



Real Estate Development Financing through Pre-letting and Pre-sale Arrangements: An Assessment of Adoption Level in Emerging Markets

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Abstract

Utilisation of pre-letting and pre-sale financing (PPF) arrangements for housing delivery have gained increased attention in the literature. However, the increasing rate of housing deficit in the emerging markets does not represent the reality of an increase in the adoption of PPF arrangements. With the aid of a semi-structured questionnaire, this study examined the level of adoption of PPF arrangements by property development companies (PDC) in the emerging markets. The questionnaires were administered to 87 PDCs in Lagos metropolis to gather property-related data such as the number of property units developed between 2008 and 2023, unit type, number of units pre-let, and number of units pre-sale, among others. With the use of an Excel spreadsheet and SPSS software, the acquired data were analysed using percentages and regression analysis. Findings revealed that the proportion of pre-letting against the total units of property developed during the year under review was 7.48 percent, and pre-sale 17.44 percent. While 67.70 percent of the pre-letting proportion applied to commercial properties,

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53.24 percent of the pre-sale proportion applied to residential properties. An increase in pre-sale adoption was observed throughout the years under consideration. Though a more significant increase was witnessed in the residential properties, commercial properties equally witnessed a slight increase across the years. The regression analysis outcome showed that none of neither pre-letting nor pre-sale financing adoption was significantly influenced by the tested organisational parameters in the study area. It is, however, necessary that the stakeholders pay attention to pre-letting financing arrangements and increase the adoption of both arrangements to improve housing provision.

Keywords: *Pre-letting, Pre-sale, Real estate development, Financing arrangements, Finance adoption*

1. Introduction

Ever-increasing human population coupled with rural-urban migration has, over the years, resulted in high demand for adequate and decent real estate for various purposes. Real estate provides housing for both rural and urban populations, as well as the creation of employment for people in the construction industry. It is a benchmark for the economic growth of any country (Udoka and Kpataene, 2017). According to the World Bank, real estate constitutes a considerable proportion of the world's wealth, accounting for approximately 60% of the total mainstream global assets, 33% of Malaysia's Gross Domestic Product (GDP), 50% of Hong Kong's, 77% of United States of America (USA) and 80% of UK's GDP (Emoh and Nwachukwu, 2011). In Australia, the real estate sector was the largest employer of labour and has contributed immensely to the country's economic output (Rowley et al., 2014). Moreover, in a developing economy such as Nigeria, real estate has equally been viewed as a basic necessity that impacts a country's prosperity and individual productivity (Olaleye et al., 2004).

Despite the valuable contributions of real estate to a human's well-being and overall national economy, its global supply shortage has become a growing concern. In the USA, high-cost cities were the result of housing supply shortage in the face of ever-rising demand (Newell, 2010). This aligns with the economic principle that an increase in demand for a scarce commodity breeds competition that forces an increase in its price. In a similar view, Madichie and Madichie (2016) identified a shortage in Nigeria's real estate supply, which they attributed to the natural increase in rural-urban migration. This ever-increasing demand necessitated the need for adequate financing, which is one of the many uncertainties being faced by real estate development in the emerging markets (Katwa and Obala, 2023).

Finance has been adjudged as the lifeblood of real estate development (Hutchison et al., 2017). Its shortage has made it a subject of scrutiny in some developed countries (Squires et al., 2016). Oyedele (2018) affirmed that the availability and accessibility of finance are major parameters to be considered in real estate development. The high cost of capital acquisition attributable to some traditional sources of finance has been identified as one of the major factors affecting access to finance and has so far stifled development (Udoka and Kpataene, 2017). Poor access to traditional sources of finance has increased attention on various forms of trust-based innovative financing arrangements. Several of these arrangements, which allow funding based on trust rather than on interest rates, are gaining relevance. Some convert the demand side of the market into the financier of the supply side. In such cases, buyers indirectly provide the needed capital based on trust rather than on interest rates. Examples of these arrangements include ground rents, peer-to-peer lending, crowdfunding, site-and-services schemes, real estate investment trusts (REITS), pre-letting, and pre-sale (Baldwin, 2017; Vanneste, 2022). While there is limited attention on many of these innovative arrangements

in the emerging markets (Lai et al., 2018), pre-letting and pre-sale financing arrangements (PPF) are gaining prominence in the Nigerian real estate development market (Olayiwola et al., 2025).

PPF arrangements have both been examined as mechanisms to guarantee easy access to finance (Olayiwola et al., 2024) and to reduce the cost of capital, among other factors driving their adoption (Olayiwola, 2023). These arrangements have proven suitable for both commercial (Hinkelmann and Swidler, 2008) and residential properties (Edelstein and Liu, 2016). Also, both arrangements have been used to effectively address housing shortage in developed economies (Edelstein et al., 2012; Li and Chau, 2019), contributing to the improvement of property markets in China (Deng and Liu, 2009) and Canada (Choi et al., 2012). Leung and Hui (2005) observed that the positive impact of these financing arrangements on property market performance motivated an increase in their adoption from 49% in 1995 to 86% in 2001. While there are studies on the challenges and prospects of forward sale arrangements (Oloke et al., 2017) and housing provision strategies (Shiyanbola & Olaleye, 2022) and factors influencing the adoption of PPF (Olayiwola et al., 2025), a paucity of studies exists on the extent of their adoption in emerging markets such as Nigeria. Accordingly, this study examined the level of adoption of PPF arrangements among property development companies in the Lagos metropolis, as well as the influence of the development companies on the level of adoption.

