COVID AND POST-COVID ERA: PRACTICES AND CHALLENGES OF ARCHITECTURE FROM 2020 TO 2024 IN IBADAN, OYO STATE

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Keywords

COVID-19, Post-COVID era, Architecture, Professional Practice, Challenges, Professional development, Nigeria

Abstract

Research Problem: *This study examines architectural practice in Ibadan, Oyo State, during the COVID-19 pandemic and the post-COVID period from 2020 to 2024. It addresses the limited understanding of how the global health crisis, economic instability, changing social behaviour, and existing professional weaknesses affected architectural operations within the city.*
Methods/theory: *The study adopted a quantitative research approach, using structured questionnaires administered to 50 architects in Ibadan. The data collected were analysed statistically to identify the major patterns and challenges affecting professional practice.*
Results: *The findings reveal that the COVID-19 period exposed the vulnerability of architectural firms, as many practitioners experienced difficulties in maintaining client engagement, continuing projects, and adapting to changing working conditions. Rising construction-material costs caused by inflation, delays in project approvals, limited access to digital tools, and weak public understanding of architectural services also affected professional practice. These challenges continued after the pandemic because of unstable economic conditions, poor digital preparedness, weak enforcement of building standards, and increasing patronage of non-professionals.*
Conclusion: *The study concludes that the pandemic intensified existing economic, regulatory, technological, and socio-cultural weaknesses within architectural practice in Ibadan.*
Key Contribution to Knowledge: *Its contribution lies in providing location-specific evidence on the challenges experienced by architectural firms between 2020 and 2024.*
Recommendation: *It recommends government support, stronger professional advocacy, improved digital capacity, public awareness*

programmes, and strengthened institutional frameworks to promote licensed architectural services and improve the profession's relevance in Nigeria's built environment.

INTRODUCTION

The major problem this study attempts to address is the possibility of the architectural practice in Ibadan not entirely recovering from the disruptions of the COVID-19 pandemic. Since the pandemic started in 2020, architects have been working in an environment of economic uncertainty, increased building prices, technical restrictions, regulatory delays, and changing client expectations. The epidemic affected project execution, office operations, site supervision, client involvement, and professional relationships. Concerns persisted even after restrictions were eased, including inflation, delays in project approvals, limited access to digital tools, insufficient enforcement of building standards, and low public comprehension of professional architectural services. The question is whether the post-COVID phase constitutes a true professional recovery or a further adaptation to an increasingly demanding practice environment.Architectural practice is the application of specialised knowledge, artistic skill, technical competence and managerial abilities to develop structures that are functional, durable, efficient and responsive to the needs of clients and society (Awolere, 2011). Professional practice is the application of expertise to suit certain social and individual requirements. In architecture, professional practice is also concerned with producing value for clients through designs that are more durable, energy-efficient, and cost-effective for owners. Architectural practice is a systematic way of designing and constructing buildings, integrating art, science and management.

However, there are certain aspects that may hinder architects from accomplishing these professional goals. Some of these challenges are long-standing issues within architectural practice, while some are a result of prevailing economic, technological and social factors (Dare-Abel *et al*., 2015; Ikoli, 2018). Architectural perception and architectural services are affected by fast changes both at the local and global levels. The professional environment has become more challenging and less predictable, especially for practitioners who are faced with the dual pressures of increasing expenses, changing technologies and shifting client expectations.The study addresses the gap between architectural education and professional practice in Nigeria, which has led to the notion that some graduates of Nigerian schools of architecture are ill-prepared for the demands of the field. This is not unique to Nigeria, and similar arguments have been held in nations like the USA, Britain and Germany (Tzonis, 2014). Architectural education provides the essential knowledge and skills needed for professional practice, but this knowledge must be regularly improved to respond to the changing nature of the practice environment (Ikoli, 2018). Architects may find it challenging to adapt to technological changes, new ways of project delivery, and changing customer expectations without training and professional development.

While previous studies have studied the professional, educational, economic and technological challenges affecting the architectural practice, not enough works have studied the interplay of the challenges with the COVID-19 pandemic and their continuance into the post-COVID era, especially in Ibadan. Most

previous studies have, in general terms, investigated the problems of architectural practice, without a direct comparison of the situation during the pandemic and following the relaxation of constraints. The present study consequently considers the topic from the point of view of continuity and change from 2020 to 2024. It differs from previous studies that examined professional obstacles in a general manner by considering how economic, regulatory, technological and social forces together influenced architectural practice in Ibadan during and after the pandemic. The research contributes to previous scholarship by giving location-specific information and by framing the post-COVID period as an ongoing process of professional adjustment rather than a complete return to regular practice.

STATEMENT OF THE PROBLEM

Architectural practice involves continuous collaboration between architects, clients, contractors and regulatory bodies through site visits, design meetings and project supervision. However, the COVID-19 outbreak in 2020 disturbed these traditional forms of practice in Nigeria, particularly in Ibadan, Southwest. Movement constraints and health rules hindered physical interaction, slowed project execution and caused many enterprises to become remote with their working arrangements. In many cases, this transformation revealed infrastructural challenges such as unreliable energy, restricted access to reliable internet services, and inadequate digital tools that hindered the effectiveness of professional practice (Ebekozien&Aigbavboa, 2021). This abrupt change also exposed the low digital preparation of many architectural businesses in developing contexts (Oke*et al*., 2024).

The post-COVID period (2022-2024) was a period when architects in Ibadan were still faced with economic challenges which mostly affected professional outcomes. Inflation and increasing prices of construction materials, along with volatile currency rates, hampered the project budgets and often necessitated repeated design changes or scope reductions. These issues also impacted professional costs, as many clients struggled with affordability and rejected typical charge arrangements. Therefore, architects often had to combine professional standards with the financial constraints of clients, which created problems in project delivery and practice sustainability (Akintoye *et al*.,2012; Ogundeji, 2023). These economic realities mirror a greater volatility within Nigeria's construction and built environment sector.Economic pressures have been accompanied by ongoing technical and regulatory hurdles. Despite the increased relevance of digital technologies such as CAD, BIM and cloud collaboration systems in the practice of architecture, the penetration of these tools among businesses in Ibadan is unequal, due to the high cost, poor training and infrastructure limitations (Akande et al., 2023). Regulatory bottlenecks, such as delays in planning permissions and erratic development control processes, continue to impact project deadlines and professional efficiency. (Afolabi et al., 2024; Ogunbiyi, 2014).

Despite the concerns stated, most of the previous studies on architectural practice in Nigeria have been on the construction industry or specialised topics such as technology adoption, regulatory compliance or professional practice. There are stilla few findings that describe explicitly how architectural companies in Ibadan encountered and managed the combined consequences of COVID-19 disruptions and post-pandemic economic, technological and regulatory issues between

2020 and 2024. This leaves a distinct contextual gap in comprehending the lived reality of architectural practice in the research area, which this study aims to fill.

