
AN INVESTIGATION INTO THE MENACE OF ABANDONMENT OF BUILDING PROJECTS IN POLYTECHNICS IN ZONE B GEOPOLITICAL AREA OF BENUE STATE

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ABSTRACT

This study is an investigation into the menace of abandonment of building projects in polytechnics in Zone B geopolitical area of Benue State, Nigeria. The research is aimed at investigating into the menace of abandonment of building projects in polytechnics in Zone B geopolitical area of Benue State, Nigeria. Specifically, the study seeks to achieve the following objectives: to identify the factors that causes building projects abandonment in polytechnics in Zone B geopolitical area of Benue State, Nigeria, to examine the effects of building projects abandonment in polytechnics in Zone B geopolitical area of Benue State Nigeria and to find possible solution to building projects abandonment in polytechnics in Zone B geopolitical area of Benue State, Nigeria. A descriptive survey design is used for this study where certain number of respondents were selected by stratified random sampling technique for data collection. An interview was utilized to collect data. Analysis was done using simple percentile and rating.

Key words: Abandonment, Building projects, Cost.

1.0 INTRODUCTION

Majority of the projects executed in the Nigeria construction industry are faced with a lot of ambiguities and complexities. These uncertainties sometimes result to these construction projects not meeting up with the requirement including the scheduled deadlines. Furthermore there is also adverse effects which also hinges on low quality, cost and time overruns which invariably leads to failure and abandonment of the effected construction projects. Ihuah and Benebo (2014) opined that the abandonment of a construction project involves the complete absconding from accomplishment of the objectives of the project and the subsequent detraction of the social, environmental and economic activities which are expected to be directly or indirectly benefited by the successful completion of the project. In order words, the abandonment of a building in a polytechnic otherwise called an educational building meant for teaching and learning purposes will in addition of the social, environmental and economic distraction have an educational and academical distraction which is expected to be derived from the projects when finally completed.

According to Ubani and Ononuju (2013); Olalusi and Otunola (2012), incessant construction projects abandonment by the public sector is continuously posing serious challenges to the stakeholders in the construction industry. The public sectors as suggested by the authors are sectors other than the private which includes amongst others the polytechnics which is a public place for academic activities. Ingwe, Okoro and Ukwai (2010), added that the construction industry is seen to be the major foundation and focal point on which the overall development of any country rests on. The construction industry is viewed as the life wire of any country. This is as a result of the roles it plays in the provision of the basic requirements for the entire citizenry.

Adenuga (2013), deduced that there are a lot of factors that contribute to construction project abandonment in the Nigerian construction industry and this construed to be a negative consequence ensuing from risk actions that invariably leads to obstruction of any or the benefits that is supposed to be derived from the these construction project. He also added that construction project abandonment in its original nature is a situation whereby the construction projects clients or owners ceases to make provisions for maintenance and operating services to a project. Construction projects Abandonment also occurs when management decides for whatever reason best known to it, to discontinue a project under construction on a temporary or permanent basis.

Statement of Problem

Many towns in Nigeria are spotted with building projects that abandoned and many times dilapidating. This mayhem is also seen in the tertiary institution of which the polytechnic is one of them. A trip to some of these polytechnic will convince appropriate authorities that there is really need to investigate the factors causing this menace, the effects of these menaces and possible solution to this challenging issue in our polytechnics. This common issue of construction project abandonment affects the entire environment by defacing the aesthetics of our academic environment, and creating learning problems as well as other health hazards to the entire academic populace of these polytechnic communities. The abandonment of these academic building construction projects normally directly affects the entire polytechnic populace as a result of its absorption by the government through reserved funds.

According to Ewa (2013), the issue of building construction project abandonment has been left unresolved for a very long time and this has created obvious room for a multiplier effect

even on the educational sector, construction industry and the entire economy as a whole. Okuntade (2014), stated that this has brought a low standard living for individuals thus unemployment. Abandoned buildings projects has also turned to be the criminals hidden out where criminals hid to carry out all manner of criminal activities thereby causing environmental disorderliness. In our polytechnics today, there have been a lot of social vices resulting to criminal activities which are carried out by cult groups and other illicit gangs which causes disorderliness and unpeace in the polytechnics.

LITERATURE REVIEW

This section reviews literatures that are related to the present study. It is discussed under theoretical frameworks of the study, the conceptual framework and other relevant literature.

Theoretical Framework

Belassi and Tukul's Theory of Success

The theory used in this research study is the Belassi and Tukul theory of success. This theory was invented by two erodent scholars, Dr. Walid Belassi and Dr. Oyalcmeli Tukul. Dr. Walid Belassi is a doctoral of Operations Management and Business Statistics from Cleveland State University, Cleveland, Ohio. He also has M.Sc. in project management and an MBA degree in finance. Dr. Walid is a member of Beta Gamma Sigma, a premier honour society that recognizes academic excellence having taught for more than 35 years in Canada, the US, and several other countries worldwide. Dr. Belassi specializes in teaching operations management, management science, and business statistics. He has also taught courses in finance, human resources management, marketing management, planning, and public administration. In addition to his academic experience, Dr. Belassi has practical experience as a business analyst, consultant, and statistician. He has worked as Portfolio Strategist and Decision Maker at JP Morgan Chase (formerly Chase Manhattan Mortgage Corporation division) in Cleveland, Ohio where he was the chief statistician for a \$2.0 billion portfolio of manufactured housing and also represents AU at the Canadian Operational Research Society (CORS).

The co theorist to the Belessi and Tukul Theory, Dr Oyalcmeli Tukul was born September 20, 1966 in Northfield, Ohio. She was the Dean of the Martin Tuchman School of Management at New Jersey Institute of Technology. Dr. Tukul received her B.Sc degree in Industrial Engineering from the Middle East Technical University and Ph.D in Decision and Information Sciences from the University of Florida. Dr. Tukul was Associate Dean and Professor of Operations and Supply Chain Management at Cleveland State University with over 27 years of outstanding academic and administrative experience.

