Investigating the potentials of fast track in mitigating project abandonment: case studies

~ **Amir Hussin B. Baharuddin** *(Universitri Sains Malaysia)*
~ **Abdulhamid Kadir Pakir** *(Universitri Sains Malaysia)*
~ **Abdelnaser Omran** *(Universitri Sains Malaysia)*
~ **Ibrahim Ado Wudil** *(Universitri Sains Malaysia)*

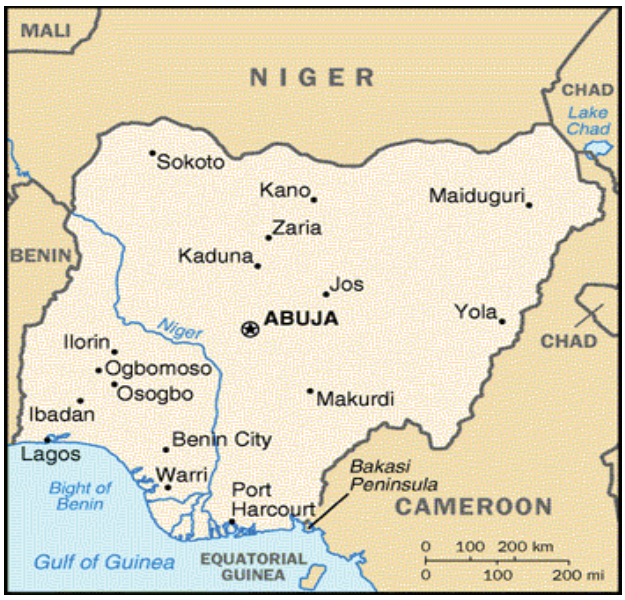
Abstract: *The construction industry plays a very role in the fixed capital formation of any economy. Thus, the activities of construction in any economy, mirrors its general performance; a healthy economy usually experiences an upward swing in construction activities and a depressed economy indicates the reverse. But, project abandonment has been posing a threat to so many countries in their march towards the achievement of the above economic independence and greater civilization, and Nigeria is no exception. We have road and other construction projects that have taken ages in building, whose completion date is only in the imagination of the gods. Governments succeed governments and waste many months reviewing contracts and on-going projects, and re-awarding contracts. The ritual has come to stay and public funds are sunk into projects whose viability, usefulness, and urgency remain doubtful; then they are abandonment. However, majority of project abandonment could be traced to longer project duration. This is because the longer the duration of a project the more additional costs to the project through variations, inflations, and other expenses associated with time (time related to expenses). Time consumed by project directly influence the cost incurred on a project. When these traditional costs are too much, they lead to the client's budget for the project to be exceeded. And when clients can no longer entertain those additional costs, it becomes a subject of disputes, and eventually the project is abandoned. As such, there is the need for the construction industry participants to embrace an efficient and effective means of minimizing projects' duration in order to minimize the occurrences of project abandonment; and Fast Track procurement method is one good project management tool that have been in used to meet these challenges of time and cost.*

Keyword: Fast track, Mitigation, Project Abandonment, Nigeria

1. Introduction

The construction industry significantly contributes to the development process of both developed and developing countries. The finished construction products also provide necessary public and private infrastructure needed for other equally necessary activities such as commerce, health, education and so on. The industry is not only important for its finished product, but it also employs a large number of people (directly or indirectly) and therefore has an effect on the economy of a country/region during the actual construction process. Unfortunately however, project abandonment have been mitigating against the attainment of these infrastructural and economic excellence. Shilgba (2007), once observed that, *Abandoned private and public projects litter the land. A man begins to build a house in Nigeria without counting the cost; he brings the project to a certain level and then abandons it indefinitely. We therefore have projects that have taken ages and whose completion date is only in the imagination of God. Public funds are sunk into projects whose viability, usefulness and urgency remain doubtful. If one should undertake the task of estimating the billions of Naira that have been wasted on projects that have been abandoned, and which would cost many times more to complete after such long periods of abandonment, the amount will be mind-boggling and in some cases the beauty of the environment has been destroyed by the unpleasant sight of those abandoned projects; and in some cases they poses danger to life.* Moreover, the world at large has been suffering from economic depression. As a result cost escalation especially in building projects has become eminent. Also the rate, at which the population is continuously rising with the attendant need for housing, and the technological complexities of modern time requiring vast investment for the sake of providing building as well as other infrastructure, surely calls for proper project management to avoid the harmful effect of project abandonment. The main aim is to investigate the potentials of fast track construction method as management tool that can be used to ensure that projects are completed within the shortest possible time. The scope of this survey is the Federal Capital Territory of Nigeria, Abuja and Kano State (one of the thirty-six states of Nigeria), all of which are located within the northern part of Nigeria.