AIM and OBJECTIVES OF STUDY

This study aims to critically examine the challenges affecting architectural practice in Ibadan, Southwestern Nigeria, during the COVID-19 and post-COVID periods between 2020 and 2024. The objective of the study highlights the following:

1. Identify and classify the major challenges of architectural practice in Ibadan between 2020 and 2024;
2. Examine the underlying causes of these challenges, with particular attention to technological, economic, social, and regulatory factors; and
3. Propose remedial measures for addressing the challenges and improving architectural practice in the study area.

CONCEPTUAL CLARIFICATION

Architectural practice is the coordinated professional actions of transforming a client's needs into a practical and buildable project. These include design development, technical documentation, statutory approval, coordination with consultants and contractors, site inspection and project administration (Registration, Etc. Act, Cap. A19, Laws of the Federation of Nigeria, 1969). In this study, the COVID-19 period refers to the disruption and adjustment phase between 2020 and 2022, when movement limitations limited physical meetings, site visits and other types of professional connections. The post-COVID period refers to the recovery time from 2022 to 2024, during which 2022 is considered a transition year between restrictions and a return to more regular professional activities. During these periods, digital technologies were widely significant for communication and project coordination, but their successful application in Nigeria was limited by financial, technical and infrastructural constraints (Ebekozien&Aigbavboa, 2021).

Four connected facets of the challenges of architectural practice are explored. Economic concerns include inflation, increased material costs, volatility of project budgets and pressure on professional fees. Some of the technological hurdles that have been significant barriers to the use of technology in the Nigerian construction sector are the cost of digital tools, lack of training and poor supporting infrastructure (Oke et al., 2024). Regulatory issues include delays in planning approval, administrative inefficiencies and insufficient enforcement of development-control criteria. Administrative procedures have been found to influence compliance with physical planning standards in Ibadan (Afolabi *et al*., 2024). The social problems are: lack of public awareness of architectural services; opposition of clients to professional costs; and patronage of unqualified service providers. The fundamental perspective of this study is that these difficulties are interlinked: increasing costs have the potential to decrease clients' motivation to employ architects; delays in regulations have the potential to further increase project costs; and inadequate technical capability has the potential to undermine project coordination. Rather, the architectural practice in Ibadan between 2020 and 2024 is regarded as the result of the interaction of economic, technological, regulatory and social factors.

LITERATURE REVIEW

Historically, "Architecture" was coined from the Greek word "architeckton" (in Latin "architecton"), which means "master builder," planner, designer, and producer of buildings,

whether existing or new (Osasona, 2006; Amole, 2004).Shrivastava, (2023). also defined architecture as the art and science of designing, planning, and developing structures and spaces. The origin of architecture is classified by eras, outlining the time period of man's existence. The era before history began to be documented, and this era spanned the time period of 10,000-1500 BC (Sarka, 2013). Where remains have been found of simple shelters constructed from animal skins draped between sticks. Structures of this type were the first dwellings constructed by man. These 'tented' structures thrived in regions where materials were scarce, or where survival required mobility; both conditions, which tended to be brought about by low rainfall and changing climates, brought about a slow transition from nomadic tents to permanent huts and vice versa, and it was from the result of intermediate modification that an enormous range of composite dwellings evolved. Some of these basic generic forms of structure are still used in remarkably unchanged forms throughout the world today, for example, the mud brick hut and yurt (a composite structure still in common use in Africa). It was through the maintenance and personalisation of these early structures that decoration was introduced, and they became more than purely functional shelters. As cultures developed and knowledge was formalised, the process of building became a craft that birthed architecture.

Origin of Nigerian Architectural Practice

Nigeria, one of the most populous countries in Africa, is geographically and well located on the West African coast. It has a great diversity in the area, its natural components comprising the varied topography, climatic conditions, as well as vegetational patterns. With a population of about 200 million people (National Population Commission, 2020), Nigeria is the largest country in Africa and accounts for 47% of West Africa's population (World Bank, 2013; 2023). In terms of land mass, it covers an area of about 924,000km and is bordered on the North by the Niger Republic, on the East by Chad and Cameroon, on the South by the Gulf of Guinea, and on the West by the Republic of Benin (Diso, 2005). Before and during the early part of the European colonisation of Africa, the entire continent was unwittingly perceived as one without any civilisation, let alone a cultural heritage (Uchegbu, 2015;Odeyale,2023). However, many European travellers, traders and missionaries who visited Africa during this period marvelled at what they discovered: Africa has a rich civilised culture, empires and kingdoms whose achievements could be compared to those of Europe. The ancient kingdoms of Benin, Oyo and Kanem-Borno were known to have achieved remarkable feats in Architecture. Some testimonies of these achievements have survived till this modern time (Uchegbu, 2015). This goes to show that Architecture has always been a major part of man's way of life, whether he is formally educated or not. It is the manifestation of an innate desire.

In Nigeria, however, the traditional architecture has been replaced by modern architecture, an expression of the industrial age. This transition from traditional architecture to modern architecture can be said to be rooted in the colonisation of Africa by Europe. Nigeria was colonised by Great Britain in the year 1901. On 1st October, 1960, Nigeria gained independence from their colonial masters. But without a doubt, the European ways had rubbed off on them. During the period of colonisation, the colonial masters, when making shelters for themselves, one that compared to the standards in their countries, they got Nigerians to do this for them. As a result, the white man's way of architectural thinking and skills were imbibed.

Although the colonisation of Nigeria was a strong drive for the presence of modern architectural style in the country, it does not accurately account for its presence. Just as modern architecture was a brainchild of the desire to express the industrial age, modern architecture in Nigeria was not an exception to this factor. With the inventions of new materials: plastic, glass, reinforced concrete and also new means of applying them, a new era had dawned. (Osasona, 2006; Odeyale& Adelaja, 2025).

Nigeria University Architecture

The University of Ibadan (formerly University College) is the oldest Nigerian university (Teferra& Philip,2003) and is located five miles (8 kilometres) from the centre of the major city of Ibadan in western Nigeria. The origins of the university are in Yaba College, founded in 1932 in Yaba, Lagos, as the first tertiary educational institute in Nigeria. Yaba College was transferred to Ibadan, becoming the University College of Ibadan, in 1948 (Nkulu, 2005). Colonial rule was imposed by the British from 1851 to 1903 on the various entities that made up Nigeria (Oladiti, Adeoye&Idowu, 2016). Due to this, the colonial authorities deemedit necessary to build the Nigerian environment using the colonial funds and resources internally generated to develop unimaginable projects of some buildings that can be obviously described as symbols of colonial architecture in Nigeria (Usanlee, 1988).

Maxwell Fry and Jane Drew, two well-known British architects, were brought in from England to create the architectural plan in order to create a fresh environment (Liscome, 2006). When developing buildings established by the colonial authority in important Nigerian cities, including Ibadan, Port Harcourt, Kano, Jos, and Enugu, both architects drew inspiration from the British model (Preston, 1981). According to Jaiyeoba and Asojo (2016), all of these factors contributed to the founding of University College Ibadan, which is now the University of Ibadan.