This theory of success comprised of factors governing the performance of a project. This theory was an expansion of project success and failure factors which is in turn related to the construction. Belassi and Tukul's theory of success for construction projects stated that the strategic and tactical factors are factors under which projects can be categorized. Furthermore, according to this theory, the factors identified therein as contributing factors are the project manager and team member related factors, project-related factor, organisation related factors and external environment-related factors. A critical study of the causes of delay in building projects in polytechnics can be broadly captured under the aforementioned factors.

This is a modern theory as it focuses on the importance of the human in a project and emphasizes the role played by team members and project manager. The theory by Belassi and Tukel accepted that projects undertaken are highly complex and thus need a broader perspective of success and failure. The theory also postulated that projects have a diversity which adds to their complexity and ambiguity which is one of the challenges facing the construction industry in Nigeria today. This Belassi and Tukel theory of success is related to the present study in that the main aim of every project is to have the project successfully delivered on time, at the appropriate quality and within approved budget that will not exceed the cost limit of the client. Again this theory focuses on the importance of the human in a project and emphasizes the role played by parties and stakeholders of a building project successful delivery. That is to say that delay is mainly caused to a wider extent by human resources involved in the building construction process. Delay by client to honour certificate or make payments, inaccurate project estimation changes in the scope of building projects, the complexity of building project, inadequacy in the planning of activities in building project, inappropriate scheduling of building construction project, variations in the design of building construction project, incorrect estimation of building project cost, inefficient management of building project material and equipment, inadequate feasibility and viability studies, type of award of used for the building contract, fluctuations in prices of resources used for building construction as the reviewed causes of delay are all human resources related causes. This is the relevance of the Belassi and Tukel theory on this research project as it emphasizes on the importance of the human in a project and further emphasizes the role played by team member or parties to a building construction project.

Conceptual Framework

The conceptual investigation into the causes to building construction projects abandonment in polytechnics in zone B geopolitical Zone of Benue state will be evaluated in this sub-section of this research study.

The Causes of Building Construction Project Abandonment in Polytechnics in Zone B Geopolitical Area of Benue State Nigeria

The causes and effect of development project abandonment are not just peculiar to a particular reason rather cut across several other reasons, (Ayodele & Alabi 2011). Although, all development project environments are different and every organization operates differently, therefore, a set of causes may not be transferred from one project development environment to another. But the use of a broader procedure for that subsequent project development should be imperative though the Nigerian development projects environment of which the polytechnics environment fall into may seem similar. This presents the same threats to almost all development projects other organization. Hence, the conceptual investigation of the causes and remedies to projects abandonment in polytechnics in Nigeria in this study. The under listed are the various causes of building project abandonment as review from literature.

Inadequate Planning

Inadequate planning of construction projects is one of the causes of projects abandonment in the Nigerian construction industry. Essenwa (2004), identified inadequate planning as one of the causes of construction project abandonment. This is also in agreement with Adedeji and Opara in Ayodele and Alabi (2011), who were of the opinion that adequate project planning precedes construction works. It is the responsibility of the directorate of physical planning of the polytechnics to adequately plan any building project in the school before commencement.

Before the actual work of the project begins, it is important to define the project objectives, scope, assumptions, risks, budget, timeline, organization, and overall approach. Adedeji (2000) reported that the purpose of this work is to ensure that there is a consensus between the project manager, the project sponsor, and all other stakeholders. Alabi (2011); Yap (2013); Ihuah and Benebo (2014), all have identified improper planning as a critical cause of construction project abandonment.

Overall plan by the directorate of physical planning should be created before the project starts. This helps to estimate the total project effort and duration. The directorate of physical planning also needs to ensure that the detailed work mapped out over the next few months to ensure that the project resources are assigned correctly once the project actually begins. It's very helpful to have an agreed-on set of project management procedures that are used to manage the project. These include how scope, issues, risks, communication, the work plan, etc will be managed.

Incorrect Estimate

Estimators determine the fate of the construction project. Wrong and incomplete estimates will surely be a financial doom while a very good cost estimate will usher in profits. Akindoyeni (2007) reported that the quantity surveyors or estimators are usually the first people to get hold of the plans, see the details, understand the contractual requirements, measure the quantities, establish unit costs, determine the project timeline and package a bid. Estimators must be equipped with very important basic skills in plan and specifications review, construction knowhow and a lot of imagination. However the estimators may make common mistakes which will definitely result to project abandonment.

The most common mistakes by estimators are missed out items which is costly especially when the project is already awarded to a contractor on a lump sum contract. Also wrong unit cost which is usually caused by non-careful review of specifications. Other mistakes includes missed out details whereby not all information are on the plans; incomplete cost planning where small but essential details such as logistics cost, tax, insurance, wastage and material handling can have a big impact on the over-all project cost; wrong man-hour productivity assumptions where one is expected a mason to complete a square meter of masonry blocks in an hour then prepare to pay for the missing man-hours. Also duplication of items when an estimate is poorly planned, chances are, items will be duplicated; Gray areas on scope of work when for contract packages that are limited to certain scope of work, the extent of the contract must be thoroughly defined.

Good estimation tend to have a better career path too. Since they know how to schedule, allocate resources and plan cost, they are the perfect material to be project managers. Good estimators will always be good project managers. Just imagine a project manager who does not understand cost.

Inflation

Inflation has become a chronic problem whose effects permeate the entire construction industry. Nagapan, Rahman, Asmi and Memon (2012), concluded that Owners are not only paying for the increased costs of facilities and capital but also for premiums on construction prices because of the uncertainties of inflation and its side effects. Building contractors are faced with severe uncertainty in bidding and financing work on projects. Productivity is affected because contractors cannot accurately forecast long-term returns on their investments

and are required to divert necessary capital to meet resource costs. Building client and contractors must endeavor to plan for these effects and attempt to reduce the risks entailed. In particular, the proper assignment of economic risks in building contract should reduce costs in the long term.