Figure 1. *Shows Nigerian map*



2. Research methodology

A qualitative approach was selected to carry out this study. Two targets areas are Kano State and the Federal Capital Territory (FCT), Abuja. Abuja was chosen because of its high level of construction activities, thus it has a fair representation of all categories of indigenous contractors (even foreign

contractors). While Kano State was chosen because it was the place where the genesis of the research concept was first conceive. The method used for the data collection for the study was field work involving discussions with the parties to the projects, references to other similar publication and other personal observation of the work process. A visit to Abuja site was first made and since work is on progress, an observation and discussion were made at the site. However, for Magwan Water Restaurant, after visiting the abandoned site and had some inspection, a visit was made to Kano State Ministry of Works and Housing (which is a custodian of the entire public owned project in the state). Discussions were held with some senior officers of the ministry in connection with the abandoned project and the likely resumption of works on site. A discussion about the Liaison office in Abuja was equally discussed. A total of 16 most important points were eventually drawn upon which analysis of the two projects was conducted. The analysis eventually provided a basis for conclusion and recommendation. These information consisted (though not limited to) of the followings (Brief description of the project; project's name; projects initial cost; project's duration/date of commencement, stage at which the project was abandoned, reasons for project abandonment, year of re-award of the project, revised completion cost/project duration, subsequent contractor (if different from above), client's commitment to the successful completion of the project, honoring of certificate by the client, contractor's plan/ schedule of work, contractor's policy with respect to resource scheduling, contractor's Policy with respect to resource leveling, contractor's adherence to Plan of work/updating it as work progresses, eventual completion date of the project; and general economic evaluation of the two projects).

3. Data analysis and presentation

The data obtained from the two projects under study were deeply explained in this section, comparing the method of project execution under the traditional procurement method which is used in the execution of the two projects under study and thus comparing it with an alternative procurement method, Fast Track, and then identifying and highlighting the benefits, dis-benefits, time and financial losses and savings derived from the use of Fast Track. Even though the completion of one of the projects, that is Magwan Water Restaurant, is yet to take-off, yet the circumstances surrounding its abandonment and the financial losses suffered from the abandonment is examined and analysed.

3.1 Project A – Proposed Kano State Liaison Office at Central Area of Abuja

3.1.1 Brief description of the project

The project is a four storey building with an underground basement on a rectangular site (approximately 200 x 100m). It consists of offices that are meant to be used by the liaison officers of Kano State Government that are in the Federal Capital City (i.e. Abuja). It also has additional let table offices that are meant to be rented to big organization and corporations. There exists as well a two storey building with 2N0 3-Bedroom apartments in each floor, which is to be used as residential apartment to the staffs. While the revenue generated from the table offices is intended to be used for maintaining the building over its useful life.

3.1.1.1 Projects name: the project's name is proposed Kano State Liason Office. The project is situated in Central Area, Federal Capital Territory (FCT), Abuja.

3.1.1.2 Project's initial cost: the project was awarded in 1980 at an initial cost of N120,000,000.00 (One Hundred and Twenty Million Naira).

3.1.1.3 Project's duration/date of commencement: the duration of the project is 2years and it commences in February 1986 and is thus intended to be completed and handed over in March 1988.

3.1.1.4 Stage at which the project was abandoned: the project was abandoned after all substructure work including basement works were successfully completed (but without finishing), and structural frames and floors casted (but excluding roof floors).

3.1.2 Date at which the project was abandoned

The date at which the project was abandonment is February, 1989. Considering the date at which the project was abandoned in relation to the total project's initial duration and the remaining items of works which are yet to be executed, it becomes evident that even if the project was not abandoned, it would not have been completed within the initial stipulated duration of the project. In other words, the execution of the project was not in conformity with the project schedule, or the execution of the project is slow, or it is behind the schedule.

3.1.3 Reasons for project abandonment

The reason for the abandonment of the project is non-payment of outstanding payment (i.e., non-honouring of certificates of payment due to the contractor by the client). But, Fisk (2000) stated that "there is no moral justification for a competent contractor being driven out of business by delayed compensation for services rendered". Even though non-payment is not a ground for project abandonment as outlined by The Joint Contract Tribunal conditions (JCT, 1980 Ed.), yet it can be argued that the amount of money owed by the client to the contractor is such that performance by the contractor is practically impossible, as also observed by Hinze (2001), "The construction industry is unique in regard to payment. While most payments in other industries are made at the time of delivery, in the construction industry periodic payments are typical". To worsen the situation, a change of administration occurred in which the subsequent administration never paid attention to the project in question because of differences in policies and political association, justifying the earlier statement by Shilgba (2007), 'Abandoned projects litters the land'. Years passed by without the project being attended to by the subsequent administrations and even those that tried to rescue the project failed to do so because of the accumulation of so many claims by the contractor and the effect of fluctuation which all together sky-rocketed the completion cost of the project to an amount much higher than the initial total cost of the project also as observed by Fisk 2000, "Inflation is one of the world's realities". This also further justifies the earlier statement by Giwa (1998), 'Non completion of a project on time will have adverse consequences on the overall cost of the project'. Had the project been fast tracked, even though it may be expensive, yet it may possibly have been completed long ago.