Fry (cited in Jackson, 2011) asserts that universities could contribute to the moral advancement of post-war society. It was the architect's job to go beyond simple shelter and usefulness because Fry intended colleges to use their structures to communicate this goal. Jackson and Holland contended that Ibadan was chosen as the location for a new college in West Africa because it was less crowded than Lagos and because the city needed a new hospital, which could be developed alongside the medical school, given its growing population of 400,000.Fry and Drew (1956), responsible for designing the University of Ibadan campus, noted: “an architecture and form of urbanism will emerge closely connected with the set of ideas that have international validity, but reflecting the conditions of climate, the habits of the people and the aspirations of the countries lying under the cloudy belt of the equatorial world”. The buildings at the University of Ibadan are an interpretive maze, yet it is part of their allure (Livsey, 2014). The University College Ibadan site was constructed in two stages. Five years prior to independence from colonial rule, in 1955, phase one was finished. The 1960s saw the completion of phase two (Asojo & Jaiyeoba, 2016).

ARCHITECTURAL PRACTICE

The idea for the formation of an independent professional architects’ organisation in Nigeria was first conceived and motivated by three Nigerian architectural students while still pursuing their training in England in the 1950s," according to the Nigerian Institute of Architects

(1983). Given the determination, conviction, and efforts of the pioneer in Nigerian indigenous architectural practice, it was not surprising that the Nigerian Institute of Architects (NIA) was established on April 1st, 1960, just six months before Nigeria gained its independence, with just thirteen members. The historic ceremony took place at the premises of the National House of Representatives in Lagos. At the time of its formal inauguration, it was known as the Nigerian Society of Architects, thus becoming the first indigenous and independent professional association in Nigeria. Their goal was to build a formidable team of architects, with well-trained professionals, knowledgeable in the practice of architecture.Also, with the view of creating value for clients, which includes designing more durable structures, using less energy, and being more affordable for owners.

In Nigeria, the professional practice of architecture is essential to forming the built environment and advancing sustainable growth. The Nigerian Institute of Architects and the Architects Registration Council of Nigeria (ARCON) were established to guarantee the highest standards of professional competence and ethics. The roles and functions of these bodies have had far-reaching effects on the practice of architecture, shaping professional standards, fostering ethical conduct, and influencing the overall development of the architectural industry.A quick look at the historical background to understand the origin and context of the formation of these bodies (NIA and ARCON) will go a long way in ensuring clarity and giving a perfect understanding of the expected roles of these bodies. The Nigerian Institute of Architects (NIA), founded in 1960, is the professional association for architects in Nigeria. According to Olanusi*et al.* (2023), "The Architects Registration Council of Nigeria (ARCON) was established by the Architects (Registration, Etc.) Act of 1969, serving as the regulatory body for architects and architectural practice in Nigeria. They organise seminars, workshops, and conferences to provide professional development opportunities and promote the exchange of ideas among architects (Alagbe*et al.,* 2020). ARCON and NIA work collaboratively to regulate and advance the architectural profession in Nigeria. While ARCON focuses on the statutory regulation of architects, including licensing and registration, NIA serves as the professional association responsible for advocacy, continuing professional development (CPD), and fostering excellence in architectural practice (Olanusi*et al.,* 2023).

Architecture and Its Challenges

Haruna (2008) established some of the absurdities witnessed in architectural practice in Nigeria in the last 20 years. Some of the absurdities identified are noncompliance with requirements of the NIA Code of Conduct and the ease with which anyone (qualified or unqualified) can register a construction business. Similarly, Arc. Roti Delano, the President of the Association of Consulting Architects of Nigeria (ACA Nigeria), identified that the bane of architectural practice in Nigeria is the over-reliance on expatriates to work illegally on projects at the expense of qualified indigenous practices Njoku (2011). It is evident from the few articles reviewed that the architectural practice in Nigeria is faced with a lot of challenges. Dare-Abel (2015) said that from whichever angle one wants to look at the challenges facing architectural practice, one cannot separate the dynamic nature of architecture as a profession, and the practice of it as a business. According to (Ikoli, 2018), architectural firms in Nigeria struggle with

financial instability due to inconsistent government policies and inflation, which significantly affect the construction industry. Furthermore, highlights that weak enforcement of building regulations has led to issues such as the proliferation of substandard and unprofessional buildings.

The challenges facing the practice of architecture today have been growing in size, complexity, and pattern. For example, a client may award his contract purely on political, religious or other considerations to a company or an individual that has no business with construction, yet expecting the architect to perform wonders and get the job done within the specified quality, time and cost. This is probably because the role of the architect in normal post-contract services is misconstrued to be that of supervision even in some of the NIA's official documents. However, this study identifies some factors that posed a threat to the practice of architecture in Ibadan, Oyo State, Nigeria, from 2020 to 2024.

Impacts of COVID-19 On Architectural Practice in Ibadan, Oyo State, Nigeria.

Other challenges encountered during this review were the impact of COVID-19. This had significant consequences on the practice of architecture, industries and eventually the overall economy of every country. Ibadan Southwest, Nigeria, being no exception also got affected from Covid-19. Manycountries and regions adopted lockdown policies by closing their borders and restricting day-to-day activities in order to curtail the spread of the virus. COVID-19 has impacted every industry, especially architecture, and containment protocols for construction have been implemented to provide maximum safety for construction workers, enforcing measures for adequate prevention and control of the spread of the virus. Some of the restrictions include a reduction in work hours, implementation of shift services, maintenance of social distancing among workers and total cancellation of any site visits and meetings.

Architectural practice, which mainly depends on networking, interaction, coordination, and site visits, was also hit hard, like other professions. Employees of the firm were working from home, and this was a new experience as many of the architects as previously worked from home was majorly limited to information technology (I.T). The pandemic-induced lockdowns led to a massive surge in remote work, propelling video calls to the forefront of communication tools. The use of information technology in the workplace has given rise to flexible working models, with the most notable outcome being the concept of remote working, commonly known as "working from home" or "telecommuting." Remote working involves the use of information technology to perform all or part of a job outside of the traditional office environment (Kavi and Koçak, 2010).

For Architects, this meant adapting to virtual collaboration, virtual client meetings, and online design presentations. Many architectural firms encourage remote work to reduce costs and tap into a qualified workforce from different locations. Other models adopted during this period are the flexible working models, such as remote work, home office work, and telecommuting. The work from home model taught the architecture and allied industry the importance of smart working, i.e. virtual mode of working, through which many things can be managed with optimum resources and with slashed overheads to save time and money. Because of COVID-19, little or no space is required for architecture and allied profession start-ups that were having their offices in co-

working spaces. The virtual mode of working helped to achieve new levels of digital proficiency for the office staff in the architectural profession. This eventually provided flexibility and convenience to the office staff who were working from home during the COVID-19 lockdown in Ibadan, Southwest Nigeria. There was an ease in coordinating and conducting meetings with stakeholders with the use of technology during the COVID-19 lockdown. The meeting time and traveling was slashed because of the work-from-home concept. The rise of Home Offices accelerated the acceptance of remote work, prompting individuals to reevaluate their living spaces. Home offices quickly became a priority for many as they sought to create productive work environments within the confines of their homes. This shift significantly impacted architectural design, with a growing emphasis on integrating dedicated office spaces seamlessly into residential layouts. As a result, some architectural firms can now practice entirely or partially remotely.