Inadequate Fund/Finance

Among others factors, financial factor is one of the most critical factors that cause abandonment in construction projects. Odenyinka and Yusuf in Ayodele and Alabi (2011), affirms that owners cash flow problem is a major factor that causes project abandonment. Akasah and Yunu (2014), added that the financial difficulties faced by many building contractors cause abandonment in construction projects. Changes made by clients increase the building construction cost used in procuring the material and equipment beyond their normal boundaries. In addition, inadequate fund to pay contractors will subsequently jeopardize contractor's cash flow and result in the slow progress on site. This result to many sub-contractors and suppliers being subjected to financial difficulties to deliver material and goods to the site. Ewa (2013); Oyedele (2013) and Edukugho (2013) agreed that projects are abandoned or completed above budget and below standard due to lack of adequate funds. The possible financial related factors that lead to abandonment in construction projects are financial problems of clients such as delayed payments, financial difficulties and economic problems; financial and cash flow problems of contractors; and external factor of poor economic conditions such as currency and inflation rate. In addition, difficulties in obtaining loans and short of funding are adverse financial-related factors identified. The financial factors identified are grouped under: Late payment, Poor cash flow management, insufficient financial resources, financial market instability.

Insufficient Financial Resources according to Abdul-Rahman, Berewi, Mohammed, Othman and Yahya (2006) opined that financial resources are major focus of construction project. They went ahead to say that lack of finance can affect project cash flow, lead to delay in project and sometimes lead to project abandonment. Difficulties in getting loan from financiers and allocation of government budget not in place are two major factors under insufficient financial resources.

Financial market instability on the other hands include increment of interest rate in repayment of loan, inflation (material prices, labour wages, transportation costs) and increment of foreign exchange rate (imported materials and plants).

Financial-related causes contributing to project abandonment are outlined as follows: client's poor financial and business management, withholding of payment by client, contractor's invalid claim, delay in valuation and certification of interim payment by consultant, inaccuracy of valuation for work done, insufficient documentation and information for valuation, involvement of too many parties in the process of honoring certificates, heavy workloads of consultant to carry out evaluation for work done and contractor's misinterpretation of client's requirement of variation order.

Bankruptcy of Contractor

Troy and Parham (2018), opined that the bankruptcy of either owner or the project or the developer of the construction project can be very unsettling to the contractors. Aluko (2008), agrees that bankruptcy of the contractors amongst other factors causes construction project abandonment. Contractors are individually vulnerable to an insolvent scenario because they are the centre of a combination of dangerous factor, which amongst others is project

abandonment, (Charles-chesnutt, 2017). Bankruptcy which is an enormous cash shortage results and the company is unable to meet its ongoing obligations on a construction project affects the rights and obligations of all parties, including owners, general contractors, subcontractors, sureties, laborers, and suppliers and this leads to the project being uncompleted.

Natural Disaster

The occurrence of the event of natural disaster such as earthquake and volcanic eruption will lead to project abandonment as the construction project will be destroyed and the lucky workers involved will run for their dear lives. During this period there will be labor shortages in construction and rising supply costs. Construction workers which include professional, tradesmen and laborers play a vital role in the building constructing for all clients. There will be none or few of these workers in an area faced with natural disaster. The supply of materials to an area affected by natural disasters can further complicate matters as well since there will be no supplier available in the area. Therefore, if the material is to be imported from elsewhere the price will be high than earlier estimated which will sometimes lead to the project abandonment.

Faulty Designs

The performance of construction projects depends to a great extent on the quality of its design and construction decisions. Okuntade (2014), stated that inadequacies in the performance construction project emanate from deficiencies in design which will reflect during construction process. Usman, Kamua and Mireri (2012), added that the extents to which the various factors contribute the abandonment problems in governmental construction projects in Nigeria are; inadequate architectural design, inadequate structural design, inadequate electrical design, inadequate mechanical design, poor construction, use of poor quality components and materials, natural deterioration due to age and environment.

Dispute

Remington (2013), reported that a combination of environmental and behavioral factors can lead to construction dispute and are usually long-term transactions with high uncertainty and complexity. The author submits that it is impossible to resolve every detail and foresee every contingency at the outset. Sometime there is dispute between the client and the project team which delays or leads to abandonment of project. These community interruptions as identified by Ihuah and Benebo (2014), can cause construction project failure and abandonment. As a result, situations often arise that are not clearly addressed by the contract. The basic factors that drive the development of construction disputes are uncertainty, contractual problems, and behavior.

Change of Government

In Nigeria when new elected representatives resume office, they may embark on construction activities. Some of these projects will be completed and some will not be completed before their tenure expires. This also occurs when a new rector is appointed and new administration takes off in the polytechnics. Yuan, Lu and Hao (2013), also added that those incomplete ones may not be completed by the new administration as they may be engaged by another project leaving the project of the former administration. Also some projects are awarded to some contractor as compensation and immediately the tenure of the administrator expires the contractors may abscond with the money without completing the project which will lead to project abandonment.

The Effect of Building Project Abandonment in the polytechnics in Benue State

Building construction projects abandonment in our polytechnics as earlier stated involve the complete abscondment of stakeholders from accomplishing project objectives and when this happen, all the educational, social, environmental and economic activities that expects to be supported by the projects are detracted. This research evaluate the effects of building projects abandonments in the polytechnics in Benue State with the intent of finding a lasting solution to the problem

The general effects of building projects abandonments according to Okuntade (2014) include; Waste of resources; Declining in property value; Loss of community and neighborhoods aesthetics values; Decrease in revenue to government; Reduction In Economic Activities; Lowering standard of living (unemployment); wastages of equipment on site; increases in final cost of project.