2. Literature Review

This section provides information on the level of adoption of PPF arrangements as tools for real estate development finance. The section is grouped into the following sub-sections: real estate development and finance, PPF arrangements, benefits of PPF arrangements and level of adoption of PPF arrangements.

2.1 Real Estate Development and Finance

Despite the indispensable role of real estate in human welfare and national economic development, inadequate access to finance has remained its main setback. The poor quality and limited quantity of real estate developments could sometimes be traced to weak and ineffective financing mechanisms (Emoh and Nwachukwu, 2011). van Donge (2012) succinctly categorised real estate development challenges into two: land ownership and management, and finance. UN (2012) identified finance as one of the critical global challenges to development, alongside good governance. Olayiwola (2023) further emphasised that real estate development finance is a fundamental centrepiece and an essential real estate development. The role of finance in development is significant to the successful implementation of any progressive investment and development exercise. van Donge (2012) conducted a comparative analysis of the Kenyan and Malaysian development trajectories from 1980 to 1994. The findings revealed stagnation in the Kenyan case and sustained growth in the case of Malaysia, despite a similarity in governance indicators for both countries. The difference in growth outcomes between the two countries was attributed to access to finance.

In spite of increasing efforts to make finance accessible, real estate development firms still encounter problems in securing funds for projects, chief among them is the high cost of capital acquisition. The global financial crisis of 2007–2008 brought real estate finance under heightened scrutiny (Squires et al., 2016), revealing the inadequacy of conventional financing arrangements and raising interest in innovative forms of real estate development financing. Baldwin (2017) identified six innovative arrangements which are predominantly being utilised in the property market globally: forward funding, unitisation, ground rents, crowdfunding and

fund pooling. Added to this list are public-private partnership, turnkey, presale (off-sale), pre-letting, shell stage, and site-and-service schemes (Tabatabai, 2016; Hutchison et al., 2017; Shiyanbola and Olaleye, 2022).

2.2 Pre-letting and Pre-sale Financing Arrangements

A pre-letting arrangement is a lease contract between a lessee and a lessor in which rent is paid in advance for a yet-to-be-built or uncompleted property (Edelstein and Liu, 2016), whereas pre-sale financing describes the outright sale of a proposed or uncompleted property to a buyer who awaits asset completion (Wilkinson and Reed, 2008). It has been examined as an arrangement used to transfer proposed real estate development from developers to lessees or buyers in exchange for money (Leung and Hui, 2005; Oloke et al., 2017). It is a sale contract transferring ownership rights at a future date, but with immediate financial commitment, between a developer and a buyer. Both have been used synonymously as off-plan transactions and as a form of innovative real estate finance arrangements in both residential and commercial real estate development (Olayiwola et al., 2023). They have become vital real estate delivery strategies currently considered by stakeholders in the industry (Alqahtany et al., 2023).

2.3 Benefits of Pre-letting and Pre-sale Financing

A significant relationship has been identified between the benefits conferred by pre-letting and pre-sale financing and their adoption by real estate development firms (Fisher, 2010; Edelstein and Liu, 2016). These benefits have inspired the consistent adoption of the financing arrangements in many developed economies, especially in the UK, Asia and Europe (Fisher, 2010; Choi et al., 2012; Kieu and Mogaji, 2018). In the emerging markets, the inherent advantages of PPF— include ease of raising needed capital for real estate development and reduction of capital cost burden on the property development companies have influenced the increase in adoption (Olayiwola et al., 2025). The arrangements have been discussed to effectively help in the project pre-assessment, aid loan accessibility, and eliminate costs. Alqahtany et al. (2023) noted that PPF encouraged the acquisition of real estate at a reduced cost as to the built-to-sell units. Hua et al. (2001) asserted that PPF arrangements have been employed to share development risk and raise finance, which serves as a take-off fund for the real estate development firms (Katwa and Obala, 2023). The arrangements also eliminate costs that are associated with spot properties (Lai et al., 2004), and examine the market performance of proposed development (Edelstein et al., 2012). They have been considered as hedging tools because they keep both development firms and lessees or buyers at a better advantage than the case of spot or existing properties (Bessembinder and Lemmon, 2002; Djenic et al., 2012; Fabozzi et al., 2020).