RESEARCH METHODOLOGY

Study Area: Ibadan, Oyo State, Nigeria

Ibadan is the largest indigenous city in tropical Africa (Ayeni, 1994). It is the capital of Oyo State, which is one of the 36 states of the Federal Republic of Nigeria outside the Federal Capital Territory, Abuja. The metropolis is made up of 11 local government areas (Figure 3.1 below). Five of these are in the inner city. They are: Ibadan North West, Ibadan North, Ibadan North East, Ibadan South West and Ibadan South East. These inner-city local governments are surrounded by the six local government areas,as shown in Fig. 1, which are made up ofAkinyele, Lagelu, Egbeda, Ona-Ara, Oluyole and Ido. The location of Ibadan was defined as the area extending for about 55 km from Asejire in the east to Agemo in the west and for about 70 km from Iroko in the north to Mamu in the south. Ibadan is located on a hilly terrain, and it has an elevation of about 210 meters above sea level. It is located between latitude 7° 05N and 7° 25N and longitude 32 °40 E and 32° 55 E and lies approximately at a distance of 145 kilometres northeast of Lagos.

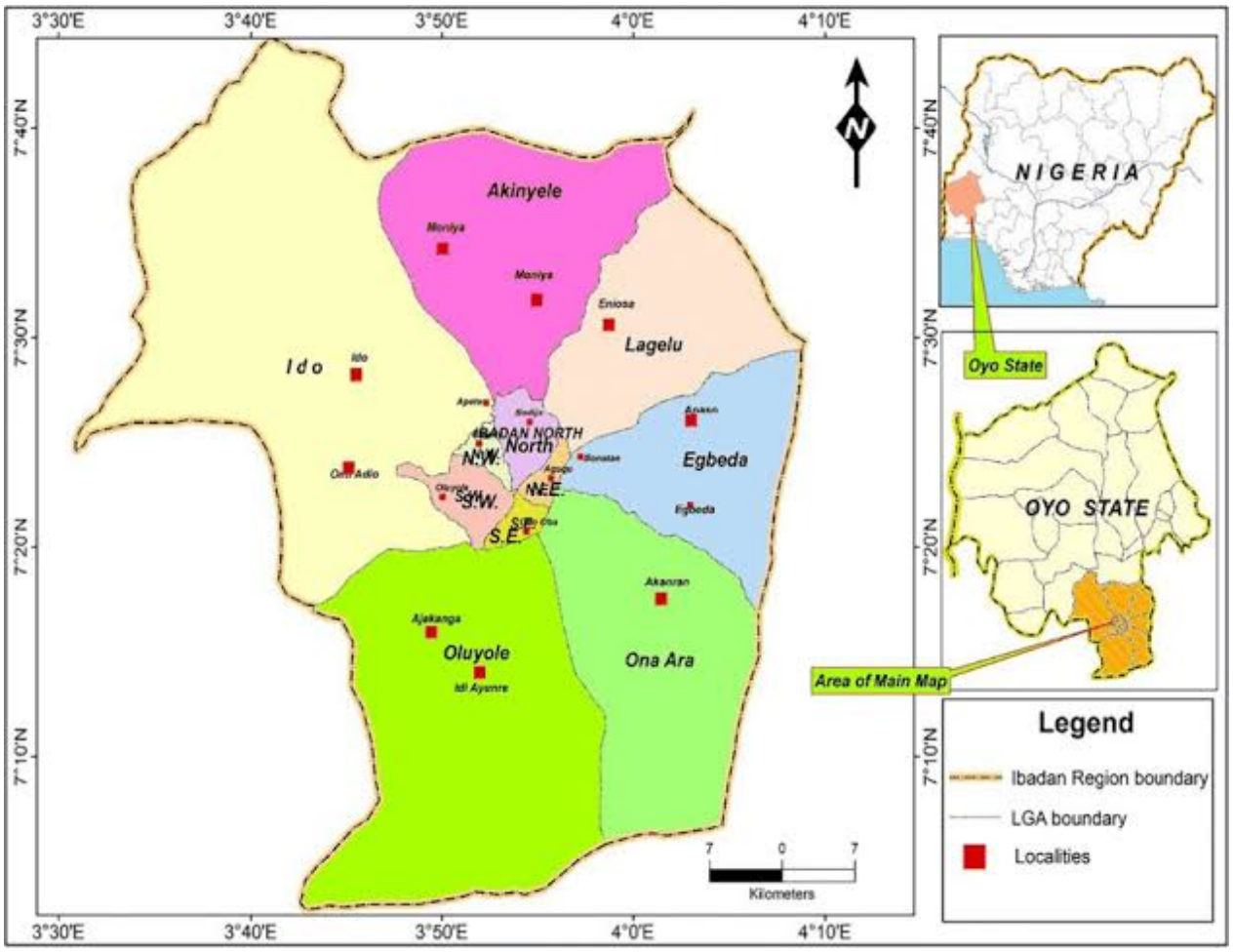


Figure 1: Map of Ibadan.Source: Federal Ministry of Lands and Survey (2025).

METHOD

This study adopted a quantitative research approach, this is found appropriate for this study because it relies on the collection and analysis of numerical data to explain and understand complex phenomena (Gay, Mills, &Airasan, 2009), as it provides a rich and in-depth view of the participants' experiences and perceptions of the challenges facing the architectural practitioners within Ibadan Southwest, Nigeria. The approach facilitates the collection of data directly from professionals in the field, enabling the gathering of first-hand information on the subject matter.

Sampling technique

The research method employs for this study is the creation of questionnaires for Architects. The questionnaires were structured based on the research objectives.

Sample size

A considerable number of 50 Architectsmade up the sample size for this study. Ensuring a diverse representation across various firm sizes and specialisations.

Data analysis

Statistical analysis is used for analyzing the data obtained from the survey. Finding themes and patterns in quantitative data is the goal of statistical analysis, an approach for data analysis. Based on the objectives of the study, the data will be classified and grouped into themes. The research questions were addressed through the identification, analysis, and interpretation to answer the research questions.

FINDINGS

Figure 2 (a and b) indicates the economic performance of the architectural firm between 2020 and 2022 and from 2022 to 2024. About 42% of firms were not sure of their economic performance during the years in review, while 8% claimed that the economic situation was very favourable to architectural practice, meanwhile, 36% asserted that it was favourable, and 14% indicated thatit was very unfavourable. This implies a mixed fortune in architectural practice in Ibadan due to the non-restriction policy adopted by the government of the state. However, there seems to be an upsurge in the construction economy from 2022 to 2024 due to the global relaxation of lockdown policies.