Other effects centered on value of the project include includes the property value in use, the property investment value, the property liquidation value, the assessed value of the property, the insurable property value and the property going concern value. Also, there is a loss on community and neighborhood aesthetics characteristics which the anticipated development projects on completion ought to provide to enhancing the built environment. But, the unattractive nature of the property as a result of a lack of the needed facilities has remained incessant in the Nigeria economy. When a building project has been raised and later abandoned, it makes no positive aesthetic values, pleasures and contributions to a neighborhood instead become eyesores to the vicinity. Further, development projects abandonment contributes to the effect of wastedresources and loss of tax revenue to the governments and other groups in the economy. Development of building projects are usually capital intensive and when abandoned and/or left uncompleted, the expected returns are lost and the already capital outlay is apparently wasted.

Waste of Building Construction Resources

Construction waste is a global challenge facing the construction industry as it has a significant impact on time, cost, quality and sustainability, as well as the success of projects (Nagapan 2012). Waste of building construction resources is the difference between purchase and actual use (Al-Hajj & Hamani, 2011). Construction waste has been described as any constituent generated as a result of construction work, and abandoned, whether or not it has been processed or stocked up before being abandoned (Yuan, Lu &Hao, 2013; Hussain, Abdul Rahman & Memon, 2013). It has been regarded as a major concern throughout the project management life cycle. Waste can have a significant effect on the success of a construction project, since it specifically has a major impact on the construction costs (Nagapan, Abdul-Rahman, Asmi & Hameed 2012). According to Memon (2013), Cost is considered one of the most significant issues and a driving force of project success as has been regarded as a major concern throughout the project management life cycle.

In spite of its recognized significance, it is common for a construction project to fail to achieve its goals within the budget. Cost overrun, according to Azhar, Farooqui and Ahmed (2008), is simply an occurrence, where the final or actual cost of a project surpasses the original or initial estimates. Therefore, cost overrun is a very common issue that affects most of the projects in the construction industry (Azhar *et al.*, 2008).

Loss of Community and Neighborhoods Aesthetics Values

Previous research has shown that building project abandonment contributes to neighborhood decline by depressing nearby project values. However, most past research estimated the impact of abandonment through cross-sectional analysis without controlling for nearby foreclosures or local housing market trends. Therefore, it remains unclear whether abandoned project reduce nearby project values or whether abandonment is more common in areas with already lower-valued properties. Prior research also has not explored how the duration of abandonment influences nearby property values. Therefore, to extend the current level of understanding of the impact of abandonment, this research examines the impact of abandoned properties on nearby property values in Baltimore, Maryland, from 1991 to 2010 using longitudinal data sets while simultaneously controlling for both nearby foreclosures and local housing market trends. This research finds that as project are abandoned for longer periods of time, the impact on nearby property values not only increases in magnitude but also is seen increasingly farther away.

Reduction in Government Revenue

Reduction in government revenue is another effect of abandonment of building construction projects. Levies and statutory fees are charged by government in the course of construction and thereafter. Abandonment of projects makes all the payments impossible. Thus, the amount of revenue accruing to government reduces and this leads to the inability of government to provide essential services to her people through teaching and learning. When project which are supposed to be used for teaching and learning are abandoned, student enrollment will drop because of lack or paucity of building facility caused by abandonment. Again government generate a lot of revenue from the polytechnics and as such when student enrolment increases the revenue is increased and versa. Revenue is generated from the polytechnic through fees paid for accreditation exercise by National Board for Technical Education and also fees paid by the students admitted into the school.

Reduction in Economic Activities

Anuobi (2003) asserted that construction industry is an essential contributor to the process of development. He averred that in every organized human community, the construction industry is intricately interwoven with the economy but the excessive prevalence of abandoned projects due to political instability in the country has contributed to the woes of the economy. This had led to the decrease in the tempo of economic activities.

Lowering the Standard Of Living

When projects are abandoned, people who had formerly been engaged and who could afford to purchase their daily needs become unemployed. Invariably, there is a reduction in the individual and corporate purchasing power. The standard of enrolment of student in the school will be reduced due paucity of building facility which is caused by the abandonment these projects in the polytechnics.

Wastages of Equipment on Site

Wastages of equipment on site is another effect of project abandonment in our Nigerian polytechnics. Waste is the most expensive item on construction site and this occurs as a result of project abandonment. The materials and plant left on site get exposed to extreme weather conditions, which hinder their re-use at the time of reactivation. Money that could be engaged into procurement of instructional materials could be used to procure plants and equipments

for construction purposes but these plants and equipments will eventually become a waste when the buildings are abandoned.

Increases in Final Cost of Project

A project before abandonment already had an initial cost of construction on which the award of the contract was based upon. At the reactivation, either by initial or a new contractor, the completion cost would have increased as a result of increase in the cost of materials, plants and equipments as well labour, payment for idle and unproductive time, arising from contractors claim, and cost of re-mobilization .Other effects are extension of time, increase in bankruptcy of firms and companies. Seeley (2000), acknowledged that any change in an industry as large as construction has a significant effect on the rest of the economy and its influence is probably greater.

The Possible Solutions to Abandonment of Building Construction Project in Polytechnics in Zone B Geopolitical Area of Benue State Nigeria

It is indeed pathetic to see that several building construction projects which would have impacted positively on the educational, economic and overall social development of the polytechnics litters the corners and open spaces of the these institution. This research will suggest solutions to the problems of building project abandonment in our polytechnics and ensure that the mandate of polytechnic education in Nigeria is achieved. In view of these the following are proposed to possibly put a stop to this ugly trend (Ayodele and Alabi 2011).

Construction Project with available resources should be initiated

Only new projects which can be completed with the available resources should be initiated. The directorates of physical planning should endeavour to work together with the rector and the bursary to ensure that only projects that have available resources to complete be initiated. Also the TETFund desk officer should be consulted for projects that will be sponsored by TETFund. The selection processes and consultancy should be characterized by accountability, transparency, honesty and integrity. The use of political and favouristic undertone rather than economic and educational advantage in citing of projects should be discouraged.