3.1.4 Year of re-award

The project was re-awarded in the year 2007; unfortunately, the bureaucracy of

obtaining approvals of continuation of the project from the relevant authorities further delayed the actual take-off of the project till early 2008. Even after the take-off, work remain in slow pace due to breakages/demolitions occasioned by changes in design/taste and the testing and removal of structurally defective elements coupled with the need to invite the relevant authorities to acknowledge such removal and subsequent changes, functionally and structurally.

3.1.5 Revised completion cost/ project duration

The revised completion cost of the project is to the tune of N945,000,000.00 (Nine Hundred and Fourty Five Million Naira) while the project duration is two years (i.e. 2007-2009). Comparing the completion cost of the project to the initial project cost, it can be seen that the completion cost has doubled the initial total cost of the project by almost seven times (i.e. 787.50% increase in the total cost of the project). Even though it may be argued by critics that the completion cost is inclusive of the cost of additional modification and changes in the project, which is as a result of change in fashion and usage, all the same the argument may be baseless because had the project been fast tracked and completed and thus put to usage, the revenue generated from the rentals would have been sufficient to undertake the renovation and modification of the structure to the current taste especially if the revenue generated was invested. Thus the huge amount of money being used to complete the project would have been put to other usage especially when there are so many unattended responsibilities by the government to its citizens.

3.1.6 Subsequent contractor (if different from initial contractor)

The subsequent contractor to the project was Messrs Afdin Engineering Ltd, a successful contractor of proven competence. However, notwithstanding the experience and competence of the contractor, the fact remains that completing a work started by someone else has never been without some difficulties and caution, this is because the degree of adherence to certain laid down rules and regulations by the earlier contractor cannot be ascertained. For example, during the completion of the project, care and caution is always taken in respect to dead loads even when they are necessary. This is because even though a strength test was carried out on all the structural elements before proceeding with the project, yet information about the foundation, sizes and number of column bases and the like, cannot be established with certainty. For example during the construction of the roof, smaller sections of steel trusses had to be used as against the prescribed sizes due to the weight of earlier prescribed sizes and the fear/uncertainty associated with the foundation. If the project was to be completed by the earlier contractor, all those problems may not arise. However one of the major problems associated with project abandonment is that, more often than not, the earlier contractor is not awarded the completion either because he is not known (or Close) to the subsequent client or even if he is known, likely at the time of the project completion, he lacks the competitive advantages (i.e. there are other contractors at the time of the completion who have better capabilities and other competitive advantages). Even in cases where he is known and is still competitive in the market, there is a fear that

the contractor will submit claims accruing to him throughout the duration of the abandonment, as noted by Fisk (2000), 'majority of all claims involve at least some elements of delay even if the primary issue is one of the other categories'. And when the claims cannot be paid, he will be willing to incorporate them in his tender and thus making his tender unnecessarily exorbitant (comparatively) just as unsuccessful tenderers always cleverly build their cost of abortive tenders in their subsequent tenders. Had the project been fast tracked, all these problems would have become avoidable.

3.1.7 Client commitment to complete the project/honouring of certificates

A commitment by the parties to a project (i.e. client and contractor) always determines the success or otherwise of a project. However experience has shown that (especially in under-developed and developing nations) clients, especially in public projects, lacks the willingness to be totally committed to the completion of projects started by previous administrations mainly due to difference in priorities and political groups or fear and jealousy of the initiator of the project to be associated (in history) with the credit of executing or founding the project. And thus, even in instances where an abandoned public project is completed by subsequent administration, sometimes it is only because it became necessary. For example, the Kano state liaison office is situated in a prestigious area in the Federal Capital (Abuja). More over all the liaison offices belonging to other states which are situated adjacent to it, have been developed and even put to usage. As such the liaison office has been causing unpleasant sight in the area especially to the completed structures. Added to that, the uncompleted building has remained an accommodation for jobless individuals, criminals, and hustlers, thus causing security threat to all the building adjacent to it (again, this justifies Shilgba's earlier assertion). Added to this, the then minister of the Federal capital Territory (Abuja), have issued a revocation notice to the state government should it fail to complete its liaison office (land being vested in the authority of the FCT minister and thus within his Jurisdiction to revoke any land that was not put to the usage it was given for). Commendable though the good effect of Kano state in completing the project, yet the commitment shown in the completion especially in honouring certificates due to the contractor may not be comparable to other priority projects especially those initiated by the present state government. These reasons have therefore led to a slag in an attempt to meet the completion deadline. It is for this same reason that there still exist so many uncompleted projects especially by the federal government that are yet to be attended to.