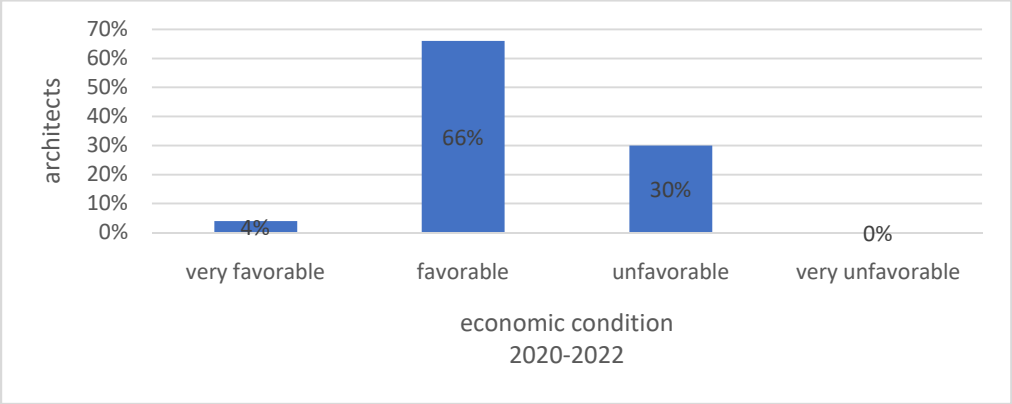


Figure 2a: economic condition of Ibadan on architectural practice between 2020 and 2022.

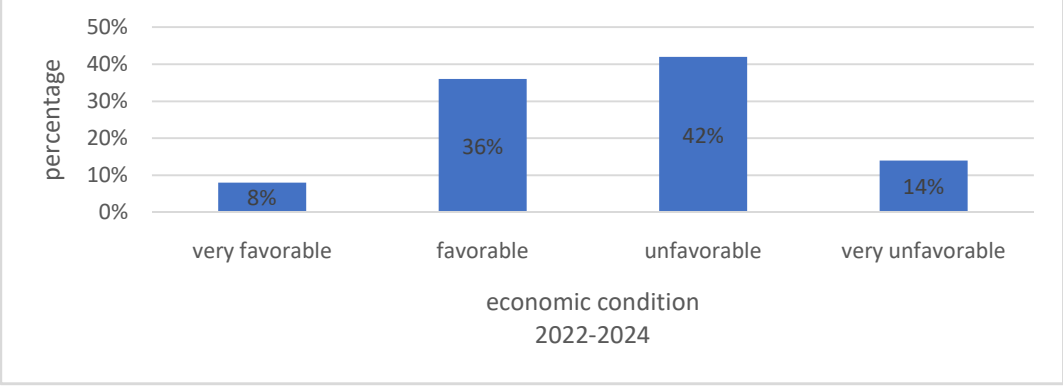


Figure 2b: Ibadan's economic situation in relation to the practice of architecture between 2022 and 2024.

Comparison of Economic Situation Between 2020-2022 and 2022–2024.

While the pandemic had a significant impact on the economy between 2020 and 2022, architectural firms in Ibadan were able to navigate through the crisis by adapting to global shifts, as shown in Figure 3 below. However, as expected, the trend is expected to continue beyond 2022, the aftermath of the pandemic, which caused an economic downturn, between 2022 and 2024, characterised by continued inflation and slow recovery of the economy.

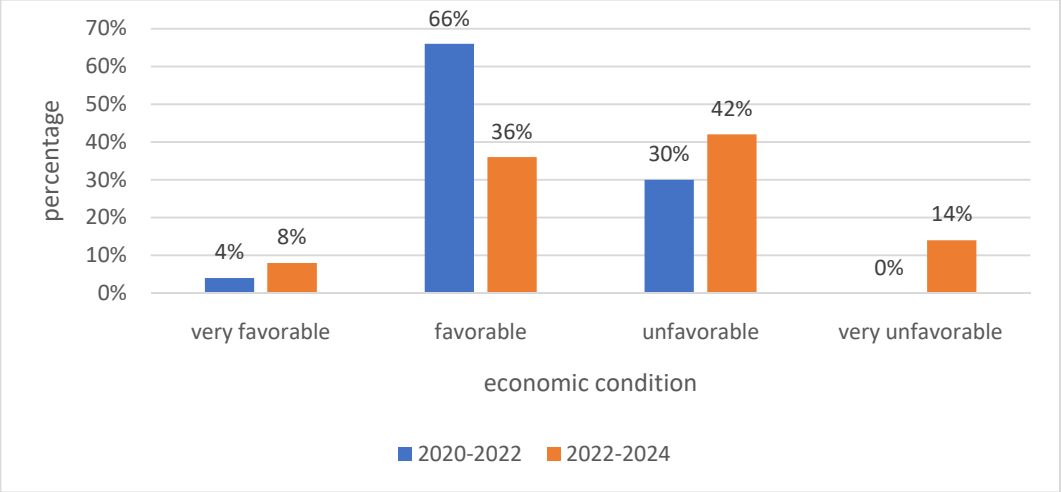


Figure 3: Comparison of economic situation in relation to the architectural practice in Ibada between 2020-2022 and 2022–2024.

This shift underscored the vulnerability of the architectural sector to macroeconomic conditions in Ibadan and Nigeria at large, as asserted by Awolere (2011). Also, according to an article of 15th January, 2023, published by Josephine Ogundeji on The Punch Newspaper, the principal architect, Vista Collaborative Consultants, BodunrinOguntoye, noted that the major obstacle to the construction sector in 2022 and beyond was the rising cost of building materials, which is largely affected by the foreign exchange rate. RasheedOlayinkaAjirotutuexpressed in The Nation Newspaper, an article of December 10, 2024. He claimed that inflation directly impacts the prices of construction materials such as steel, which are typically imported or subject to fluctuations in the global market.

Effects of Fluctuations in Material Costs on Projects

According to the findings, as illustrated in Figure 4, 58% of architects reported that inflation had significantly delayed project timelines, 32% believed that it had increased project costs, 8% claimed that it had decreased project quality, and 0% believed that it had no significant effect. Architects in Ibadan Southwest, Nigeria, may face significant challenges as a result of fluctuations in material costs, as indicated by the study results. This was affirmed by RasheedOlayinkaAjirotutu's article of December 10, 2024, in The Nation

Newspaper. Finally, to overcome financial limitations and guarantee project success, architects should carefully evaluate the resources at their disposal and prioritise design components (Nwosu*et al*., 2020).

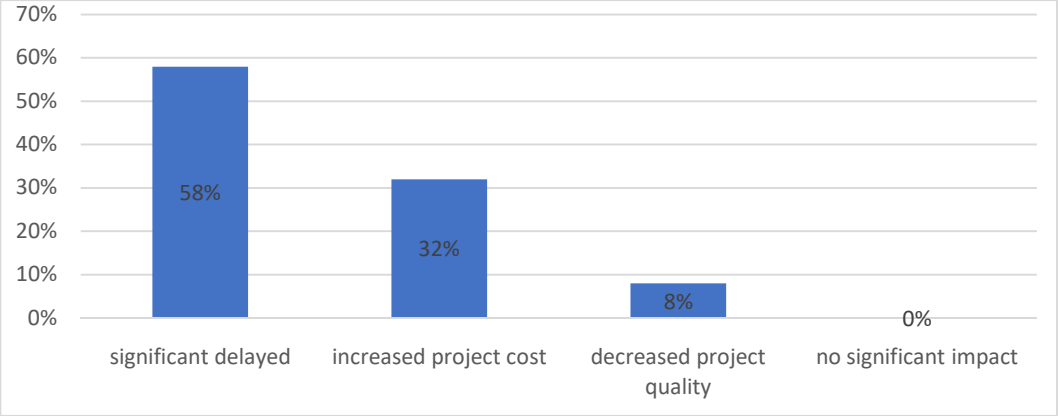


Figure 4: Effect of fluctuation of material cost on building projects.