Corruption should be curbed

Corruption at all levels and other stakeholders in the educational housing sector should be curbed through due process, Economic and Financial Crimes Commission (EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other crime control agencies. effective monitoring and evaluation, understanding of project's mission, technical knowhow of the project manager, support from top management of the polytechnics, political risks, effective procurement process of the procurement unit of the polytechnic, detailed and comprehensive design by the consultants, provision of adequate finance by the polytechnics administrator or the financing institution, effective communication and information management by design team, physical planning directorate and all other parties involved.

Effective Monitoring

Project management activities according to Saqib, Ahmed and Sharif (2008), are key factors for project success. They further opined that by using the management tools, the project managers would be able to plan and execute their construction projects to maximize the project's chances of succeeding and achieving their stated objectives. This assertion is also in line with Ike, Korda and Harper (2012), who are of the view that project managers should intensify effort in project monitoring thereby improving project implementation as well as the chances for project success. In the polytechnic, the directorate of physical planning, the TETFund monitoring and evaluation team should endeavour to work closely with the consultants to ensure effective monitoring of the project during construction.

Provision of Adequate Finance by the Client or Sponsor

Provision of adequate finance is an important component of project success because it contributes effectively in making sure all the various component of the project are engaged towards completion of their tasks.

According to Yong and Mustaffa (2012), it is essential for a client or sponsor to ensure that funds are made available to maintain the cash flow of the project. Problems such as delayed payments and financial difficulties are seen to be a major factor could hamper the progress of construction projects. While Ejaz, Waheed, Anpalegan and Alegan (2013), opined that funding could be considered as one the most important success factors which makes a project come alive and gets completed on schedule. Finance meant for any building construction project in a polytechnic should be readily made available to ensure consistency in cash flow in order to avoid abandonment of the project.

Understanding of Project's Mission

Clearly defined project objectives are very important in achieving stated building construction project. This gives the managers of the building construction project a clear cut direction of what is expected in other to get to the desired destination.

Adnan, Paul, Longley and Guy (2014); Baccarini and Collins (2003), opined that understanding of client's and users' needs, clear project goals and end user requirements constitutes understanding the entire project's mission statement. There should be clear understanding between the polytechnic team which includes the chief executives, directorate of physical and their consultant and the contracting teams.

Political Risk

Political risks and activities can affect the execution, implementation and possibly the project completion period if not properly handled. While a stable political environment will increase the likelihood of achieving a project successfully. This assertion is also in tandem with Yong and Mustaffa (2012), findings that when the economy is politically stable, there is likelihood that project will be successfully delivered. This political stability will go a long way in curbing some of the causes of building project abandonment in our country. Causes like inflation, corruption of officers, procurement problems and many more could be curbed through political stability.

Effective Procurement Process

Procurement has always been a problem in the Nigerian construction industry. Procurement process includes the process involved in award of the project to a successful bidder and also the process involved in the procurement of resources for the project. The process of award of

most construction related contracts hinges on the basic principles of procurement viz tendering and selection of capable hands to execute the project. In the case selecting a capable contractor without a transparent procedure in place, the consequence of such an action would be devastating.

According to Yong and Mustaffa (2012), the procurement method as well as tendering procedures plays an important role in ensuring that projects achieve their initial set objectives of cost, schedule and quality.

Basara (2014), also opined that lack of an effective procurement process could equally lead to failure and the procurement issues should be prioritized during project implementation. The directorate of physical planning should ensure that due is followed during the procurement process. A procurement unit should be established and a qualified procurement officer must be appointed to ensure that the process is successful to avoid abandonment of the project in future.

Detailed and Comprehensive Design by the Consultants

Ensuring detailed and comprehensive design by the consultants is another way of solving the problem of abandonment in our polytechnics. Ika (2012), emphasized on the need for a detailed design that is coherent in line with the specification of the project as a vital ingredient for achieving a successful project without which the project would fail. Yong and Mustaffa (2012), agree to the assertion above where they stressed on the need for a detailed design of a project as aid to achieving project success. The directorate of physical planning in our polytechnics should ensure that building designs are comprehensive and completed before project are commence.

Effective Communication and Information Management by Design Team

Another solution to the mayhem of building project abandonment is effective communication and information management by design team. This implies having a good and adequate communication channels among the project team by ensuring that there are ways to manage the flow of information in a bid to achieve project objectives.

Poon, Nothwehr, Singer and Johnston (2001), suggested methods of disseminating information should be via working drawings, manuals, meetings, letters and memos. Shehu and Akintoye (2009), further opined that effective communication is an essential aspect of any successful programmed and project management.

With effective communication and information management by all teams in place and well executed, the incidence of abandoned projects littering our polytechnics will be a thing of the past.

Empirical studies

There have been previous scholarly researches, finding and recommendation on the topic under review. A lot of researchers have carried out research on the topic” evaluation of abandonment of construction projects in Nigeria. Even though many of their research studies were carried out in others states like Akwa Ibom and other geographical region in the south south. There has not been any of this research carried out to understudy projects in the tertiary institution in Nigerian especially those in the north central zones of which Benue state fall in. However taking a critical look at their work, it was observed that their results were the independent variable upon which this research is based. Quite a lot of factors are responsible

for project failure which, in some cases, finally result in outright abandonment (Amade 2015).

According to Ogunsemi (2000), the successful completion of a project depends on adequate planning which also includes financial planning. This research was not carried out using projects in the polytechnics as a case study. Again the author did not carry this research in the north central geopolitical zone of Nigeria. This present study is different from the previous research because it was carried out in Benue state using academic building construction abandoned in polytechnics in zone B geopolitical area of the state.

Akindoyeni in Ayodele, Olusegun and Alabi (2011), qualitatively reasoned that some of the causes of project abandonment in Nigeria are: deaths of client, inability of client to attract fund and lack of good planning. The present research will definitely differ from the previous research study in that client of building projects in the polytechnic are quite different from client of private building projects and the death factor might not affect the projects the way the death of private clients will affect the private building projects. This is because the death of administrators does not bring the organisation to an end, there administration at this level is transitional and there is always a next line manager who automatically takes over the leadership if anything happens to the Rector.