3.1.7 Contractor's plan/schedule of work

As discussed in the literature review, plans are steps taken towards the achievement of desired goals. And therefore contractor's plan of work constitute a systematic breakdown of all the activities to be undertaken in a project and the time it will be undertaken and how long it will take to undertake it. In other words, it gives a graphical representation of all the activities to be undertaken towards the achievement or completion of the project and the total duration of all the activities, thus giving the project duration. Control measures can therefore

be taken from the plan to put back any deviation from the original plan back on track. Schedule on the other hand gives more detailed information than programme of work, in that it shows the amount of money needed to execute the activities and the various paths in undertaking the activity or project. Thus from the schedules the consequences of delaying an activity can be seen in respect to the total completion period of the project and the financial implication associated with that delay. The schedule also show the critical path, that is the longest path in the execution of an activity along which any delay in it will cause a delay in the project completion and at the same time it is a path along which the activity duration can be shortened in order to reduce the total project duration. The plan of work and the schedule therefore serves as a guide in controlling a project's total duration. However, in the course of project execution by the traditional method (not Fast tracked), there is no serious compulsion attached to completion time and thus in many cases the programme of work and schedules(even if there are) are only unnecessary documents to the contractor. This explain why, on entering a project site, it can easily be noticed that materials available (on ground) and the gang of work is not tallying with an intended level of achievement of work over a period of time, because there is no compulsion with respect to time. In the same respect and reference to the programme of work by Messrs Afdin (the contractor handling the completion of Kano State Liaison Office), it can be seen that the programme of work indicated that the project is going to be completed in one year, but even a year after the initial completion date, the project is not completed and there is hardly any genuine explanation for such a delay. On the other hand there are no schedules even to guide the adherence to the programme of work and thus it is difficult to identify the activity that actually delayed the completion process and which path or way is to be taken to bring the project back on track. Little wonder then, even though there was never a time work stopped on the site, yet the completion of the project is far behind schedule. The reason remains no plans and schedules were prepared, even when they were, they were not adhered to and thus there is no performance measure and control which is the fundamental characteristic of Fast Track.

3.1.8 Contractor's policy with respect to resources scheduling

The eventual success of a project depends directly upon each activity being executed on schedule. And for this to be achieved, all the resources for each tasks should be on-site by the task's Earliest Start Time, or at worst they must be there by its Latest Start Time. If any resource is delivered after the task's LST, time is lost and the project's finishing date slips. Tasks on the Critical Path must start as scheduled, because they do not have float to absorb lost time from late deliveries. To ensure all resources are accoutered for, all of them must be identified: the construction materials, the equipment needed, the workers (skilled and unskilled). And the whole process of ensuring that the correct resources are on-site and on-time for each task is called procurement. It begins with the contractor identifying each resource, writing its specification, selecting a supplier, and ordering it. On the other hand, the suppliers prepares a working drawing for the supply and make a prototype and have it inspected to agree on the time it should be supplied.

The contractor should not ignore procurement process after orders have been placed. A project manager may appoint someone to make continual contacts with all the suppliers, this person is called an expediter and his or her job is to monitor the suppliers at important milestone during the procurement process. A planner should prepare a schedule for each resource needed for the project. When all these small schedules are arranged together, the collection is called a 'tickler sheet'. Because the scheduled time for each milestone triggers a phone call to a supplier, it acts as a tickle to the expediters' and suppliers' memory- hence the name. In complex situations and in particular when disappointment with regard to the supplies are encountered, it is necessary to be updating both the schedule and the tickler sheet, and thus the new procurement schedule becomes the schedule upon which the expediter monitor the supply. Unfortunately, in the execution of projects by so many construction companies, the compliance with the above guiding principle is not adhered to strictly. This explains why during the completion of Kano State Liaison Office the on-time execution of some aspects of the works suffered a major delay, because the materials were not supplied as at when due. Even though disappointments are sometimes inevitable in the dear-life, yet through careful planning and the anticipation of the fact that things may go wrong and thus preparing a remediable action, the impact of such disappointment to the eventual completion of the project may be minimised. In the same vein, if the contractor handling this project has thought about a likely disappointment from the supplier and sub-contractors, and thus made an alternative arrangement with other subcontractors and suppliers, the delay encountered during the execution of these works may have been avoided or reduced to a minimum.