Both the supply side (the real estate firm) as well as the demand side (buyers) of the market benefit from these arrangements. Their market acceptability appears to have been hinged on the benefits they confer. Unlike the spot property arrangement, which necessitates a payment of a lump sum, the buyers who constitute the demand side are allowed to pay on an instalment basis under the pre-letting and pre-sale financing arrangements. The mode of instalment payment is usually based on the agreement between the development firms, and this is clearly stated in the contract terms and conditions (Olayiwola, 2022). According to Leung et al. (2007), investors are presented with the option of either paying an initial deposit while the balance is paid as a lump sum at project completion or in instalments as the case may demand.

This pre-letting and pre-sale technique makes property financing for an investor, such as an average buyer, an easy task.

Moreover, Proskurovska and Dörny (2022) positioned that it equally reduces future housing search costs and legal costs, such as transaction costs. Their study argued that all pre-letting and pre-sale financed property transaction enjoys exemption from transaction tax, otherwise known as capital gain tax payable to the government on every registered property until after the completion. This exemption is because the property has not yet been officially registered. This indicates more savings on the part of the lessees or buyers. Hua et al. (2001) identified that pre-letting and pre-sale financing arrangements provide an opportunity to critically assess property sales performance long before commitment of funds to its development. They accord the privilege of pre-determining market responses to a project well before construction. This is a form of market study, which is a part of feasibility and viability studies for a proposed project. Unlike spot property, which may suffer from void if it fails the market acceptability test, pre-letting and pre-sale financed property can easily be converted since it is still in the planning stage. These arrangements aim to help reduce or eliminate the problem of void after construction in the Nigerian property industry. Development firms can use it to test market demand. Once the impossibility of demand is envisaged, the property design can quickly be changed to suit the market demand or otherwise cancel such proposed development.

The arrangements assist the development firm in solving the market uncertainty problem since the time of sale is almost the same as the time of investment decision making (Leung and Hui, 2005). The increasing attention on the arrangements appeared to relate to their distinctive ability to mitigate uncertainty arising from a potential drop in the future price of property. They enable developers to transfer property at a fixed price, which, by contract, is not affected by future downturns or upturns in the property's value. This also serves as a hedge against any financial loss that may likely arise from the unsold property in the event of any fall in price by the completion time (Edelstein et al., 2012). Choi et al. (2012) opined that pre-letting and pre-sale financing arrangements give developers a higher chance of securing loans for development. Evidence of sales for a stipulated number of units in a proposed development reduces uncertainty and encourages financial institutions to commit funds to the project, as is commonly seen in the USA (Edelstein et al., 2012). The study added that pre-letting and pre-sale financing aid developers in securing buyers for the proposed projects, thereby assuring sales. This approach eliminates the void period by ensuring that a substantial number of units in the development are occupied before the completion (Chang and Ward, 1993).

The demand side of the market becomes the source of funding for the supply side, easing the financial burden on the development firms. Hua et al. (2001) opined that the arrangements are effective for mobilising funds for real estate development, especially in the face of financial constraints. Since the property is sold before construction, the money raised from prospective owners is ploughed into the development. This enhances firms' financial viability when large-scale development of real estate is involved (Leung and Hui, 2005), and in the case of smaller projects, the excess funds can be gathered for investment in some other projects with higher returns (Leung et al., 2007). Pre-letting and pre-sale financing arrangements transfer both risk and financial responsibility to the house lessees or buyers. They saddle lessees or buyers with the responsibility of financing these developments through either equity or bank loans. A certain percentage is deposited before the signing of the Sales and Purchase Agreement, while the balance is paid upon completion of the development (Ibrahim et al., 2015). Pre-letting and pre-sale financing arrangements appear to be a reliable solution to the current financial problems hampering the performance of the real estate development sector in Nigeria if

properly utilised. As a “risk-reducing” tool (Djenic et al., 2012), the concerns of development firms on major development risks will be reduced.

Lai et al. (2004) identified that pre-letting and pre-sale financing arrangements help to eliminate marketing costs and inventory costs, which are inevitable in the case of spot or existing properties. They argued that because pre-letting and pre-sale financed properties are yet to be developed, marketing and inventory costs are effectively eliminated. While this study agrees with Lai et al. (2004)'s view on the elimination of inventory costs, it differs on the elimination of marketing costs. A pre-letting or pre-sale financed property must still be advertised to attract potential buyers for the proposed development. Therefore, marketing and advertising costs will still be incurred. However, maintenance costs will be eliminated since it is a proposed development and not a spot property.

Pre-letting and pre-sale financing arrangements are trust-based financing approaches, substituting interest payments with integrity (Kieu and Mogaji, 2018). Unlike a completed development, also known as a spot property, which affords the privilege of inspection and verification of property quality. The lessees or buyers of pre-letting and pre-sale financed properties only buy based on their trust in the information provided by the developer during the advertisement of the proposed development. The properties are presented to lessees or buyers through computer-generated images, providing a view of what the property will look like after completion, assuming there is no alteration in the design. The lessees or buyers may agree to accept the development as revealed on the developer's plan or make a request for alteration to suit their specific needs (Edelstein, 2012). For developers, this is an advantage in overcoming high interest rates that constrain performance in the development industry.

