ABANDONED PROJECT RESTORATION MODEL (APRM) FOR RESIDENTIAL CONSTRUCTION PROJECTS

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UNIVERSITI TUN HUSSEIN ONN MALAYSIA
ABANDONED PROJECT RESTORATION MODEL (APRM) FOR RESIDENTIAL CONSTRUCTION PROJECTS

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A thesis submitted in fulfillment of the requirement for the award of the Doctor of Philosophy

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I would like to dedicate my journey towards my Doctoral degree to the two most important people in my life, first to my late Mother, who is no more with me physically, but in my heart you hold a place that no one else could ever fill, my heart was broken when I lost you but a part of me went with you. Together with your love and blessings, I have always hold on to something that you have constantly uttered to me which was to achieve in life you have to endure hardship and never to expect for it to come easy. That was what have motivated me to only to look into my goals and go on strong in my life, and not to believe in failures. And to my Father, sacrificing your happiness for the happiness of the one you love is by far the truest type of love. My Dad has a strong work ethic which is imbued in me, making me proud to say that I’m more like you. Any man could be a father but it takes a special person to be a Dad as you. With that said, I would like to dedicate my Doctoral thesis to my dearest parents, who have prayed for my safety, well-being and success, the two person whom I love from the core of my heart and the greatest gift from God to me. Thank you.
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ABSTRACT

Incompletion of construction projects is a common phenomenon in Malaysia. Project abandonment has given an adverse consequences to the economy, society and environment. In the best interest of the end users and other parties involved in the contract, the best resolution for this abandoned projects is to successfully revive them, which has its’ stages and barriers along the way as well. The main aim of this research is to develop an effective model as a guide towards project restoration which could be used to mitigate the issue of abandoned residential construction projects in Malaysia. Identifying the factors contributing towards the restoration of the abandoned projects are important to have a successful completed project. This research was conducted in the purpose of identifying those significant factors in order to obtain the restoration process for abandoned projects where lastly the Abandoned Project Restoration Model (APRM) was developed. The research focuses on residential construction projects. This research comprises of both quantitative and qualitative approaches and process, where a pilot survey and full survey, and as well as interview analysis were conducted. Factor model was developed using AMOS and lastly the developed model was validated and tested by related officials. The outcome of this research showed that the most significant factor for abandoned project restoration is Management Aspects. A complete restoration process based on the significant factors identified were also obtained. This model is seen as useful in contributing and as well as assisting the restoration of the abandoned projects in Malaysia and could be used as a guideline for that purpose.
ABSTRAK

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<td>Construction Industry Development Board</td>
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<td>Exploratory Factor Analysis</td>
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<td>Hong Kong Institute Of Planners</td>
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<tr>
<td>IMD</td>
<td>Institute For Management Development</td>
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<td>JKR</td>
<td>Jabatan Kerja Raya</td>
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<td>KPKT</td>
<td>Kementerian Perumahan Kerajaan Tempatan</td>
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CHAPTER 1

INTRODUCTION

This chapter looks into the importance of the Malaysian construction industry towards the economy growth and contribution to the country. Along the way the main issue or problem of abandoned projects and the needed effort on proceeding with the restoration of abandoned projects in Malaysian and its consequences are discussed here. This issue is also shown to be endured in other countries as well apart from Malaysia. Therefore, the purpose of conducting this research based on the background of the problem and narrowing down the research scope, and coming towards identifying the research aim and objectives are discussed by the author in this chapter as well.

Malaysia is a dynamic country which is constantly evolving as stated in an article from The German Chamber Network, (2012). It is elaborated in the same article as well that being a middle-income country, Malaysia has transformed itself since the 1970s from a producer of raw materials into an emerging multi-sector economy spurred on by high technology, knowledge-based and capital intensive industries. In the year 2011, New Straits Times has reported that the Malaysia's Economic Performance ranking improved to 7th place out of 59 economies compared with the 12th position in 2007.
The Malaysian construction industry is generally separated into two areas. One area is general construction, which comprises residential construction, non-residential construction and civil engineering construction. The second area is special trade works, which comprises activities of metal works, electrical works, plumbing, sewerage and sanitary works, refrigeration and air conditioning works, painting works, carpentry, tiling and flooring works and glass works (Malaysian Institute of Economic Research, 2011). The Department of Statistics, Malaysia, (2010) has described the Malaysian construction industry as a substantial economic driver for Malaysia.