3.1.9 Contractor's policy with respect to resource leveling

In developing a most up-to-date schedule, it is unconsciously assumed that there is unlimited supply of all the resources needed for the tasks, but the real world situation may be very different. The single crane available and thus budgeted, may be needed for two construction tasks at the same time; or the carpentry crew may be required to work on two or more different tasks at the same time; or the painting crew will not be allowed to work alongside the electricians in a confine space. As such, other than resolving resource clashes, the wide swings in the daily application of certain resources, especially work crews, must be smooth. For example, the carpentry crew might be assigned work on four-day task and then be left idle for the three days, which would disrupts its working momentum, decrease its efficiency and complicate management of the job. Management's objective is to achieve a steadily working crew by rescheduling certain tasks by altering or adding precedence links into the network. These adjustments tend to complicate the network and lengthen the project though. When schedule shows two tasks requiring the same piece of equipment at the same time, the manager decides which tasks should use it first by comparing the total floats of both tasks. Their floats determine the priorities. Another type of constraint relates to separating tasks that can confuse progress if allowed to occur together. For example, laying foundation, laying the under slab services and the development of road beds may all be schedule

to start on the same day in the network. The PM may want the foundation to proceed unimpeded, therefore the other two tasks may be required to start afterwards. The delays may not be a problem because perhaps the total float on the other two tasks can absorb it and thus no major schedule disruptions are caused. Equally, in cases where several tasks are competing for the use of a piece of equipment, such use is rarely 100% allocated to any task over its whole duration. Its use might be shared among all the competing tasks, thereby reducing or eliminating any loss of time. A crane for example, is often needed for a short time at the beginning of a task to place materials, after which it will be free for other applications. Such shorter use of periods would be sequenced. Because of the rescheduling, the net work diagram should also be updated to record a consistent set of data. Each task from the task order should be checked and compared with the original net work making corrections and additions where necessary. However, these procedures and systematic work planning are only features of Fast track projects. The use of schedules/net works and its eventual strict adherence to, is very limited with traditional construction methods. Even in situations where resource levelling is practicable, as it must to a certain extent, the problem lies in management putting the usage of the resources in the form of networks and thus identifying the floats and financial consequences of prioritising resources; and the completion of Kano State Liason Office is no exception.

3.1.10 Contractor's adherence to plan of work/ updating it as work progresses

While plans are steps to ensuring the achievement of a desired goal, control o the other side is an attempt in making sure those plans are adhered to, and where they cannot be adhered to, then separate plans are taken and incorporated into the original plan, together they become the new plan. It should be remembered that plan and control are inseparable (in fact Harold Koontz, 1995 referred to them as Siamese twins). It therefore follows that plan is next to nothing without control and vice versa. Referring to the completion of Kano state liaison office still, it has already been established that plans and schedules are not strictly prepared and adhered to and therefore updating does not even arise. This explains why projects run this way take a longer completion period. Even the running of private life may hardly yield any meaningful success without some form of planning and control to make sure that the plans are adhered to. On the other hand, in fast track projects, the preparation of plan of work and schedules is what even makes a project, to be a fast tracked project. And thus, right at the onset there is a clear understanding of where to go , when to go , how to go, how expensive is it to go, and what is the price of failing to go at a particular time. All these factors are what guides a fast track project and thus eventually leading to an on-time completion of project and thus making Fast Track Project stand a shoulder higher than the conventional methods of project execution.

3.1.11 Eventual completion date of the project

Even though the future is seldom predicted with certainty, yet with careful plans and control, there could be a higher degree of reliability in the predictions. But when projects are run without strict adherence to plans and schedules, it will be hard (if not

completely impossible) to predict when a certain milestone will be reached not even to talk of completion of the project. In the same vein, even though work is still going on in the site, yet completion date cannot be stated with certainty. Several periods were fixed for the completion, but it was not achievable (even though in fairness all works are almost completed). Had the project been fast tracked, it will be easy for a completion date to be known. This is because plans and schedules which depicts the start and completion period are already in existence and are being adhered to. Should there be any hindrance to the adherence to the plans and schedules, and plans and schedules are prepared in accordance with the intended completion date. And equally should there be any delay in the execution of any activity, it can be shown from the path whether the delay is capable of delaying and thus extending the completion date (i.e. along the critical path) or not. When it is capable of delaying the completion date, more resources are added to the path in order to shorten its duration (fast tracked), and when it does not have any adverse effect on the completion period, life becomes easy.