Chang and Ward (1993) identified that pre-letting and pre-sale financing enhance property market efficiency, and confer on developers the benefits of loss minimisation and profit maximisation. In the 1980s, pre-letting and pre-sale financing were used to transform Taiwan's property sector, enabling 80 per cent of owner-occupied properties to be developed despite difficulties in accessing capital from the formal sector. The study further discussed that the arrangement allows developers to minimise losses inherent in spot properties due to post-construction voids, as well as a loss inherent in pre-letting and pre-sale financing due to a lack of opportunity to participate in future price appreciation. Pre-letting and pre-sale financing allow developers to adopt a portfolio-based property sales approach. According to Chang and Ward (1993), the portfolio-based property sales approach involves dividing the entire development into three stages: one is sold at the planning stage, another at the construction stage, while the remaining is disposed of at the completion stage. This strategy enables developers to minimise losses and maximise profits.

From the aforementioned, pre-letting and pre-sale financing are suggested to be suitable arrangements capable of reducing or eliminating the current challenges encountered in real estate development finance. It is an interest-free financing option and provides a guarantee-free access to the finance needed for real estate development. Its ability to substitute trust for interest payments serves as a competitive advantage for development firms, especially in countries like Nigeria, where the problem of high interest rates has become a persistent challenge. However, all of the studies reviewed are based on foreign contexts rather than Nigeria. Hence, it is necessary to test these factors within the study area to identify how the factors motivate the adoption of pre-letting and pre-sale financing in real estate development firms. It is also important to examine if any of the firms' characteristics, such as firm size, financial strength and experience, mediate the level of adoption of these financing arrangements.

2.4 Level of Adoption of Pre-letting and Pre-sale Financing Arrangements

Studies have revealed an increasing level of adoption of pre-letting and pre-sale financing arrangements for commercial and residential property transactions in many developed countries over the years. Edelstein et al. (2012) noted that for several decades, these arrangements have been employed in many Asian countries such as Hong Kong, China, Singapore, Korea and Taiwan, as well as in the USA. In addition, Leung and Hui (2005) reported their application in Malaysia, London, Toronto and Beijing. According to Leung and Hui, the ratio of pre-letting and pre-sale financing arrangements in Hong Kong, which is regarded as a pioneer user that increased from 49% in 1995 to as high as 86% in 2001.

To assess the level of adoption, Shiyambola and Olaleye (2022) examined the frequency of use of each housing provision strategy. The study asked respondents to indicate how frequently housing strategies were used in practice by development firms in Lagos metropolis over thirteen years. The study found that pre-letting and pre-sale were among the most employed strategies for housing delivery by developers. Similarly, Oloke et al. (2017) measured developers' preference for project financing techniques by requesting them to rank a list of available options. The study identified forward sale as one of the project financing methods that received a high level of preference. However, both studies lack data on the type of property for which these arrangements were adopted. Also, none of the studies investigated property-specific data. Using property-specific data will eliminate bias and provide clear information that will guide the development firms' decision-making processes on the particular property type that attracts buyers' attention when pre-letting and pre-sale financing arrangements are employed. Hence, this study examined the level of adoption of pre-letting and pre-sale financing arrangements across different property types using property-specific data. It also measured the influence of a firm's profile on the level of adoption.

3. Methodology

Primary data was collected from the property development companies (PDC) in Lagos metropolis using a semi-structured questionnaire. A total enumeration of the 87 PDCs in the study area was carried out for this quantitative research. The questionnaire was administered to a senior staff member from each of the 87 PDCs in the study area. Data such as the profile of the firm, the yearly number of properties developed from 2008 to 2023 and the yearly number of properties developed using pre-letting and pre-sale financing arrangements during the period were collected. The figures were acquired based on the property types (residential, commercial and others). In addition, the firms were asked to rate, on a scale of 1 to 7 (where 1 = not adopted and 7 = highly adopted), the level of adoption of pre-letting and pre-sale arrangements. The study took the middle point as the minimum benchmark for a good level of usage. The data was analysed using frequency distribution, percentage and regression analysis. The field survey was personally conducted.

The study disaggregated the adoption into pre-letting, pre-sale and others. That is,

$$TUD = \sum TP_L, TP_s, Others \quad \text{----- (1)}$$

Where:

TUD is Total number of property units developed;

TP_L is the Total number of Pre-let units;

TP_s is Total number of Pre-sold units; and

Others refer to property developed through other means of financing.

Total pre-letting and pre-sale was calculated as the summation of residential and commercial units pre-let and pre-sold across the development firms during the year under review. This could be depicted as shown in equations (2) and (3).

$$TP_L = \sum RUP_L, CUP_L \quad \text{----- (2)}$$

$$TP_S = \sum RUP_S, CUP_S \quad \text{----- (3)}$$

Where:

TP_L is Total number of Pre-let units;
 RUP_L is Residential Unit Pre-let;
 CUP_L is Commercial Unit Pre-let;
 TP_S is Total number of Pre-sold units;
 RUP_S is Residential Unit Pre-sold; and
 CUP_S is Commercial Unit Pre-sold.