Also, the causes of project failure and abandonment according to Ubani and Ononuju (2013), include instability and inconsistency in government, defective method of project finance and political corruption in the award of contracts. A critical study of this work will be convincing that the projects under are public projects rather than private building construction projects. These public building projects are sponsored by the government unlike the situation in this present study where the projects are sponsored by the polytechnic or any other sponsor who might be an agency of the government, non-governmental organisation or even private individuals.

Similarly, the findings from the study of Amade (2015), and Olalusi and Otunola (2012), agreed that the method of payment and procurement is highly significant to the failure and abandonment of construction projects. However, the political factor was only moderately significant in the study of Amade (2015).

According to Olapade and Anthony (2012), most capital projects fail and are abandoned in different stages of their development, while others that were delivered performed poorly in delivering intended services. Frequent cases of failed and abandoned public and private sector projects are consistently causing serious nightmare to all the stakeholders within the construction industry. The result from the study of Ayodele, Olusegun and Alabi (2011), showed the causes of project abandonment as inadequate project planning; inadequate fund, inflation, bankruptcy of Contractor, variation of project scope, political factor, death of client, incompetent project manager, wrong estimate, inadequate cost control, faulty design and delayed payment.

The works of Ayodele, Olusegun and Alabi (2011) recommends that to drastically reduce these negative effects; clients should undertake adequate project planning, possess enough fund for the project, engage contractor that have strong financial stand for their project. Architects should once and for all at inception produce detailed design dictated by the cost plan prepared by the Quantity Surveyor who does the cost control from inception to completion of project. Client should form the habit of making payment to contractors promptly as at when due. The Government should also make strong efforts to reduce inflation

and when there's change of administration, previously commenced project should not be abandoned.

Aim and Objectives of the Study

The aim of this study is investigation into the menace of abandonment of building projects in polytechnics in Zone B geopolitical area of Benue State Nigeria. Specifically, the study seeks to achieve the following objectives:

1. to identify the factors that causes abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria
2. to examine the effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria.
3. to find possible solution to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria

Research Questions

1. What are the factors that cause abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria?
2. What are the effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria?
3. What are the possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria?

Research Hypotheses

The following hypotheses have been formulated to guide the study and will be:

1. there are no significant factors that causes abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria.
2. there are no significant effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria.
3. there are no possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria.

3.0 METHODOLOGY

Research Design

The qualitative research technique is used for this study where the researcher conducted an intensive individual interview with the correspondents to explore their perceptions on the issue of building construction project abandonment. The design is considered suitable for this study because it enabled the researcher collect information directly from the various parties involved in the randomly selected abandoned building construction projects as they exist in the polytechnics where these building projects are abandoned.

Area of the Study

This research is carried out in Zone B geopolitical area of Benue state. Benue State is one of the 36 states of Nigeria and lies in the North Central of Nigeria with Makurdi as the state capital. Benue state has three (3) Geopolitical zones therein. They include Zones A, B and C. Zone A comprises of Katsina- Ala, Kwande, Konshisha, Logo, Ukum, Ushongo, and Vandeikya Local government areas; Zone B comprises of Buruku, Gboko, Guma, Gwer, Gwer West, Makurdi and Terka Local government areas; and Zone C comprises of Ado, Agatu, Apa, Otukpo, Okpokwu, Ogbadibo, Obi, Oju and Ohimini Local government areas. Zone B is chosen for this study because polytechnics are coincidentally predominant in this zone. Makurdi has Akewe Torkula

Polytechnic and Nigerian Army College of Environmental Sciences and Technology; Tarka has the Federal polytechnic while Gboko has Fidei Polytechnic, Gboko Polytechnic, Akperan Orshi Collage of Agriculture Yandev and Barnamtel Information Technology Institute and lots more within the zone that are used for this study.

Population of the Study

The population of the research study comprises of 48 selected professionals and parties who were involved in the abandoned building construction projects in the polytechnics under study.

Sample and Sampling Procedures

Random sampling technique is used in selecting the abandoned project in polytechnics within Zone B geopolitical area of Benue State. The various professionals and parties including males and female sexes involved in these abandoned projects were interviewed and answers are recorded as data.

Instrumentation

The major instrument used for this research study is the case study interview method. The interview consists of well structure questionnaire in a pre-determined manner in which all the interviewees answer in the same order. The respondents' were asked question concerning the abandoned building construction projects and their answers were written down for analytical procession.

Procedure for Data Collection

The researcher personally collected data directly from the respondents through one on one interview with the respondents. These data were written down analytical procession.

Procedure for Data Analysis

The procedure for data analysis for this research work includes the use of simple percentile for general information. Furthermore a descriptive statistics was employed and used to answer the research questions. The cut-off point of fifty percent (50%) and above was considered accepted while forty nine percent (49%) and below was considered not accepted for the answers to the question items on the instrument.

RESULT

The result of the study was organized around the research question as follows

4.2.1 Research Question 1: What are the causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State?

To answer this question, the analysis of responses on the causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State are shown below in table 4.2.1 below.

Table 4.2.1: The causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria

S/no	ITEM DESCRIPTION	NO DISAGREED	%	NO AGREED	%	RANK	DECISION	REMARKS
1	Death of client	33	68.75	15	31.25	7	Unaccepted	
2	Inadequate finance/ fund.	1			97.92	1	Accepted	
3	Inflation	5	10.42	43	89.58	2	Accepted	
4	Inadequate planning	14	29.20	34	70.80	4	Accepted	
5	Incorrect estimate	13	27.08	35	72.92	3	Unaccepted	
6	Bankruptcy of contractor	33	68.75	15	31.25	8	Unaccepted	
7	Faulty design	19	39.58	29	60.42	5	Unaccepted	
8	Dispute	20	41.67	28	58.33	6	Accepted	
9	Natural disaster	45	93.75	3	6.25	9	Unaccepted	

Table 4.2.1 shows the causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State. As shown in the tables, the causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State as responded by those interviewed include death of client, inadequate finance/ fund, inflation, inadequate planning, incorrect estimate, bankruptcy of contractor, faulty design, dispute, natural disaster. From the respondents inadequate finance/ fund and Inflation ranked 1 and two and are the two most common causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State. Others acceptable and unacceptable causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State are contained in the table above.