3.2 Project B – Proposed Completion of Magwan Water Restaurant – Kano

3.2.1 Brief description of the project

The project comprises of a 5-star hotel located in the most prestigious areas within the city of Kano. It was constructed during the then civilian governor of Kano State, Late Alhaji Muhammad Abubakar Rimi. The hotel attracted a lot of customers especially tourist because of its strategic location and its scenery view. This is what informed the decision of the subsequent government to expand it and add more structures and recreational facilities. The project is intended to comprise of additional hotel accommodation and guest chalets, Banquet hall, night club, sporting facilities, a bigger and well landscaped parking lot. The extension work was started in 1986. Unfortunately no sooner had it started than it was abandoned.

3.2.1.1 Projects name

The project's name is proposed Extension of Magwan Water Restaurant. It is situated along Audu Bako Way, in Nassarawa area of Kano city.

3.2.1.2 Project's initial cost

The project was awarded in 1985 at an initial cost of N65, 000,000.00 (Sixty Five Million Naira).

3.2.1.3 Project's duration/date of commencement

The proposed duration of the project was 2years and it commenced in June 1985 and is thus intended to be completed and handed over in July, 1987.

3.2.1.4 Stage at which the project was abandoned

The project was abandoned after all substructure work including basement works were successfully completed (but without finishing), and structural frames and floors casted (but excluding roof floors).

3.2.1.5 Date at which the project was abandoned

The project was abandonment after one year from its commencement, that is1986. But considering the date at which the project was abandoned in relation to the total project's initial duration and the remaining items of works which are yet to be executed, it become evident that even if the project was not abandoned, it would not have been completed within the initial stipulated duration

of the project. In other words, the execution of the project was not in conformity with the project schedule, or the execution of the project is slow, or it is behind the schedule.

3.2.2 Reasons for project abandonment

The reason for the abandonment of the project was that, there was a coup by the military which ousted the then civilian/ democratic government. Unfortunately the project did not receive any attention from the successive government. However, considering the inflation rate in Nigeria, especially over a long duration, and couple with the fact that during the completion of the project, so many elements of the building (especially the structural elements) will not be functional both structurally and aesthetically, and thus there will have to be the need to remove and replace thus defective elements, and also due to the fact that some elements of the building would have been vandalized, the completion cost will be mind boggling in comparison with the initial cost of the project. Years passed by without the project being attended to by the subsequent administrations and even those that tried to rescue the project failed to do so because of the accumulation of so many claims by the contractor and the effect of fluctuation which all together skyrocketed the completion cost of the project to an amount much higher than the initial total cost of the project, which further justifies the earlier statement by Giwa (1988). Had the project been fast tracked, even though it may be expensive, yet it may possibly have been completed long ago.

3.2.3 Year of re-award

As at the time of this data collection, the project is yet to be re-awarded, but is on the process of re-award. It was learnt that so many investors have shown interest in the completion of the project, and have even forwarded a proposal for the completion of the project, but the state government is yet to reach a compromise with a single investor. But it was gathered that any moment from the date of this data collection, the successful bidder will be on site to proceed with the completion of the project.

3.2.4 General economic evaluation of the two projects

The success or otherwise of a project is determined by the 3 project constraints also known as the Triple Project Constraints; Time, Cost and Quality. When a project is conceived, executed and completed within an agreed time (or any other such time reasonably adjusted), it is said to be a successful project. This is because it gives the client the opportunity to start recouping his investment apart from the simple feeling of discharge of responsibility and in which case attention can be shifted to another endeavour in life. If however, a project lasted for a longer period than necessary, the initial amount of money sunk into the project represents an amount of money that is unnecessarily tied down and thereby losing value. The money should have been used in providing other social services by the government, in which case the revenue generated from the services, or if it is non-profit oriented, the satisfaction to be derived from such projects, will be worth more than the initial amount tied down. In the same vein, when project duration is elongated, project's cost also increases. Mogbo (2003), stated that 'time and cost are inseparably linked and if, for example, the duration of a particular part of the project, or the programme as a whole change,