To determine the total number of real estate development financed through pre-letting and pre-sale arrangements, the summation of equation (2) and (3) was taken as shown in equation (4).

$$APP = \sum TP_L, TP_S \quad \text{----- (4)}$$

Where:

APP is the Aggregate of property units Pre-let and Pre-sold.

In order to accurately calculate the rate or level of adoption of pre-letting and pre-sale financing arrangements equations (5), (6), and (7) were employed. For the percentage change in TP_L , TP_S and APP, each was evaluated against TUD.

$$\Delta TP_L = TP_L / TUD \quad \text{----- (5)}$$

$$\Delta TP_S = TP_S / TUD \quad \text{----- (6)}$$

$$\Delta APP = APP / TUD \quad \text{----- (7)}$$

Furthermore, the relationship between the level of adoption of pre-letting and pre-sale arrangements was tested using regression equations (8) and (9)

$$P_L = C + \beta x^0 + \beta x^1 + \beta x^2 + \beta x^3 \quad \text{----- (8)}$$

$$P_S = C + \beta x^0 + \beta x^1 + \beta x^2 + \beta x^3 \quad \text{----- (9)}$$

The study also employed regression analysis to determine the relationship between the adoption of pre-letting and pre-sale financing arrangements and the organisational parameters such as age of the firm, staff strength, asset base and ownership types. The outcome variable for the regression analysis was the levels of pre-sale and pre-letting adoption, while the predictors were the real estate development firms' characteristics, such as years of establishment, type of ownership, staff strength, and asset base. At a 95% degree of confidence ($p = 0.05$), the Durbin-Watson test of autocorrelation for both pre-sale and pre-letting is approximately 2, respectively, as shown in Table 5. This implies that no assumption of linear regression is broken. The closeness of both Tolerance and Variance Inflation Factor of both arrangements to 1 suggested a low level of collinearity. Hence, the available information is suitable for linear regression analysis.

3.1 Reliability and Validity Tests

The reliability and validity of the instrument were established through expert review (done through administration of a pre-test questionnaire) and Fleiss' Kappa. The experts were

purposively selected and comprised five academic members and two practitioners. The corrections, as observed by each expert, were implemented, and the instrument was resubmitted for approval before its administration. Post administration of the instrument was assessed independently by a professional data analyst for data consistency, outliers and cross-validation within responses. To test the internal consistency of the acquired data, the categorical data were assessed using Fleiss' Kappa (McHugh, 2012) at a 95% confidence interval. The Fleiss' Kappa for the categorical independent variables was 0.547, indicating a moderate and reliable level of agreement between the responses on organisational parameters (Landis & Koch, 1977). At p-value 0.002, the outcome revealed that the agreement is not due to chance but a real effect.

4. Findings and Discussion of Results

The level of adoption of pre-letting and pre-sale financing in the surveyed firms was analysed using percentages of property-specific data. The section gives details of the real estate development firms' profiles, the characteristics of the respondents, and finally, the level of adoption of pre-letting and pre-sale financing arrangements.

4.1 Profile of Firms

Table 1 **Profile of Real Estate Development Firms**

Profile		Frequency	Percentage (%)
Year of Establishment	Up to 5	17	19.5
	6 – 10	22	25.7
	11 – 15	25	28.7
	16 – 20	13	14.9
	21 – 25	4	4.6
	Above 25	6	6.9
	Total	87	100.0
Ownership Type	Sole Proprietorship	27	31.0
	Partnership	8	9.2
	Joint Venture	3	3.4
	Limited Liability Company	49	56.3
	Total	87	100.0
Asset Base	Up to \$555,000	25	28.7
	\$555,001 – \$1.1 million	15	17.2
	\$1.11 million – \$1.6 million	14	16.1
	\$1.61 million – \$2.2 million	12	13.8
	\$2.21 million and Above	21	24.1
	Total	87	100.0
Staff Strength	Up to 5	13	14.9
	6 – 10	15	17.2
	11 – 15	13	14.9
	16 – 20	6	6.9
	21 – 25	5	5.7
	Above 25	35	40.2
	Total	87	100.0

Exchange Rate of \$1 = ₦450 (CBN, 22nd April, 2022)

As presented in Table 1, the profile of the firm was examined using different parameters such as year of establishment, ownership type, asset base, and staff strength. These parameters were analysed using frequency distribution and percentages. The analysis revealed that 55.1 percent of the surveyed real estate development firms have been in existence for more than 10 years, with 67.7 percent of the firms having more than 10 members of staff. It was equally revealed that 13.8 percent of these firms were being operated as limited liability companies, with 28.7 percent as sole proprietorships. This indicates that the surveyed firms have, over the years, developed a good capacity for effective operation of real estate development. This has got them engaged in several real estate development exercises that have translated to an increase in their asset base. As shown in Table 1, 71.2 percent of the firms have an asset base of over five hundred and fifty-five thousand USD naira (\$555,000).