Impact of the Economic Situation of Ibadan on the Architectural Standard Scale of Fees

As shown in Figure 5, of the total number of respondents, 42% acknowledged that the fee structure of architectural services has increased, 44% established that the fee structure has decreased, while 14% agreed that there has been no change in the fee structure. The findings showed that what the clients are willing to pay has slightly decreased in comparison with the NIA scale of fees, as opined by Awolere (2011). This poses a serious threat to the oversight bodies (ARCON & NIA) in reviewing the scale of fees to align with the current economic reality of Ibadan. With the above claim, it can be deduced that the architectural fee structure has been slightly increased according to the difference in the percentage of the respondents.

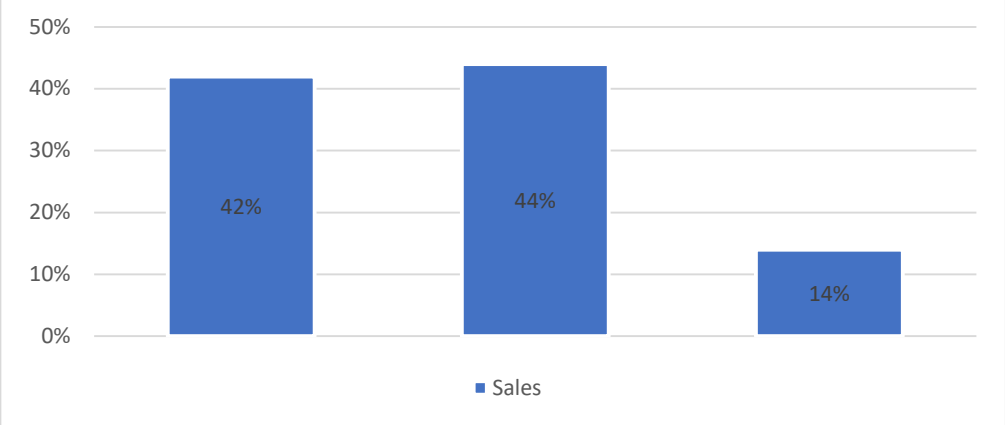


Figure 5: Respondents' views on the scale of fees.

Demand for Architectural Services

As shown in Figure 6, the survey results highlight the impacts of the economy on the demand for professional services, while 52% agreed that the economy had significantly affected the demand for architectural services. Meanwhile, 42% had a contrary view, and the other 6% were undecided on any changes in demand, which agreed with the assertion of Awolere (2011).

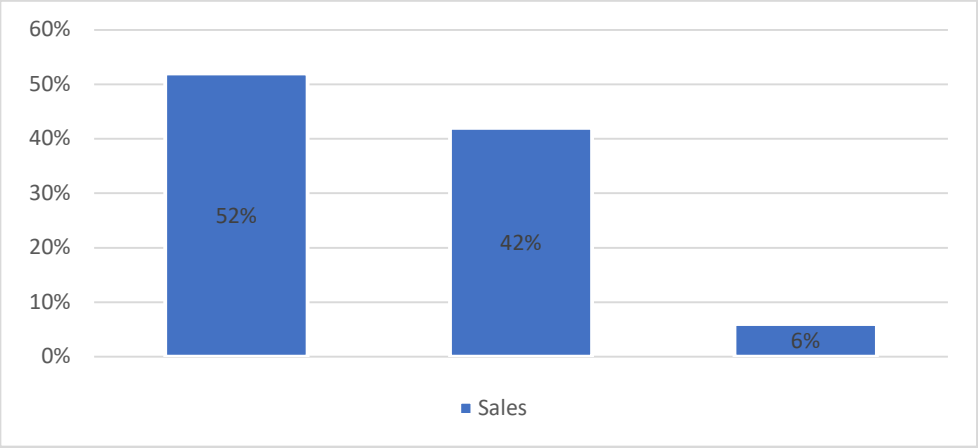


Figure 6: Demand for Architectural Services.

REGULATORY AND LEGAL CHALLENGES

Familiarity with Building Codes and Regulations

According to the survey conducted on the familiarity of architects with the local building codes in Ibadan, as indicated in Figure 7, 76% of the architects were already familiar with the building codes. This is an encouraging result that indicates that more architects are becoming aware of the statutory building codes in Ibadan Southwest, Nigeria.18% of the architects are somewhat familiar with the building codes, however, 6% claimed they are not familiar with the building codes, indicating the needs for continuing education of the architects on the importance and need for building codes in Nigeria, as expressed by Ogunbiyi, M.A. (2014).

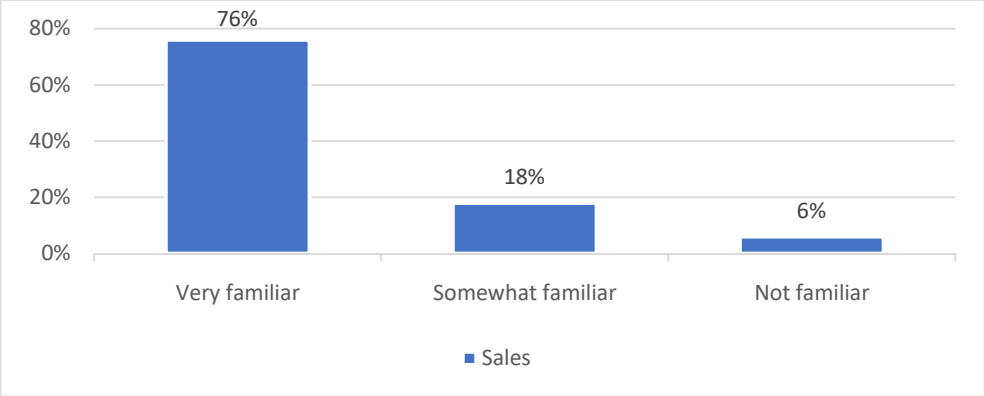


Figure 7: Architects' Familiarisation with the Local Building Codes.

Challenges Related to Regulatory Compliance

According to the results of the survey conducted on the compliance of architects with local building regulations in Ibadan, as shown in the following figure 7, it was recorded that 6% of the architects always complied with the regulations, with 32% often complied, 34% did sometimes complied, while 28% of the architects rarely complied with the building regulations, as shown on the figure 8. This shows that the level at which a larger percentage of the respondents complied with building regulations is not encouraging, thereby agrees with Opara (2020) on thecall for sensitisation on the need for architects to pay strict adherence to building regulations.