then in the majority of cases, the cost of doing the work must also change. It is therefore almost impossible to control the cost of carrying out work unless the time performance is also closely linked to it and concurrently controlled'. Also Preliminary items (or indirect cost and especially time-related items) will keep increasing in proportion to the extent of delay, and in which case eventual completion cost might be mind boggling. Hinze (2008), stated that 'the added costs associated with increasing the project duration consist of the direct costs (loss of worker morale, reduced productivity, material spoilage, etc.), indirect costs (managerial salaries, job site utilities, liquidated damages, etc.), and market losses (lost revenues when the facility is not put into use, other similar facilities completed ahead of the project in question, etc. Even though quality might not be directly affected by the length of time the project took, the actual problem lies in the ability to secure the funds needed to meet the earlier intended quality because inflation and other issues have made the attainment of such quality very expensive and sometimes not affordable. Hinze (2008) further stated that 'as the duration is extended further, a point will ultimately be reached where the owner will probably terminate the contract'. On the other hand even though it may be arguable , that fast track projects are usually expensive, yet it may be defendable that the benefits to be derived from fast Track Projects have by far outweigh the difference in the amount of money that exist between the traditional method of project execution and Fast track. Even though Magwan Water Restaurant is a profit oriented service or project, and thus it is possible to invite private investors to complete the project and own it in order to recoup back what they invested, thus saving the government from using its money for the completion of the project, the loss to the client is usually in the number of years it will take in the possession of the private investors who will be collecting the revenue generated from the project. The regrettable aspect is that in profit oriented projects, before the project is returned to the client, in most cases, the project or the service, becomes out of fashion to the public due to changes in taste and fashion which is occasioned by the passage of time, or may be as a result of the availability of similar but better service from the market competitors. But perhaps the most regrettable situations in this kind of concession, is where revenue projection over the concession period falls below expectation, since the future is seldom predicted with certainty. Instances like this usually bring about unnecessary crisis in the form of re-negotiation of the concession period which sometimes leads to disputes between the parties. Another problem with this arrangement is that, usually toward the end of the concession period, most investors lacks the willingness to maintain the property as agreed by the parties, especially when the revenue generated by the private investors falls short of their expectation. This eventually leads to the client collecting back a dilapidated property and in some cases this also leads to acrimonious disagreement and disputes. On the other hand, Kano state Liaison Office is not a fully profit oriented project. Even though, there exist in the structure some lettable spaces, but principally the structure is intended to be a power base for Kano State Government within the Federal Capital City. Thus, it is difficult for the completion of the building to be given to a private investor, because as a power base of

the state it cannot be put to a commercial use completely even though a section of it can be let out. Hence the only likely way to complete the project is for the government to use its own money for the completion, and this in many cases constitutes a heavy financial outlay and sometimes a misplacement of priority, while if the project is left unattended to, equally it remains a monument of loss. If the two projects were Fast Tracked and completed, then the client (Kano State Government) would have been saved from the problem of project abandonment.

4. Conclusion

From the result of the analysis, it is evident that there exist significant areas of concern regarding the trend of projects' abandonment especially in public projects. Public funds are sunk into aspirations that are never realised when it should have been realised in spite of the insatiable need for the funds. With reference to the first research question, which seeks to find out the financial implication of project abandonment, it has been fully explained in the data analysis that project abandonment constitute a significant loss to both the client, the contractor and in general, the economy of a nation.

i) Loss to the Client

A client who sink his money toward the attainment of a particular project and to which the project got abandoned before completion, the client's money is said to be tied down. This is because the money cannot generate revenue and to make matters worse it will keep losing value until such a day when the project is completed. He is faced with the problem of a foregone alternative of investing his money elsewhere, which would have enabled him to a return on his investment. The eventual completion of the project will undoubtedly be much higher than the initial cost, as observed by Giwa (1998), further worsening the financial losses of the client.

ii) Loss to the Contractor

Project abandonment in most instances has been more detrimental to contractors than even the clients and in many cases it has lead to bankruptcy of contractors. This is because after the project abandonment, a contractor is faced with debt settlement to suppliers, subcontractors and workmen on site. He is also faced with the additional expenditures such as demobilisation of plants and equipment to other site (if engage somewhere) and maintenance/ security of work done and all other plants and equipment. Even though all these expenses are to be borne by the client especially if the abandonment is due to a fault by the client, the crux of the matter is that all the above expenses will have to be borne by the contractor pending when the project resume and thus when the client pay the contractor. That is to say all the expenses must be settled by the contractor whether the project continues or is abandoned. And in cases where it is not settled, the contractor may faced been charged to court for failure to settle debt. The situation is even worse when bank loan is involved because it will be accumulating interest to the detriment of the contractor and it may even lead to the loaner bank auctioning the contractor's property in order to redeem its loaned money. The most difficult situation of all is that when the project is eventually awarded to another contractor upon resumption of works on site. This usually happens

when at the time of the resumption of works on site, the contractor is competitively out of the market, or the contractor has already been declared bankrupt or when the client at that material time has decided to favour any other contractor for political reasons.