Even with this establishment, however, it must be noted that most of the construction projects are failed to complete on time. It is also not uncommon for construction projects to be delayed, or in the worst scenario even abandoned due to various reasons. An unfinished building is a building (or other architectural structure, as a bridge, a road or a tower) where construction work was abandoned or on-hold at some stage or only exists as a design (Hussin and Omran, 2011). It may also refer to buildings that are currently being built, particularly those that have been delayed or at which construction work progresses extremely slowly. Many construction or engineering projects have remained unfinished at various stages of development. The work may be finished as a blueprint or whiteprint and never be realised, or be abandoned during construction.

As defined by the Ministry of Urban Wellbeing, Housing and Local Government, (2009), there are several stages before declaring a project as non-completion or in other word abandoned. If a project has exceeded its’ expected completion date by 10 %, it is then considered as a “late project”. If a project is still delayed beyond 10 % - 30 %, it is then considered to be a “sick project”. If a project has been stalled with no work being done or no workers present on site for over 6 months, it is then considered to be an “abandoned project”.

The issue of abandoned project apart from Malaysia is also faced by other countries. According to a report by Obatomi (1993) there are about 4000 uncompleted projects belonging to the Federal Government of Nigeria with an estimated cost of above N 300 billion which will take 30 years to complete at the present execution capacity of government, also according to him this issue has been left without adequate
attention for too long which is now having a multiplier effect on the construction industry in particular and the national economy as a whole. Olalusi and Otunola, (2012), elaborated that in Nigeria today, the landscape is littered with abandoned building, road, rail, ports and other infrastructural projects at all levels of governance from Local Government through the State Government to the Federal territory. There are also other researchers from different countries from Asia, Middle East and America, which have issued on abandoned projects in their respective countries (Jumia House, 2015). 

The issue of abandoned projects has long been criticised in Malaysia, and therefore one of the objectives in the Strategic Thrust 2 of the CIDB 7 Strategic Thrusts is to revive these abandoned projects in the country (CIDB Annual Report, 2010). This is mainly to protect the importance of all the end users who have been effected and to produce a better quality of life which was the main idea intended in the first place when starting a specific project. Project revival could also recapture the profit and redevelop the country’s economy, which ultimately strengthens the image of the construction industry.

The construction sector in Malaysia is still in high demand and similarly to the cases mentioned in other countries, there are similar problems in this sector too. These problems will affect the overall of the construction industry. There are a number of factors that has been identified from past research in Malaysia on the issue of abandonment project (Hussin and Omran, 2011) such as:

i. Finance
ii. Poor marketing and sales strategies
iii. Technical problems faced during construction
iv. Problems caused by compensation demanded by squatters for resettlement.

Anyhow, more details on the factors/causes of project abandonment will be further discussed in Chapter 2 of this thesis.

The issue of abandonment of construction projects is one that has tremendous effects on the industry and the economy of the country. The process of reviving abandoned projects is not an easy task either. There are some stages that has to be
looked into and reviewed thoroughly in order to begin the revival process. As starting a new construction project, reviving an abandoned project has its challenges and risks as well, but when a project is successfully revived and completed, it does have its beneficial contribution to various parties, and reduces the burden and the anxiety of this parties as well including the government.

1.1 Problem Statement

The problem of abandoned projects in the construction industry is a global phenomenon and the construction industry in Malaysia is no exception. The abandonment of construction projects has resulted in many adverse consequences to the country’s economy, society, buyers, banks and environment where this issue or problem has to be solved. Economically, it is a waste of useful resources and the enhancement on the quality of life for the people is also affected. Low and Tan (1994) stated that quality development unit (QDU) in Singapore has adopted ISO 8402, in which the quality here refers to the characteristics of the project or service that is able to provide the satisfaction for the stated or implied needs. Olusegun and Michael, (2011), has stated that the construction industry plays a very dominant role in the economy of any nation. A healthy economy usually experience an increase in construction activities, but in a depressed economy, the incidence of project abandonment tends to be more prevalent.

