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Perceived Impacts and Solution to Poor Project Management on Abandoned Construction Projects

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Abstract

The menace of missed project objectives such as schedule and cost target overruns with distressing regularity and backlogs of projects waiting to be tackled have largely characterized the construction industry, especially in developing countries like Nigeria. These occur as a result of many unidentified factors (including poor project management) which eventually lead to project failure. This study aims at investigating the perceived impacts of poor project management on abandoned construction projects and the methods that can be used to reduce the impacts. The study employed the survey research design method. The study obtained information from 66 construction profession in Lagos, Nigeria to treat the objectives. The results of the study were analyzed with SPSS software using frequencies, percentages and mean item scores. The results of the study show that, the impacts of poor project management on abandoned construction projects and its stakeholders are conflicts, loss of economic value and reduced standard of living among the citizens. The methods of reducing the identified impacts through project management include adequate planning, use of competent professionals and standard project management procedure. The study concluded that, to reduce project abandonment on construction projects, project managers must incorporate adequate planning, cost control and resource management into their services and engage experienced professionals.

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Keywords: Cost overrun; cost control; project failure; project management; project planning

1. Introduction

The impact of poor project management on construction projects across nations including Nigeria cannot be underestimated as it has grave consequences on both the stakeholders (clients, consultants, contractors and users) and nations. The menace of missed project objectives such as schedule and cost target overrun with distressing regularity and backlog of projects waiting to be tackled have largely characterized many developing countries, including the Nigerian construction industry. Poor project performance occurs due to many unidentified factors (including poor project management) which eventually lead to various effects. While project management involves an array of carefully planned, interrelated and organized efforts directed towards the accomplishment of project objectives [1].

Project abandonment was defined as the decision of management, for whatever reason to temporarily or permanently discontinue a project under development or currently in operation [2]. It was further explained that abandonment is an act of giving up on something completely, with no certain intention of when to resume [3]. Abandoned projects characterize many developing countries, Nigeria inclusive. There are about 4000 abandoned projects which belong to the Federal Government of Nigeria and they were estimated at over N300 billion [4]. The abandoned projects were calculated to take an average of 30 years to complete at the current execution capacity of the government.

Many factors have been traced to abandonment of construction projects. It was discovered in [5] that hostile company culture, political pressure, improper reporting structure, influences, vested interest and inappropriate level of management commitment are the organizational and managerial causes of project abandonment. According to [2], staffing, managerial and communication aspect of project management are the causes of project abandonment. [6] concluded that, although some projects are abandoned as a result of technology or design problems, the main reason behind project abandonment is a lack of understanding of the influence of project management on construction projects thereby leading to project abandonment. Other causes of project abandonment include – lack of social analysis of a project, project imposition, improper financial analysis, under bidding of project and lack of technical analysis [2]. [7] asserted that contractors' bankruptcy, variation of project scope and incompetent project managers are responsible for project abandonment in Nigeria. The factors identified appear endless, but they are mostly connected by project management. That is, many of the causes may be mitigated with proper project management, hence the need to investigate the relationship between project management and abandonment of construction projects.

Abandonment of construction projects as a result of the many factors identified has had devastating effects on both the projects and its stakeholders. [4] declared that project abandonment leads to the disappointment of the populace, low standard of living, wastage of resources, reduction in employment opportunities, decrease in economic activities, decrease in revenue accruing to government, difficulties in attracting foreign loans and increase in final cost of the project. [8] described the impacts of abandoned project as both socio-economic and environmental. [3] opined that, project abandonment has its effect on the individual, community and government.

Since project abandonment has been largely attributed to poor project management [9], it is important to work towards preventing its occurrence by identifying the project management factors responsible for project abandonment, the effects of project abandonment in the construction industry and the strategies that can be used to avoid project abandonment. Against this background, the study investigates the effects of poor project management on construction projects and determine ways of preventing project abandonment that are due to poor project management.

2. Literature Review

2.1. Impacts of poor project management on abandoned building projects

From the background of the study, it could be established that, there are many factors that are responsible for abandonment of construction projects of which, project management related factors are highly rated. Therefore, if the project management related factors could be eliminated, project abandonment could be reduced to a bearable minimum. [10] stated that project abandonments are not always bad, as they can lead to substantial learning and produce artifacts that are applicable to future projects. This was supported by [11] who noted that, project

abandonment may be a good and acceptable management practice because it may prevent further investment of scarce organization resources in a non-productive venture. On the other hand, however, [10] stated that project abandonment was a corporate resource and is often difficult to deal with because it requires special management skills and critical business decisions.

Various impacts of project abandonment as a result of poor project management have been highlighted in various studies. [12] established that project abandonment has both socio-economic and environmental impacts. Environmental impacts consist of visual impacts, landscape modification, erosion, biodiversity decrease and pollution. Socio-economic impacts consist of increased unemployment, conflicts between public administration and private of population and transfer of cost between private sector, loss of economic value of the area, marginalization of population and transfer of cost between private and public sector.

