Cash-Cow into the Purse of Malaysian Property Investors: Students Housing Investment". *Traektoriâ Nauki, Path of Science. 2017. Vol. 3, No 8, ISSN 2413-9009*
15. Levisauskaite, K., (2010), *Investment Analysis and Portfolio Management. Kaunas, Lithuania: Vytautas Magnus University*
16. Karpinski M., (2015) *Student accommodation in Malaysia. <https://www.hotcoursesabroad.com/study-in-malaysia/student-accommodation/student-accommodation-in-malaysia/>, [accessed May 11 2020].*
17. Lydia, A., William, A. A. Anthony, K. and Abraham, O. (2016) *An Investment Analysis of Private Hostel Business in Ghana Tertiary Institutions; A Case Study of Knust Campus, Ghana. British Journal of Education, Society & Behavioural Science 15(1): 1-13, 2016, Article no. BJESBS.23891 ISSN: 2278-0998*
18. Mitra [2017] Mitra, S. (2017). *Student Housing – The Next Big Real Estate Asset Class? <http://jllapsites.com/real-estate-compass/2017/03/student-housing/>, [accessed May 11.2020].*
19. Ogunba A. O (2013). *Globalization and Risk Management in Development Appraisal: Challenges Before Nigeria. Risk in Nigeria Development Appraisal. 690-699.*
20. Ogungbe M.A, Olukolajo M.A, and Binuyo O.P (2018). *An Investment Analysis of Private Student Hostel in Nigeria Tertiary Institutions: A Case of FUTA Campus. International Journal of Investment Management and Financial Innovations. Vol. 4, No. 1, 2018, 1-8.*
21. P., Gopal (2008). opal, P. (2008). *College towns: Still a smart investment. <http://www.primepropertyinvestors.com/businessweek.pdf>, [accessed May 11.2020]*
22. Pat-Mbano, E. C., Alaka, I. N., & Okeoma, O. I. (2012). *Examining the Physio, Psycho and SocioEconomic Implications of Non-Residential Policy on Imo State University Students. Canadian Social Science, 8(2), 170-179*
23. Prasad, N. (2006). *Current Issues in Private Sector Participation (PSP) In Water Services United Nations Research Institute for Social Development (UNRISD).*
24. Prasad, N. (2008) *Social Policies and Private Sector Participation in Water Supply: Beyond Regulation New York: Palgrave Macmillan;237. ISBN: 9780230520820*
25. Raimi, K., Ibisola, A., & Abdul, E., (2019) (1) (PDF) *Assessment of the Student Housing Market in Some Selected Tertiary Institutions Neighbourhood in Ogun State, Nigeria.. Available from: https://www.researchgate.net/publication/336936864_Assessment_of_the_Student_Housing_Market_in_Some_Selected_Tertiary_Institutions_Neighbourhood_in_Ogun_State_Nigeria [accessed May 10 2020].*

26. Savills World Research. (2014, Summer). *Spotlight World Student Housing*. <http://pdf.euro.savills.co.uk/residential---other/spotlight-world-student-housing-2014.pdf>. [accessed on May 23 2020]
27. Savills World Research (2017). *Spotlight World Student Housing*. <http://pdf.euro.savills.co.uk/global-research/spotlight-world-student-housing-2016-2017.pdf> [accessed on June 30, 2020]
28. *Student House Business*. (2017). *The top developers in student housing*. <http://www.studenthousingbusiness.com/>. [accessed on June 23 2020]
29. Trojanek M. and Trojanek R. (2012). *Profitability of Investing in Residential Units: The Case of RealEstate Market in Poland in the Period from 1997 to 2011*. *Actual Problems of Economics*; 2(7): 73-83
30. Ubong, B. (2007), *Hostel Accommodation in Tertiary Educational Institutions in Nigeria: To Be or Not to Be*, available at: [ww.bassejubong.com/HOSTEL%20ACCOMMODATION](http://www.bassejubong.com/HOSTEL%20ACCOMMODATION).
31. Ghani. Z and Sulieman N. (2017), "Cash-Cow into the Purse of Malaysian Property Investors: Students Housing Investment". *Traektoriâ Nauki = Path of Science*. 3(8):2413-9009