The impact of abandoned project has affected the society and environment negatively as well. Past researchers Bavani and Stuart, (2009) has reported in their study that abandoned project has caused the existence of pools of stagnant water which has become the breeding ground for mosquitos endangering the health of the public and environment. An abandoned project after a certain period of time has invited squatters where this has raised concerns of public safety surrounding the area. As for the environment it has become a sore eyes as the surrounding of the abandoned project is subjected as a place to dump rubbish and overgrown of grasses. The impact of this issue of abandoned project on buyers are best described as sad. Not only the properties that they have invested a certain amount of money is now incomplete but yet they have to proceed with the monthly loan payment to the bank. There is another effect of this
issue that has been forwarded by Chow, (2009), where he explained that the buyers do tend to suffer where at this point they will not be able to gain any type of benefit from the potential property that have invested in terms of value appreciation and rental collection. The main impact faced by banks due to this issue is the overwhelming debts, (Kong, 2009). These impacts that are briefly touched here shows on the importance and necessity of going ahead with project restoration.

Although there are abandoned projects that has been revived successfully, but there are projects that are still being revived or being considered to be revived, according to the Ministry of Urban Wellbeing, Housing and Local Government (UHLG), (2015). According to UHLG as well, there are number of abandoned projects which has not yet come close to the consideration stage, due to some reasons such as the possibility of project revival is slim as there are no companies that are interested in investing on the revival of abandoned projects. The statistics of abandoned projects in Malaysia throughout the years has been discussed in Chapter 2 to show the intensity of the issue and to show the justification on the necessity for conducting this research. At the moment how far project restoration could be carried out and achieving zero abandoned projects in the country is yet to be known. A proper model/guideline which could assist the process of restoration has to be established as well. Figure 1.1 shows the life-cycle of building, and at this cycle it is shown the occurrence of project abandonment in Malaysia.

![Figure 1.1: Life-Cycle of Building (Bayer, 2010)](image-url)
In order to achieve the research objectives, three research questions are raised to help the researcher in achieving the research objectives. The research questions are as follows:

Question 1: What are the factors in proceeding with the revival of abandoned projects in Malaysia?

Identify and look into the factors for abandoned projects restoration in Malaysia, by ranking the factors.

Identify and look into the factors for the non-revival/discontinuation of the restoration of an abandoned project.

Question 2: Is there measures given leading to project revival, if so how far has it been effective/helpful?

Determine the measures that substantially helped in project revival.

Determine the level of effectiveness of the measures towards solving the problem.

Question 3: If there are measures leading to project revival are lacking and not effective, what are the reasons behind it?

Identify the reasons for this and revisit the measures taken and understand the non-effectiveness of it.
1.2 Aim and Objectives of the Research

The aim of this research is to develop an effective model as a guide towards project restoration. This model could be used to mitigate the issue of abandoned residential construction projects in Malaysia, hoping this could lead towards achieving zero abandonment of residential projects in the country in the coming future. Therefore, there are some objectives that has been identified which will lead to the achievement of this aim.

i. To identify the significant factors for abandoned project restoration.

ii. To identify the significant factors for the discontinuation on proceeding with the restoration of an abandoned project or non-revival of an abandoned project.

iii. To develop, validate and test the Abandoned Project Restoration Model (APRM).

This method and process that was used and followed in order to achieve these research objectives are shown in Figure 1.2.
AIM: To develop an effective model as a guide towards abandoned project restoration

**OBJECTIVES**

1. To identify the significant factors for abandoned project restoration
2. To identify the significant factors for the discontinuation on proceeding with the restoration of an abandoned project or non-revival of an abandoned project.
3. Develop, validate & test the Abandoned Project Restoration Model (APRM).