The effects identified by [4] are: disappointment of the populace, reduced standard of living, wastage/under-utilization of resources, reduction of employment opportunities, decrease in tempo of economic activities, decrease in revenue accruing to government and difficulties in attracting foreign loans among others. [3] noted that the effects of poor project management are felt by the individuals, community and government.

2.2. Methods of Reducing Project Abandonment with Project Management

Many of the authors that worked on the effects of project management on abandonment of construction projects suggested different solution to the problems. This is evident in the works of [11] who suggested that project abandonment can be cured by extending project schedule, better project management procedures, addition of more people to work schedule, increased funding for construction projects, increased pressure on suppliers, reduced scope of project, request for outside help, better development methods, changed technology and performing some other functions.

The solutions suggested by [4] are: adequate planning inception, making funds available, engage competent construction professional, production of economic designs, project scope should not be varied, prompt payment to contractors, partnering, risk appointment, risk review, clear communications, root cause analysis, maintaining morale and right culture, keeping register of uncertainties, reduction of inflation, previously started jobs should not be abandoned for new ideas and strong financial based contractors should be employed. [3] took a multi-dimensional approach by suggesting social analysis, institutional analysis, financial analysis, economic analysis and technical analysis to solve the problem of project abandonment. In addition, [12] suggested that project abandonment can be avoided by conducting users' satisfaction and needs survey, holding internal technology fairs, ensuring sustained user involvement in product definition, project reviews and studying.

3. Research Method

The survey research design was used for the study. The study was quantitative in nature as it involves the assessment of selected abandoned projects with the use of structured close-ended questionnaire for data collection. Since construction projects fall into different categories such as building, civil and heavy engineering projects, the study focused on building (residential, industrial, institutional and recreational) projects within Lagos, Nigeria. According to [13], any construction related professional such as architect, builder, estate surveyor and valuer,

quantity surveyor or engineer would make a good project manager provided there is requisite knowledge, experience of the industry and ability to lead and co-ordinate.

Hence, the population of this study consists of abandoned building projects (public and private) that were executed by construction project managers. The projects used for the study were selected through the non-probabilistic convenience sampling technique based on the ease of collecting data for the study from such projects. The questionnaire for the study was initially administered on ten respondents in order to discover the weaknesses in it. After that, necessary corrections, additions and subtractions were made to the questionnaire as noted by the respondents and validators. Sixty-six out of eighty distributed questionnaires were returned (based on the sampling technique) and analysed for the study. The method of data analysis were frequencies, sums, percentages and mean item scores.

4. Data Analysis

Table 1 shows the general information of respondents and the projects used for this study. On profession, 21.2% of the respondents were architects, 24.2% were builders, 13.6% were quantity surveyors, 25.8% were engineers and 15.2% were into other professions that are related to the built environment like estate management. These professions are the basic fields of study of respondents at the undergraduate level and afterwards, they may go into project management at post graduate and professional level. The table reveals that, architects, builders and engineers are the prominent professionals in the construction project management practice of the Nigerian construction industry.

In addition, 34.8% of respondents have worked for 1-5 years in the project management profession, 42.4% have worked for 6-10 years and 22.7% have worked for 11-15 years. Based on the information, 65.1% of the respondents have between 6 and 15 years of work experience in project management and this shows that the respondents for this study have the requisite experience and knowledge to provide valuable information for this study. Furthermore, 69.7% of the project managers used for this study handled residential projects at one time or the other, 25.8% handled institutional projects and 4.5% handled other types of projects apart from residential and institutional buildings.

None of the respondents claimed to have engaged in religious or recreational projects and this is probably because many religious organizations give the project management aspect of their work to members of their faith (church or mosque) who practice or have idea of the built environment. In addition, there are not many recreation centres in Lagos State, perhaps in Nigeria. Lastly, 25.8% of the respondents' organizations are into sole proprietorship type of business, 13.6% are into partnership, 45.5% are private limited liability companies and 15.1% are public limited liability companies. This indicates that the organizations used for the study are fairly evenly distributed.

Table 1. General information of respondents and their organizations.

Profession	Frequency	Percentage
Architecture	14	21.2
Building	16	24.2
Quantity surveying	9	13.6
Engineering	17	25.8

Others	10	15.2
Total	66	100
Work experience		
1-5	23	34.8
6-10	28	42.4
11-15	15	22.7
Total	66	100
Type of project		
Residential	46	69.7
Institutional	17	25.8
Others	3	4.5
Total	66	100
Gender		
Male	50	75.8
Female	16	24.2
Total	66	100
Respondents organization		
Sole proprietorship	17	25.8
Partnership	9	13.6
Private limited liability	30	45.5
Public limited liability	10	15.1
Total	66	100

Table 2 indicates the impact of poor project management on abandonment of construction projects and construction stakeholders. The impacts with highest rating are wastages/underutilization of construction resources (3.85), conflicts (3.65), loss of economic value (3.62), visual effects (3.52) and marginalization of population (3.50). In addition, reduced standard of living (3.41), pollution (3.39), decreased biodiversity (3.39), erosion (3.29), unemployment (3.29), landscape modification (3.17), disappointment of the populace (3.14) and difficulty in attracting loans (3.02) are impacts of poor project management on projects abandonment with moderate rating.