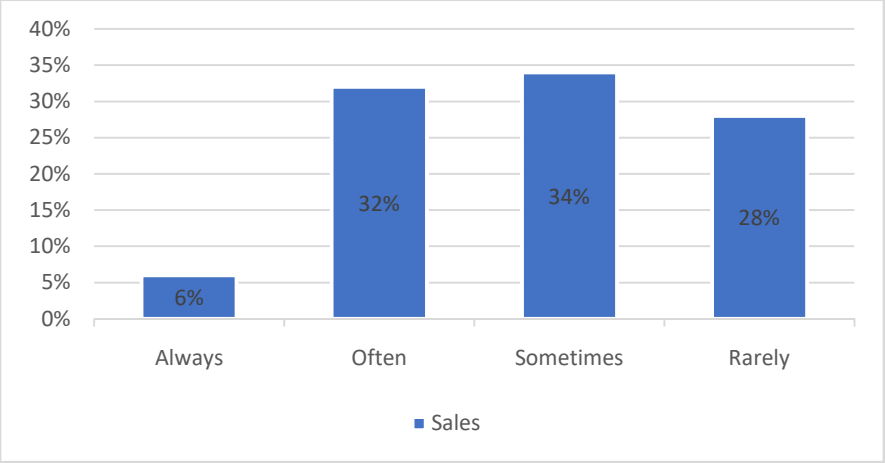


Figure 8: The Compliance Level of Architects with the Local Building Regulations.

Effectiveness of Local Building Regulations

The survey results indicated the level of effectiveness of local building regulations in Ibadan, with 2% of the respondents being of the view that the building regulations in Ibadan were very effective, 36% held that building regulations were effective, while 62% claimed that building regulations in Ibadan were ineffective. This ineffectiveness of the building regulations has negatively impacted the architectural practice in Ibadan. This shows the need for enforcing strict adherence to local building regulations in Ibadan through governmental policies and the concerned regulatory bodies, as discussed by Afolabi *et al.*(2024).

Local Building Codes and Regulations with Global Architectural Standards

Results from the survey conducted shows that only 4% of the respondents agreed that the building codes and regulations in Ibadan were up to the current global architectural standards, 42% of the respondents claimed the local building codes and regulations in Ibadan were somewhat up to the current global architectural standard, while 54% disagreed, and were of view that the local building codes and regulations in Ibadan were outdated, this shows the need for currency in the local building codes and regulations to align with global standards according to (Mbamali*et al.,* 2012).

Delay in Obtaining Approvals for Architectural Projects

According to the survey results, 10% of the respondents claimed they encountered frequent delays during the approval stage, 76% experienced delays occasionally, while 14% rarely encountered delay during approval stage. As cited by Asa& Kareem(2016), delays in obtaining permits and approvals due to bureaucratic bottlenecks in the approval process, inadequate planning and other factors, call for the need to develop an efficient statutory approval process to mitigate these delays.

TECHNOLOGICAL CHALLENGES

Adoption Rate of Technological Advancements Among Architects in Ibadan

The survey results indicated in Figure 9 show a varying pace of technological adoption among architects in Ibadan. While 26% of respondents reported a rapid integration of technological advancements into their practice, 42% adopted these innovations at a moderate pace, and 16% exhibited slow adoption. This was a testament that architects in Ibadan are

responding to the technological advancement and imbibing it into the culture of their practice. This trend aligns with Lasode and Ogunsola (2023), who identified technological challenges as a significant barrier to knowledge sharing among architects in Ibadan. Similarly, Akinola *et al.* (2023) highlighted that although there is a growing awareness of digital tools such as Building Information Modelling (BIM) in Nigerian architectural practice, resistance to change is a major challenge that hinders widespread adoption. The findings suggest that while some architects in Ibadan are embracing technological innovations, others struggle due to systemic challenges, thereby affecting the overall modernisation of architectural practice in Ibadan, Oyo State, Nigeria.

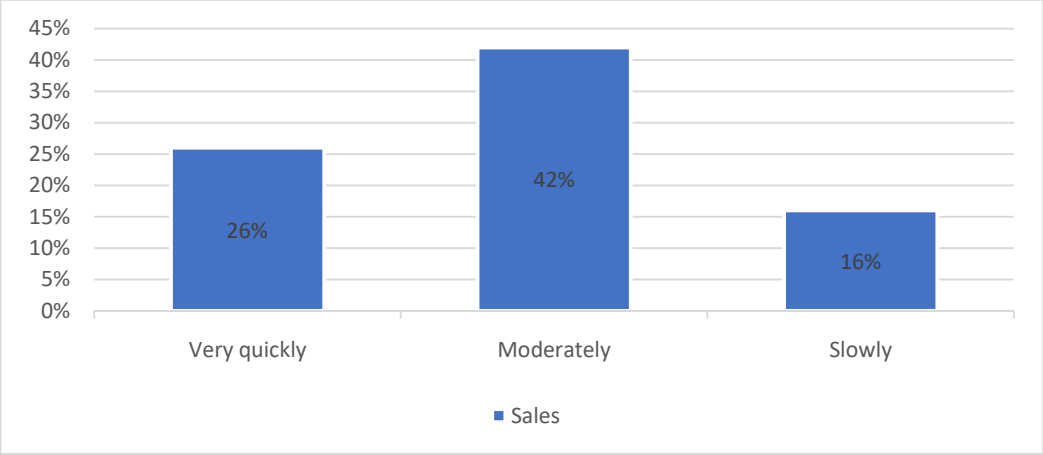


Figure 9: Adoption rate of technological advancement.

Impact of Technological Adoption on Architectural Practice Efficiency

As revealed in the survey results, 50% of the respondents asserted that the adoption of the technological advancement has significantly improved the efficiency of their architectural practices, 44% claimed the efficiency of their architectural practices has been moderately improved, while 6% held that the adoption of technological advancement has had little impact on the efficiency of their architectural practices. This shows that the adoption of technological advancements has greatly impacted the efficiency of the architectural practice of the architects in Ibadan Southwest, Nigeria. This agrees with Akande *et al.* (2023), who highlighted that integration of emerging technologies, such as Building Information Modelling (BIM) and Computer-Aided Design (CAD), has contributed to increased efficiency and productivity in architecture in Ibadan, Nigeria.

Impact of Technological Challenges on Project Delivery

According to the results of the survey conducted, 30% of the respondents had a significant impact in their ability to deliver projects, as of 58% held that their ability to deliver projects had been moderately impacted, 8% of the respondents claimed their ability to deliver projects had been slightly impacted, while 4% asserted that technological challenges has made no impact on their ability to deliver projects. With this, it is clear that technological challenges have great impacts on the architects' ability to deliver projects, and this aligns with findings by Akande *et al.* (2023), who noted that technologies like Building Information Modelling (BIM) and Computer-Aided Design (CAD) can enhance the efficiency of project delivery. Similarly,Gambo(2017) expressed that information and communication technology (ICT) has the potential to improve project delivery in Nigeria.

Challenges of Accessing Modern Architectural Technologies and Tools in Ibadan

The results of the survey conducted show that 12% of the respondents found it very challenging to access modern architectural technologies and tools, 66% held the view that it was moderately challenging, 18% asserted that accessibility had no challenges, while 4% claimed that accessibility was not challenging at all. It shows that the accessibility to modern

architectural technologies and tools in Ibadan is challenging and requires proper attention to ease the accessibility. This agrees with Akande et al. (2023), who identified challenges such as limited technical knowledge and skills among architects, financial constraints, and lack of access to necessary hardware and software as major challenges in adopting emerging technologies in Nigeria. Similarly, (Gambo, 2017) claimed that resistance to change impedes the effective implementation of Information and Communication Technology (ICT) in architectural practice in Nigeria.