**METHODS USED**

1. Review and study on past literature reviews to the related research.
2. Use questionnaire and conduct surveys and interviews with MHLG, JKR, NAPIC & other government officials on the related issue.
3. Use questionnaire and conduct surveys and interviews with developers and other officials who have been involved with project revival.
4. Use some of the successfully revived projects, and also current projects in the reviving process as a case study.
5. These projects could also be used as an approach to determine the causes for the non-completion of the project from the perception and perspectives of all the stakeholders.
6. This part of the research could be carried out by using questionnaires & conducting interviews.

Figure 1.2: Methods used to achieve the Research Aim and Objectives
1.3 Research Hypothesis

A hypothesis is defined as a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation. Through conducting this research the previous studies has showed the factors for abandoned projects that has been identified previously, where those factors has become the starting point to proceed with further investigation emphasizing on abandoned project restoration which is the heart of this research.

Therefore the hypothesis made in the beginning of this research was that the factors for abandoned projects would lead to identifying the significant factors for abandoned project restoration. This is established by testing this hypothesis through this research.

At this point of the research the factors for abandoned projects is referred as Hypothesis 1 (H1) and the significant factors for abandoned project restoration subsequently is referred as Hypothesis 2 (H2). Further on in this research, it could be seen if H1 could infer towards H2.

1.4 Scope of Research

The current state of the Malaysian construction industry is still facing the issue of abandoned residential projects. Therefore, this research is fully based on the restoration of abandoned projects in the Malaysian construction industry where by conducting this research has opened the opportunity to study and understand the impact of this issue which leads to the contribution towards solving and overcoming these issues in the construction industry. As the current state of project abandonment in Malaysia shows a majority of residential construction projects that are affected as according to Ministry of Urban, Wellbeing, Housing and Local Government, therefore this research was focused on the abandoned residential projects, especially in Peninsula Malaysia.
1.5 Significance of the Research

Construction is a vital sector contributing significantly to the economics of all countries (Najmi, 2011). The construction industry must be dynamic to be able to respond to the changes that the world is constantly facing, as well as the social, economic, and technological challenges affecting all industries. The opportunities and problems in construction are different from those of the last century. The demands of clients, companies and employees differ from time to time, and thus the vision of the construction industry is always developing; to keep up, management must change too (Malaysian Institute of Economic Research, 2011).

Any construction organization must have a strategic plan and vision that lead the way to achieving its goals. The key to achieving that lays in successful management, by identifying needs and goals the company wants to achieve (Najmi, 2011). The Government is proactively generating economic growth by building infrastructure, housing, township, commercial districts, industrial and economic zones (CIDB Annual Report, 2010). Likewise the current economic growth, construction development also requires a transformation which will not only assist economic growth, but at the same time, helps in reducing social costs too.

Therefore, through this research we are able to test and measure completely the hypothesis and concepts, and also allows for a more comprehensive view of the problem on abandoned projects in this country to be obtained and also to single out as well the factors contributing to this. This research ascertains the causes in continuing and discontinuing a project that has already been abandoned.

1.6 Overview of the Research Method

The research methods are the ways and procedures we use and follow for collecting data for the purpose to answer the research questions that has been drafted. The methods applied consists of suitable techniques in data collection, identifying and targeting the research population and how or ways to approach them for the purpose of the research, and the intended questions that needs to be answered by them as well (Stringer, 2007).
The research method also requires a “research design” where a plan is well thought of on how to answer the research questions (Kellehear, 1993). For instance, it is important to determine which methods suits best for answering those research questions. Following this, it is more suitable to map out on how this methods will be applied and along with that the limitations of each method for a particular research should be determined in hence.

Focusing on the research method at the initial stage itself of this research first and foremost has led to identifying the research questions, the aim and objectives too. In order to answer the research questions this subsequently has led towards achieving the aim and objectives, where a research design was put together which had suitable methods planned and applied in this research. This will be discussed thoroughly in the next following chapters.

In the next following chapters focuses the factors and impacts of abandoned construction projects, the types of methods and stages of method approaches that was applied, collection and intense analysis of data bringing up to the development of the Abandoned Restoration Model (APRM), and lastly the discussion of the results with referring to the hypothesis that at this point has been tested.