4.2.2 Research Question 2: What are the effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria?

To answer this question the analysis of responses on the effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State, Nigeria are shown below in table 4.2.2 below.

Table 4.2.2: The effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria

S/no	ITEM DESCRIPTION	NO DISAGREED	%	NO AGREED	%	RANK	DECISION	REMARKS
1	Declining in project value	2	4.17	46	95.83	1	Accepted	
2	Waste of polytechnic and other sponsor resources	5	10.42	43	89.58	2	Accepted	
3	Loss of aesthetics values in the polytechnic environment and hideout for crimes	10	25	38	79.17	5	Accepted	
4	Expected returns are lost and the already capital outlay is apparently wasted	10	20.83	38	79.17	3	Accepted	
5	Loss of revenue to polytechnic and other groups in the economy	10	25	38	79.17	4	Accepted	
6	Increases in final cost of project	20	41.67	28	58.33	6	Accepted	
7	Reduction in academic activities	20	41.67	28	58.33	8	Accepted	
8	Lowering the standard of living in the polytechnics	20	41.67	28	58.33	7	Accepted	
9	Wastages of equipment on site	20	41.67	28	58.33	9	Accepted	

Table 4.2.2 shows the effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State, Nigeria. As shown in the tables, the effects of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State, Nigeria are declining in project value, waste of polytechnic and other sponsor resources, loss of aesthetics values in the polytechnic environment, expected returns are lost and the already capital outlay is apparently wasted, loss of revenue to polytechnic and other groups in the economy, increases in final cost of project, reduction in academic activities, lowering the standard of living in the polytechnics, wastages of equipment on site

From the respondents' answers, decline in project value and waste of polytechnic and other sponsor resources ranked 1 and 2 in the distribution and are termed the two common effects that constitute construction project abandonment. Consequently, all factors in this distribution are accepted by the respondents.

Research Question 3: what are the possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria?

To answer this question on the analysis of responses on the possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria are shown below in table 4.2.3 below.

Table 4.2.3: The possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria

S/no	ITEM DESCRIPTION	NO DISAGREED	%	NO AGREED	%	RANK	DECISION	REMARKS
1	Setting up more national sponsorship or donor agencies to augment the effort of TETFund	2	4.17	46	95.83	4	Accepted	
2	Only new projects which can be completed with the available resources should be initiated.	7	14.58	41	85.42	8	Accepted	
3	The selection processes and consultancy should be characterized by accountability, transparency, honesty and integrity.	2	4.17	46	95.83	5	Accepted	
4	Corruption among stakeholders in the polytechnic housing sector should be curbed through due process, Economic and Financial Crimes Commission	1	2.08	47	97.92	3	Accepted	

	(EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other crime control agencies.							
5	Political stability	7	14.58	41	85.42	9	Accepted	
6	Effective communication among parties	3	6.25	45	93.75	7	Accepted	
7	Understanding of project's mission	2	4.17	46	95.83	6	Accepted	
8	Effective monitoring and evaluation	1	2.08	47	97.92	2	Accepted	
9	Provision of adequate finance by the client	1	2.08	47	97.92	1	Accepted	

Table 4.2.3 shows the possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State Nigeria. As shown in the table above, possible solutions to abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State are: setting up more national sponsorship or donor agencies to augment the effort of TETFund, only new projects which can be completed with the available resources should be initiated, the selection processes and consultancy should be characterized by accountability, transparency, honesty and integrity, corruption among stakeholders in the polytechnic housing sector should be curbed through due process, Economic and Financial Crimes Commission (EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other crime control agencies, political stability, effective communication among parties, understanding of project's mission, effective monitoring and evaluation, provision of adequate finance by the client.

From the respondents' answers, provision of adequate finance by the client, effective monitoring and evaluation and due process to curb corruption among stakeholders in the polytechnic housing sector through, Economic and Financial Crimes Commission (EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other crime control agencies ranked 1st, 2nd and 3rd in the distribution others as listed above are all accepted as having high percentage from the analysis. The analysis accepted all the factors as contained in the table

Discussion of Findings

The first findings revealed that inadequate finance/ fund and Inflation ranked 1 and two and are the two most common causes of abandonment of building construction project in polytechnics in Zone B geopolitical area of Benue State. This finding is in agreement with that of Ayodele and Alabi (2011) who is of this opinion.

The second finding of this study revealed that decline in project value and Waste of polytechnic and other sponsor resources ranked 1 and 2 in the distribution and are termed the two common effects that constitute construction project abandonment. This finding agrees with that of Okuntade (2014) who attested to this fact.

The third finding of this study revealed provision of adequate finance by the client, effective monitoring and evaluation and due process to curb corruption among stakeholders in the polytechnic housing sector through Economic and Financial Crimes Commission (EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other crime control agencies ranked 1st, 2nd and 3rd in the distribution others as listed above are all accepted as having high percentage from the analysis. This finding agrees with that of Ayodele and Alabi (2011) who attested to these facts.