4.2 Characteristics of Respondents

Table 2 Profile of Respondents for the firms

Profile		Frequency	Percentage (%)
Gender	Male	66	75.9
	Female	21	24.1
	Total	87	100.0
Highest Education	HND	19	21.8
	B.Sc.	43	49.4
	M.Sc.	23	26.4
	Ph.D	2	2.3
	Total	87	100.0
Years of Experience in Real Estate Development	Up to 5	19	21.8
	6 – 10	17	19.5
	11 – 15	27	31.2
	16 – 20	19	21.8
	21 – 25	5	5.7
	Total	87	100.0
Professional Qualification	NIESV	29	33.3
	NIOB	12	13.8
	NSE	4	4.6
	NIQS	11	12.6
	NIA	5	5.7
	Others ¹	15	17.2
	No Response	11	12.6
	Total	87	100
Position	Managing Director	8	9.2
	General Manager	15	17.2
	Project/Property Manager	41	47.1
	Public Relations Officer	3	3.4
	Others ²	20	23.0
	Total	87	100.0

Others¹ – this constituted 1 CIBN – the Chartered Institute of Bankers of Nigeria, 3 NIM – the Nigerian Institute of Management, 1 CIPM – the Chartered Institute of Personnel Management of Nigeria, 6 PMI – Project Management Institute.

Others² – this constituted 4 – Facility Manager, 7 – Estate Surveyors, 1 – Associate Partner, 1 – Admin Manager, 5 – Head of Agency and Management, 1 – Marketing/Research Officer, 1 – Business Development Executive.

Analysis in Table 2 revealed that 75.9 percent of the respondents were male and 24.1 percent were female. The predominance of males in the senior cadre of the firms could be attributed to the demanding nature of tasks involved in real estate development. Analysis of the respondents' educational background revealed that all were educated with a minimum of an HND degree. This suggests that the respondents were sufficiently knowledgeable to read, understand and give sound judgment on each of the questions raised in the questionnaire. Additionally, the analysis revealed that 58.7 percent of the respondents had at least 10 years of work experience in real estate development, and their opinions were therefore considered valid.

The respondents' professional qualifications varied across different professional bodies. However, a larger percentage were from the built environment, making their responses reliable. Prominent among these were members of the Nigerian Institution of Estate Surveyors and Valuers, which constituted 33.3 percent of the respondents, members of the Nigerian Institute of Building and Nigerian Institute of Quantity Surveyors, which constituted 13.8 and 12.6 percent respectively. Other respondents belonged to professional bodies such as the Nigerian Society of Engineers, Nigerian Institute of Architects, Chartered Institute of Bankers of Nigeria, the Nigerian Institute of Management, the Chartered Institute of Personnel Management of Nigeria, the Institute of Chartered Accountants of Nigeria, and the Project Management Institute.

Furthermore, it was noted that 9.2 percent of the respondents were managing directors, 17.2 percent were general managers, 47.1 percent were either project or property managers, and 3.4 percent were public relations officers of their firms. The remaining 22.8 percent included other positions such as accountant, data processing officer, facility manager, human capital manager, estate surveyors, associate partner, admin manager, head of agency and management, marketing/research officer, business development executive, and secretary. Moreover, Table 2 indicated that 73.3 percent of the respondents (an aggregate of managing directors, general managers and project/property managers) who completed the questionnaire were senior staff members, and possessed accurate and vital details on the practice of real estate development in their respective firms. This validates the adequacy and accuracy of acquired data.

4.3 Level of Adoption of Pre-letting and Pre-sale Financing

For clearer identification of the level of adoption, this study allowed each development firm to rate its level of usage of each arrangement and property-related data. It was then equally analysed as shown in sub-sections 4.3.1 and 4.3.2, respectively. Furthermore, this study tested the relationship between the level of adoption and the firms' profile, and the level of adoption of pre-letting and pre-sale financing arrangements using factor analysis and mean rating.

5. Level of Adoption of Pre-letting and Pre-sale Financing Arrangements

Considering the ratings of 4 to 7 as the range indicating high levels of use, only 18.3 percent and 57.3 percent of the respondents (the summation of scale 4 to 7) showed good usage of pre-letting and pre-sale financing, respectively. Similar to the findings of Shiyanbola and Olaleye (2022), who noted that pre-letting and pre-sale had been adopted by the developers as one of

the methods for housing delivery, the results presented in Table 3 confirmed the adoption of both arrangements. However, the preference for pre-sale was higher than that for pre-letting. This could be because many real estate development firms prefer selling properties outright after every development, rather than engaging in management and maintenance thereafter. In addition, the fact that 54.0 percent of the respondents had never used pre-letting further indicates a lack of interest in the build-to-rent model.