iii) Economy of a nation

It has already been established in the literature review that the construction industry plays a very important role in the economy of any nation. This is because it determines the level of civilisation of any nation and it creates wealth and employment more than any other industry. It therefore follows that, with project abandonment, a country's march towards civilisation is derailed, employment, and thus spending power is hampered, this in turn affect the general economic activity of a nation negatively. With regard to the research question (can Fast Track be used in mitigating late project's delivery), it has already been established with diagrammatical illustrations that project durations can be reduced by Crashing or Fast Tracking the activities involved in the project. Crashing a project means adding more resources to an activity in order to reduce its duration, while Fast tracking involve merging activities that would have ordinarily been done one after the other, with a view to reduce the total duration of the activities as illustrated in chapter two. Referring to research question (is the application of Fast Track beneficial to the client), the application of Fast have been proved in the data analysis beyond reasonable doubt that it is beneficial to the client principally because it reduces project duration and give a client the opportunity of having an early return on his investment. It should be noted that by reducing project duration, market long- term uncertainties are avoided. The additional expenses associated with long time project duration is also avoided. Hinze (2008), stated that 'time consumed by projects directly influence the cost incurred on a project. The adage of "time is money" is not only true but applicable on construction projects'. Even though the potentials of Fast Track in saving extra costs by reducing project duration have been fully established, there are other factors which tend to make its application difficult and sometimes, practically impossible. These factors may include but not limited to the followings:

a) Poor adaptation to new innovations

Not many contractors are willing to forego their traditional and perhaps more conversant way of carrying out their project and thus adapt to new innovations of carrying out projects. This may be due to the fear of risk associated with trying new ideas.

b) Knowledge and expertise

In carrying out Fast Track procurement method of construction, the knowledge and expertise of planning techniques is essential. But many contractors do not have the knowledge and expertise in preparing schedules and thus using the schedules to monitor project's duration. Even the few ones that have the knowledge and thus prepare the schedules, in most cases they don't keep to the schedules which is as good as they do not have it. Hinze (2008) stated that 'it is important to have schedules, but it is more important to use it'.

c) Fraud

Fraud is a link with any act that is intended for deceit and trickery leading to the other party been deceived, cheated. In this regard, investigations has shown that there

are projects which are conceived and started but with a deceitful intention to the public by public office holders. A large amount of money is paid to the contractor (usually a fraudulent or a proxy of the client) who start work on site and soon abandon the project. In many cases the contractor's where about becomes enshrouded in mystery and even his office cannot even be traced.

d) Bribery

'Bribery can be explained as paying a person to do what they should ordinarily do in order to expedite matters, or paying a person to use his power or influence over others to get something done by those others, or compelling a person (extortion) through threats of what will occur if the payment is not made', (Pearl et al, 2005). Even though the research work did not came across a situation where this problem exactly happen, yet it is a common knowledge that contractors are sometimes compelled to give kick-backs for a contract awarded in their favour. And in most cases, the kick-back becomes detrimental to the contractors' financial ability to continue the project, and so they abandoned the work. In other instances, the contractors are not compelled to give out the kick-back, but they maliciously give to greedy public office holders and the eventual consequences is that they cannot be instructed or controlled, true to the adage ; 'you cannot eat your cake and have it'. In situations like these, contractors carry out works in their own pace, leading to longer project duration and sometimes eventual project abandonment as a result of inflation and claims occasioned by longer durations.

e) Political reasons

Changes in political administrations have in many instances led to projects started by previous administrations to be abandoned by subsequent administrations especially if there is a difference in political group/association. This usually happens because of the differences in policies and priorities.

5. Recommendation

'Success of project actualisation is a pre-indicator of development in any economy, while abandoned projects (among many other project ills), are undoubtedly vestiges of economic crunch which represents a nation's losses', Aliyu (1999). Therefore in order to avoid longer projects durations, which in many cases lead to project abandonment, the study recommends the followings:

5.1 Training

There should be regular trainings, workshops, etc with a view to educate and enlighten all the parties involved in the construction industry, especially the contractors, about the potentials and advantages of Fast Track procurement techniques as a means of reducing project duration which eventually lead to cost reduction of projects.

5.2 Enactment of laws against project abandonment

Government should enact laws containing stiffer regulations on project abandonment with a view to discouraging project abandonment. This may include banning political office holders from starting new projects without completing earlier started ones by previous administrations even if they belong to different political groups.

5.3 Penalties

Probe panels should be constituted for any project abandoned with a view to finding out what happen and who is responsible for the project abandonment between the

client and the contractor. If the contractor is responsible, he should be charged liquidated and ascertain damages for all the days extended above the due completion date. If the client is responsible, the nature and reason for the client's action or inaction should be investigated. If it becomes necessary, he should be charged to court for embezzling public funds and possibly be banned from holding any political office in the future.

5.4 Flexibility in policies to adapt to new innovation

Policies should be dynamic and not static, and therefore they should be flexible enough to suit varying changes and situations including being progressive to adapt to modern techniques and strategies.

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