Conclusion

Based on the findings, the following conclusions were drawn; inadequate finance/ fund, inflation, inflation, inadequate planning, faulty design, dispute, are the causes of abandonment in the polytechnics in zone B geopolitical area of Benue state, while death of chief executive of sponsoring agency, bankruptcy of contractor. Natural disaster is rejected to cause abandonment in the polytechnics in zone B geopolitical area of Benue state. Again, declining in project value, waste of polytechnic and other sponsor resources, loss of aesthetics values in the polytechnic environment, expected returns are lost and the already capital outlay is apparently wasted, loss of revenue to polytechnic and other groups in the economy, increases in final cost of project, reduction in academic activities, lowering the standard of living in the polytechnics wastages of equipment on site are all the effects of abandonment in the polytechnics in zone B geopolitical area of Benue state. Setting up more national sponsorship or donor agencies to augment the effort of TETFund, only new projects which can be completed with the available resources should be initiated.

The selection processes and consultancy should be characterized by accountability, transparency, honesty and integrity, Corruption among stakeholders in the polytechnic housing sector should be curbed through Due process, Economic and Financial Crimes Commission (EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other crime control agencies, political stability, effective communication among parties, understanding of project's mission, effective monitoring and evaluation, provision of adequate finance by the client are all possible solution to the menace under study.

Recommendations

To drastically reduced the effect of project abandonment client should undertake an adequate planning for the project at inception and make enough fund available based on the reliable estimate made by the Quantity Surveyor at the inception. The client should engage service of competent construction professionals: the Architect should at once and at inception produce economic design as dictated by cost plan prepared by the Quantity Surveyor who also controls cost from inception and throughout the duration of the contract.

Prompt payment to the contractor as directed by Architect through Quantity Surveyors certificate. The government should also put in all effort to reduce inflation and when there is change in political government, previously started job should not be abandoned for their new idea. Government should also make sure competent contractors that have strong financial stand are employed to execute contract works. The government and school authority should endeavour to curb corruption at the all levels of the stakeholders in the housing sector

through due process and the help of the Economic and Financial Crimes Commission (EFCC), Budget Monitoring and Price Intelligence Unit (BMPIU) and other Crime Control Agencies; more national sponsorship or donor agencies should be set up to augment the effort of TETFund effective monitoring and evaluation committee should be set up and empowered by the school authority, provision of adequate finance by the client and solution to others as contained in the table. Only new projects which can be completed with the available resources should be initiated. The selection processes and consultancy of contracts should be characterized by accountability, transparency, honesty and integrity.

SPONSORED BY THE TERTIARY EDUCATION TRUST FUND (TETFUND) 2024
INSTITUTION BASED RESEARCH GRANT INTERVENTION



ACKNOWLEDGEMENT

Special thanks to the Executive secretary TETFund for all the research training opportunities and funding.

I also appreciate all that made this research work a success.

REFERENCES

- Abdul – Rahman, it, Wang C and Ariffin H. N. (2013). *Identification of Risks Pertaining to Abandoned Housing Projects in Nigeria*: Journal of Construction Engineering. Hindawi Publishing Corporation.
- Adedeji A.O. (2000): *Inflation of Production Planning Techniques on performance of Construction firms in Nigeria*. Journal of the Federation of Building Contractor in Nigeria. 13 (1)
- Adesina R.O. (2010): *Investment into cause and effects of project abandonment in Nigeria considering Ondo State as a case study* HND Thesis submitted to Department of Quantity Surveying, Refus Giwa Polytechnic, Owo- Nigeria.
- Akasah A. and Yunu R. (2014). *A review on abandoned construction projects. Causes and effects*. In the proceedings of the International Integrated Engineering Summit (IIEs Vol. 14) pp. 1-4.
- Akindoyeni A. (2007): *The Management of Abandonment Project*. Journal of Nigeria Institute of Building. 1 (2), 27

- Akinolu E.O. (2003) *Professional Indemnity Insurance*, Federal Ministry of Finance and National Planning 2 (7), 6-8.
- Asika, L.K., (2009). *Essentials of Research Methodology*. Owerri: Spring Publishers. Pp.21
- Dahlan, N. H. (2011): *Rehabilitation of abandoned housing projects*: Ebdee Publications, Dalas:
- Essenwa F.O. Junior (2004) *Project Procurement method in Due Process or How to Executive Capital Projects Efficiently*. Department of Physical Planning and development, National Universities Commission Abuja. Nigeria.
- International Journal of Architectural Research. Arch – I JAR. Vol. 7 – issue 1. Pp. 65.73.
- Ihuah, P. W. and Benebo, A. (2014). *An assessment of the causes and effects of Abandonment of development projects on real properly values in Nigeria*.
- Jacobson J (2007). *The dismantling of Baltimore's public housing*: Housing authority cutting 2,400 homes for the poor from its depleted inventory – A15 = year trend shows a decrease of 42 percent in occupied units. The Abell Report.
- Kotangora O.O (2007) *Project abandonment Nigeria Tribune*
- Longman Dictionary (2005) *Dictionary of Contemporary English* Pearson Education Limited
Journal Emerging Trends Economics and Management Sciences (JETEMS) 2 (2): 142- 145 (ISSN: 2141- 7024).
- MCCConnell Eric (2011). *Project Appraisal - Definition and Steps*.
- Mukuku, M. J, Aigbavboa C. O and Thwala W. D. (2014). *A theoretical review of the causes and effects of construction projects cost and schedule overruns*. Text of paper presentation. International conference on Emerging Trends in computer and Image Processing (ICET 2014) Dec 15-16.
- Olalusi, O and Otunola, A (2012). *Abandonment of Projects in Nigeria – A review of causes and solution* paper presented at the international conference on chemical, civil and environment engineering. (ICCEE 2012). Dubai.
- Sunday, D. O. and Adenuga, O. A. (2013). *Causes, effects and remedies of errors in Nigerian Construction Documents*.
- Tan. A (2004). *Why projects Fail? 1001 reasons*. Venton Publication. The concept of Project Appraisal: accessed from Wikipedia. Org/wik/project appraisal on 27th June 2016.
- Yusif A and Odeyinka, H.A. A. (2000). *"The causes and effects of construction delays on completion cost of housing projects in Nigeria*. Journal of Financial Management of Property and construction. Vol. 2 (3) pp. 31-44.