Table 3 **Level of Adoption of Pre-letting and Pre-sale Financing**

Pre-letting and Presale Financing	Frequency	Percentage (%)
Pre-letting (Rated on scale 1 to 7)	1.00	54.0
	2.00	23.0
	3.00	4.6
	4.00	10.3
	5.00	6.9
	6.00	--
	7.00	1.1
	Total	100.0
	Mean	2.0
	SD	1.4
Pre-sale (Rated on scale 1 to 7)	1.00	12.6
	2.00	17.2
	3.00	12.6
	4.00	14.9
	5.00	24.1
	6.00	10.3
	7.00	8.0
	Total	100.0
	Mean	3.9
	SD	1.8

SD = Standard Deviation

From the aforementioned, it is evident that the two financing arrangements are not new in the real estate development industry. The arrangements, referred to as off-plan in the industry, are widely known, except for a few respondents, constituting 2.0 percent reported being unaware of them. This small group likely comprises of secretarial staff who have little or no detailed understanding of the arrangements.

6. Level of Adoption of Pre-letting and Pre-sale Financing Arrangements Using Property Related Data

For further analysis of the rate of pre-letting and pre-sale adoption, data on past real estate developments were collected per firm from the year 2008 to 2023. The data were analysed using percentages, and the results are presented in Table 4. The results revealed that the arrangements were used for both commercial and residential properties, which affirmed the work of Hinkelmann and Swidler (2008) and Edelstein and Liu (2016), who noted the application of pre-letting and pre-sale financing arrangements in the property in the USA property market.

According to Table 4, which was calculated using equations 1 to 6 as explained in the methodology section, a total of 12,043 real estate units were developed within the year under

review by the respondents. The analysis revealed that 7.48 percent of the total output was pre-let during the year under review. This corroborates the outcomes in Table 3 regarding the low level of adoption of pre-letting finance arrangements by the development firms. As noted earlier, this could be due to the firms' lack of interest in management and maintenance of real estate. The results also show that 65.08 percent of pre-let units were commercial properties. This implies that properties such as office and shop units were the most transacted using the pre-letting finance arrangement.

In contrast to the pre-letting arrangement, pre-sale had a higher adoption rate of 17.44 percent. However, this level of adoption is low when compared to the number of units financed through other means, such as equity and mortgage, which accounted for 75.08 percent of the total output. As previously mentioned, the higher acceptance rate of pre-sale over pre-letting could be because most of the real estate development firms were interested in the outright sale of their developments. They often focus on the acquisition of bare land, its development and disposal. While commercial properties were the most pre-let units at 67.70 percent, residential properties took the lead with 51.20 percent in pre-sale.

Table 4 Rate of Pre-letting and Pre-sale Adoption

Year	Pre-letting			Pre-sale			Aggregates			Percentage $\Delta(\text{APP}, \text{TUD})$
	RUP_L	CUP_L	TP_L	RUP_S	CUP_S	TP_S	APP	Others	TUD	
2008	15	12	27	38	39	77	104	732	836	12.44
2009	16	12	28	44	14	58	86	681	767	11.21
2010	12	13	25	51	16	67	92	1,190	1,282	7.18
2011	19	16	35	56	112	168	203	854	1,057	19.21
2012	13	20	33	60	173	233	266	834	1,100	24.18
2013	21	23	44	47	57	104	148	235	383	38.64
2014	24	28	52	48	125	173	225	531	756	29.76
2015	21	32	53	78	202	280	333	464	797	41.78
2016	15	39	54	67	21	88	142	877	1,019	13.94
2017	21	48	69	74	19	93	162	349	511	31.70
2018	21	40	61	105	17	122	183	215	398	45.98
2019	14	45	59	79	27	106	165	331	496	33.27
2020	21	53	74	91	21	112	186	267	453	41.06
2021	17	85	102	99	50	149	251	495	746	33.65
2022	19	71	90	87	42	129	219	479	698	31.38
2023	22	73	95	94	47	141	236	508	744	31.72
Total	291	610	901	1,118	982	2,100	3,001	9,042	12,043	24.92
Percentage $\Delta(\text{TP}_L, \text{TP}_S)$	32.30	67.70	100.00	53.24	46.76	100.00	24.92	75.08	100.00	
	$\Delta\text{TP}_L = \text{TP}_L / \text{TUD} = 7.48$			$\Delta\text{TP}_S = \text{TP}_S / \text{TUD} = 17.44$						

RUP_L = Residential Units Pre-let; CUP_L = Commercial Units Pre-let; TP_L = Total Pre-letting;

RUP_S = Residential Units Pre-sold; CUP_S = Commercial Units Pre-sold; TP_S = Total Pre-sale;

APP = Aggregate of Pre-let and Pre-sale financed development (summation of TP_L and TP_S);

TUD = Total Number of Units Developed; Percentage = Rate of APP against the TUD;

Others refer to real estate development units financed through other means, such as equity, mortgage, etc.