Table 2. Impact of poor project management on abandonment of building projects.

Effects	Mean	Extent of impact	Rank
Wastage/underutilization of resources	3.85	High extent	1
Conflicts	3.65	High extent	2
Loss of economic value	3.62	High extent	3
Visual effects	3.52	High extent	4
Marginalization of population	3.50	High extent	5
Reduced standard of living	3.41	Average extent	6
Pollution	3.39	Average extent	7
Decreased biodiversity	3.39	Average extent	8
Erosion	3.29	Average extent	9
Unemployment	3.29	Average extent	10
Landscape modification	3.17	Average extent	11
Disappointment of the populace	3.14	Average extent	12
Difficulty in attracting foreign loans	3.02	Average extent	13

5 = Very High Extent (VHE), 4 = High Extent (HE), 3 = Average Extent (AE), 2 = Low Extent (LE), 1 = Very Low Extent (VLE)

Table 3 reveals the methods of reducing the impact of poor project management on abandonment of building projects in Nigeria. Adequate planning at inception (4.58) and engagement of competent construction professionals (4.48) were very highly agreed to by the respondents as methods of reducing project abandonment. Also, standard project management procedure (4.29), clear communications (4.15), good development technique (4.06), increased funding (4.00), employment of strong financial base contractors (3.98), production of economic designs (3.97), economic and financial analysis (3.94), risk apportionment (3.91), change of technology (3.88), risk review (3.82), root cause analysis (3.79), keep register of uncertainties (3.76), ensure sustained user involvement (3.76), conduct user satisfaction and need survey (3.73), maintaining good morale and right culture (3.71), extension of project schedule (3.68), previously started jobs should not be abandoned for new ideas (3.64), government should reduce

inflation (3.52) and increasing pressure on suppliers (3.50) were highly agreed to by the respondents as methods of preventing project abandonment in the construction industry.

Table 3. Methods of reducing the impact of poor project management on construction projects.

Solutions	Mean	Level of agreement	Rank
Adequate planning at inception	4.58	Very high agreement	1
Engage competent construction professional	4.48	Very high agreement	2
Standard project management procedure	4.29	high agreement	3
Clear communications	4.15	high agreement	4
Good development technique	4.06	high agreement	5
Increased funding	4.00	high agreement	6
Strong financial base contractors should be employed	3.98	high agreement	7
Production of economic designs	3.97	high agreement	8
Social, institutional, financial, economic and technical analysis	3.94	high agreement	9
Risk apportionment	3.91	high agreement	10
Unvaried project scope	3.91	high agreement	11
Change of technology	3.88	high agreement	12
Risk review	3.82	high agreement	13
Root cause analysis	3.79	high agreement	14
Keep register of uncertainties	3.76	high agreement	15
Ensure sustained user involvement	3.76	high agreement	16
Conduct user satisfaction and need survey	3.73	high agreement	17
Maintain good morale and right culture	3.71	high agreement	18
Extension of project schedule	3.68	high agreement	19
Previously started jobs should not be abandoned because of new ideas	3.64	high agreement	20
Government should reduce inflation	3.52	high agreement	21
Increased pressure on suppliers	3.50	high agreement	22
Partnering	3.36	Average agreement	23
Hold internal technology fairs	3.33	Average agreement	24
Request for external assistance	3.15	Average agreement	25
Addition of more people to the project	3.02	Average agreement	26
Reduced scope of project	2.74	Average agreement	27

5 = Very Highly agreed (VHA), 4 = Highly agreed (HA), 3 = Averagely agreed (AA), 2 = Low agreement (LA), 1 = Very Low agreement (VLA)

5. Conclusion and recommendations of the study

The study investigates the effects of poor project management on abandonment of building projects. The findings of the study are consistent with the work of Carrero *et al.* (2009) in the area of wastage/underutilization of resources, conflicts, loss of economic value, visual impacts and marginalization of population. Other effects such as reduced standard of living, pollution, erosion, unemployment and disappointment of the populace only have average effect on construction project abandonment and were scarce mentioned in previous studies. In this study, adequate planning at inception and engagement of competent construction professionals were rated as the best methods of preventing construction project abandonment. In addition, standard project management procedure, clear communications, good development technique, increased funding, economic designs, risk management, users' satisfaction survey and so on were rated high as solutions to construction project abandonment. However, at the bottom of the list of solutions to construction project abandonment were partnering, holding internal technology fairs, requesting for external assistance, adding more people to projects and reducing scope of projects.

Therefore, based on the findings of this study, it was concluded that, wastages/underutilization of construction resources, conflicts, loss of economic value, visual effects and marginalization of population are the

major impacts of poor project management on construction projects. To reduce these impacts, the study further concluded that, adequate planning at inception, engagement of competent construction professionals, standard project management procedure, clear communications, good development technique, increased funding, employment of strong financial base contractors and production of economic designs should be encouraged by stakeholders.

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