Challenges in Adopting New Architectural Technologies

The survey was conducted to assess the challenges faced by architects in Ibadan in adopting new architectural technologies. The results revealed that 52% faced the challenge of high cost of technologies, 34% were challenged with lack of training resources to equip themselves on how to operate these technologies, 10% had limited access to advanced software/tools due to the. While 4% of them were resistant to change within the firms. In affirmation of (Akande*et al.,* 2023), this highlights that the largest percentage faced the high cost of technologies in order to purchase these tools to adopt technologies in order to enhance productivity.

SOCIAL CHALLENGES

Public Awareness of the Role and Value of Architectural Services in Ibadan

According to the survey results, 2% of the respondents perceived public awareness of architectural services as very high, 16% as high, 74% as low, and 8% as very low. This suggests a significant gap in public understanding of the value and role of architectural services in Ibadan, Southwest Nigeria. A study by (Ikoli, 2018) revealed that public awareness regarding the roles and values of architectural services in Nigeria is low, with knowledge of what architects do not being in the public domain.

Clients Understanding the Value of Professional Architectural Services

The survey was conducted to assess how architects often encounter clients who do not fully understand the value of professional architectural services. However, the results from this study revealed that 56% of the respondents often encountered clients who do not fully understand the value of professional architectural services, 42% asserted that they engaged such clients occasionally, while 2% maintained that they rarely encounter such clients. However, this highlights the need to gear up the sensitisation of the people to educate them on the value of architectural services according to the Royal Institute of British Architects (RIBA, 2016).

Challenges in Educating Clients About the Importance of Quality Architecture

It was revealed according to the results of the survey that, 36% of the architects held that they faced frequent challenges in educating client, 50% asserted that the challenges of education was occasionally, while 14% claimed they rarely faced challenges in educating client, this shows that effective communication and continuous education of clients has to be prioritized to eliminate this difficulty and enhance clients' understanding of importance of architectural value, according to the Royal Institute of British Architects (RIBA, 2016).

Collaboration with Other Professionals`

The results of the survey conducted on the collaboration of professionals indicated that 2% of the respondents found it frequently difficult to

collaborate with other professionals, 66% encountered problems in collaboration sometimes, 20% rarely had difficulty in collaboration, while 12% never had difficulty in collaboration. This shows that architects need more education on the essence of team collaboration in order to enhance the success of all their subsequent projects. In the building industry, collaboration plays a vital role in making sure that projects are successfully executed in alignment with the project's objectives. Poor collaboration may lead to failure of projects.

Clients'Reception to Innovative Modern Architectural Styles

According to the results of the survey, 12% of the respondents were of the view that the clients in Ibadan were very receptive to innovations and modern architectural styles, 82% of the respondents asserted that the clients were moderately receptive, 2% thought that clients were not receptive, while 4% of the architects were not sure. The results show that a good number of clients were receptive to innovations and embraced modern architectural styles, as this encourages architects to be more innovative and creative in their designs (Asojoand Jayeoba, 2016).

CONCLUSION

The study arrived at several critical conclusions that align with its research objectives. Firstly, in relation to the identification and classification of challenges, it was clearly established that economic, regulatory, technological, and social factors collectively contribute to the challenges faced by architectural firms in Ibadan, Oyo State. The study found that economic instability, particularly inflation and the unpredictable nature of material costs, continues to create uncertainty in project planning and execution. Furthermore, bureaucratic inefficiencies, coupled with delays in obtaining building permits and inconsistencies in policy enforcement, hinder the seamless execution of architectural projects. Additionally, technological limitations, such as restricted access to digital design tools and inadequate training opportunities, have slowed down professional innovation and growth.

According to Akintoye *et al*. 2012), which stress that the high cost of construction materials, inflation, and currency devaluation negatively impact architectural services in Nigeria. Also, an article of 15th January, 2023, published by Josephine Ogundeji on The Punch Newspaper, the principal architect, Vista Collaborative Consultants, BodunrinOguntoye, noted that the major obstacle to the construction sector in 2022 and beyond was the rising cost of building materials, which is largely affected by the foreign exchange rate. The delayed approval process for building permits remains a bureaucratic hurdle, contributing to project inefficiencies and client dissatisfaction (Opara et al., 2021). Additionally, the adoption of digital tools such as Building Information Modelling (BIM) remains limited, largely due to cost constraints and a lack of professional training opportunities (Akanni, 2022). The findings suggest that the COVID-19 pandemic had both short-term disruptions and long-term changes on architectural practice (Okonta et al., 2023). Building Information Modelling (BIM), remains low due to high costs and limited professional training (Ogunsemi&Ojelabi, 2020). Moreover, social factors, including the public's limited understanding of architectural services and a strong inclination towards informal construction, remain significant obstacles to the profession's advancement.

In the assessment of the root causes of these challenges, the study found economic instability, weak policy implementation and high building material costs as major challenges to the architectural profession. The findings also revealed that inefficient regulatory frameworks, bureaucratic bottlenecks and weak enforcement mechanisms have created a system where compliance with building codes is often compromised. Moreover, the high cost of adopting modern architectural software and the absence of sustainable cost control measures in the procurement of suitable software are a threat to architectural practices and professionalism.

Finally, in proposing remedial measures to address these challenges, the study emphasised the need for architects to adopt cost-effective design methodologies while seeking alternative and locally available building materials to mitigate the adverse effects of fluctuating costs. Additionally, streamlining regulatory processes, strengthening the enforcement of urban development policies, and advocating for pro-architectural legislation were identified as crucial strategies for addressing regulatory inefficiencies. Furthermore, technological advancement in the architectural profession can be accelerated by introducing subsidised access to digital tools, expanding training opportunities, and fostering industry-wide digital transformation. On the social front, public awareness campaigns, media engagements, and active participation in policy dialogues were recommended as effective ways to enhance the visibility and appreciation of architectural services.

CONTRIBUTIONS TO KNOWLEDGE

The study has made an important contribution to architectural scholarship by giving empirical data on the difficulties influencing Architectural practice in Ibadan during 2020-2024. The contributions are:

- An In-depth Study of Architectural Challenges: The study provides a thoroughly documented record of the economic, regulatory, technological and social issues that have affected architectural practice in Ibadan, as a useful reference for future investigation.

- Policy-Oriented Recommendations for Reform: The study includes strategic policy recommendations to assist regulators, legislators, and professional bodies in enhancing the built environment.

- Practical Solutions to Improve Architectural Practice: The study bridges the gap between theory and practice with concrete proposals, including digital transformation techniques and economic interventions, making its findings useful for academia and industry stakeholders.

The architectural profession in Ibadan will benefit from sustainable growth, increased regulatory efficiency, better technology adoption, and more public recognition through the implementation of the insights and recommendations obtained from this study, thus contributing to a more resilient and innovative built environment.

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