In addition, the finding aligns with the observation of Li and Chau (2019), who affirmed an increase in the adoption of the arrangements in the Hong Kong market. Similarly, there was a relative increase in the usage of pre-letting and pre-sale financing arrangements by the real estate development firms in the Lagos metropolis within the years under consideration. As presented in Table 4, there is a steady increase in the adoption of pre-letting and pre-sale finance arrangements in the Nigerian real estate development market. The table shows a percentage change of 12.44 in 2008, which grew to 31.72 in 2021. Although there were sharp declines in 2010 and 2016, the growth suggests a renewed adoption by the firms due to the

inherent benefits of the financing arrangements. The decrease in 2016 might have been due to the economic recession in Nigeria that spanned from 2016 to the first quarter of 2017. Similarly, the slight decline from 2021 might be the aftermath of the COVID-19 pandemic in 2020 and the subsequent cash crunch.

7. Relationship Between Level of Adoption and Firms' Profile

This study further sought to determine whether firms' profiles – such as years of establishment, staff strength, asset base and ownership type – influenced the level of adoption, using multiple regression analysis. Following simple principles of regression analysis – which involve one continuous dependent variable, two or more continuous or categorical independent variables, and the existence of a linear relationship between them (Gogtay et al., 2017) – the findings of this study's multiple regression analysis are illustrated in Table 5. The Durbin-Watson test of reliability for both pre-sale and pre-letting models is approximately 2, indicating that there is no autocorrelation in the models. This implies that the observations are independent of one another. Hence, the independent variables are good predictors for the level of pre-letting and pre-sale adoption in the emerging markets (Adhikari, 2022).

Table 5 Relationship between Firms' Profile and Pre-letting and Pre-sale Adoption

Model	R	R ²	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Pre-letting	0.241 ^a	0.058	0.019	1.347	1.989
Pre-sale	0.298 ^a	0.089	0.051	1.750	2.054

a. Predictors: (Constant), Asset Base, Ownership Structure, Staff Strength and Year of Establishment
Dependent Variable: Pre-letting, Pre-sale

Regression equations for Table 5 are presented in equations (1) and (2). Both revealed insignificant contributions of the four tested firm profile variables on pre-letting and pre-sale financing, respectively. The equations confirmed that none of the four variables tested significantly motivates real estate development firms' adoption.

$$P_L = 2.876 - 0.090YE - 0.102OS + 0.021SS - 0.094AB \quad \dots\dots (1)$$

$$P_S = 4.975 + 0.119YE - 0.044OS - 0.263SS - 0.108AB \quad \dots\dots (2)$$

Where:

P_L means Pre-letting.

P_S means Pre-sale.

YE is the Year of Establishment;

OS is Ownership Structure.

SS is Staff Strength; and

AB is Asset Base.

Table 5 revealed that there is a low degree of correlation between firms' profiles and both pre-letting and pre-sale, with $R = 0.238$ and 0.315 , respectively. Based on the R^2 , only 5.7 and 10.0 percent of the total variation in pre-letting and pre-sale adoption (dependent variables) could be explained by the year of establishment, staff strength, asset base and ownership structure (independent variables). This indicates that the factors motivating real estate development firms in the adoption of pre-letting and pre-sale financing arrangements extend beyond the four tested parameters. This finding is in tandem with Ibrahim et al. (2015) and Kieu and Mogaji (2018), who identified the benefits inherent in the arrangements as the key motivating factors for their adoption.

8. Conclusion

The analysis demonstrated that pre-letting and pre-sale financing arrangements are not new to the real estate development firms in Nigeria. When applied to both commercial and residential properties, their level of adoption varied. Furthermore, it showed that the majority of the development firms do not consider pre-letting in their choice of finance for real estate projects. The increasing adoption levels of both arrangements were not significantly influenced by the tested organisational parameters. The increase could be attributed to other factors, within the organisation or outside of the firm's profile. Unlike residential properties, the analysis showed a significant increase in the adoption of pre-letting for commercial properties. However, an increase in pre-sale adoption was seen throughout the years under consideration. Though a more significant increase was recorded in the residential properties, commercial properties equally experienced a slight increase over the years. On the aggregate level, there appeared to be an increase in the adoption of both arrangements for real estate development in Nigeria. However, more can still be done to encourage higher usage of these arrangements. It is necessary that all stakeholders get involved to ensure a smoother and broader adoption of pre-letting and pre-sale financing arrangements. By doing so, it enhances the improvement in housing provision as experienced in developed economies where they have been adopted.

This study adds to the existing body of knowledge by showing the increase in the level of adoption of pre-letting and pre-sale financing arrangements by the property development companies in Global South countries. The improvement in the rate of adoption is neither intrinsic nor connected to any of the qualities or profiles of the property development companies. It shows that what motivates the adoption of pre-letting and pre-sale financing arrangements is extrinsic. As this study focused primarily on the level of adoption of pre-letting and pre-sale financing arrangements, further research could examine the factors motivating their adoption beyond the profile of property development companies. The information provided in this study illustrates the current trends in the adoption of these financing arrangements by development companies and shows how adoption levels responded to global and national financial crises and the COVID-19 pandemic. Further studies can be conducted to extensively examine the combination of both internal and external factors that contribute to the adoption of pre-letting and pre-sale financing arrangements by PDCs in emerging markets.

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