1.7 Research Gap

Past research has only touched on the causes and effects of abandoned projects not only in Malaysia but in other countries as well. That part on project abandonment has been studied by past researchers from Malaysia and other countries along the years. Apart from the existing issue on abandoned projects, the contribution from the findings of the factors/causes has also led towards conducting this research. From a thorough literature review, studies or research on restoration of abandoned projects are not much seen, especially on the factors for abandoned project restoration and restoration process or methods.

Research gap is a research question or problem which has not been answered appropriately or at all in a given field of study (Alvesson and Sandberg, 2011). As the factors for abandoned project has been studied in the past, the factors for abandoned project restoration has not been provided nor answered in this related field, marking it
as the research gap for this research. The restoration part has been either touched upon very minimally or not at all when coming to the part of factors for abandoned projects. By conducting this research the factors for abandoned project restoration has been achieved for residential construction projects in Malaysia, where this factors has been identified from the most significant to the least. Along with the accordance of the significant factors found, the process of achieving them and overcoming any obstacles or issues in doing so was also identified, where now the restoration process for the abandoned projects has been put together through this research.

Therefore, it is evidently seen from this research that previous studies has not only brought to the development of Abandoned Project Restoration Model (APRM), but also shows the importance of developing and having this model for an effective restoration of abandoned residential projects in Malaysia.

1.8 Thesis Structure

This section describes the main elements that has been put forwarded and also that are expected in this thesis. The main elements of this written thesis are as follows:

(i) Abstract

The abstract is an overview of the whole thesis. The abstract is the first to be referred by most of the readers as it is an opportunity for the readers to spur their interest further. The abstract summarises the main contents of the thesis, especially the thesis statement, but does not cover every aspect of the main text. The main objective in having an abstract is to give the reader a good idea of what the thesis is about.

(ii) Introduction

The introduction section is usually longer than an abstract. In this thesis it provides the background of the topic, a brief review of the current knowledge, indicates the research gap, and states the research aim and
objectives where how it comes to fit into the research gap and the hypothesis as well.

(iii) Literature Review

The literature review here is the evaluation of previous research on the topic of this research. In this section it shows that there is a gap in the knowledge and by conducting this research has attempted to fill the research gap.

(iv) Methodology

The section on methodology outlines the types of methods to choose and the reason of choosing that particular method. The methodology in this thesis shows all the relevant methods and approaches applied in order to get the final outcome of this research.

(v) Findings

The findings of this research are reported here and presented in a systematic manner.

(vi) Data Analysis

The analysis part based on the findings along with discussions are the highlight of the thesis.

(vii) Discussion

In the discussion section there are comments on the final results, explanation of what the results means and interpretation of the results in a wider context. Here, the specific results obtained are related to previous studies.
(viii) Conclusion & Recommendations

The research aim and objectives that have been achieved are emphasised here. Apart from that, the most significant results are also emphasized, research novelty, research contribution and the research limitations are discussed here as well. Recommendations on the issue focused on in this research and also future research recommendation are laid out.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

A literature review is known as a text of a scholarly paper, which includes the current knowledge including important and real findings, as well as conjectural and methodological contributions to a particular topic. Literature reviews use incidental sources, and do not report new or original experimental work (Baglione, 2012). A literature review is a select analysis of existing research which is relevant to the research topic and shows how it relates to the research investigation. It explains and justifies how the investigation may help answer some of the questions or gaps in the research area (Shields and Rangarjan, 2013).

The literature reviews that was conducted for this research were evaluative, exploratory, and instrumental. Apart from that, narrative review was also used in which it summarises different primary studies which conclusions are drawn into a holistic interpretation based on the reviewers’ own experience, existing theories and models (Campbell Collaboration, 2006; Kirkevold, 1997). This type of review contributed towards answering the research questions from Chapter 1.
The literature review in this chapter shows how the research and investigation that has been conducted suits with what has occurred before and puts it into context. The literature review here was able to give a proper and thorough understanding, and allows to critically analyse the background this research. The necessary source and information was sought and selected in order to develop a context for this research.

The literature review conducted here also shows how the current investigation on this research relates to the issue of abandoned projects on the previous research conducted. It is able to reveal the contribution of this research where it fills the gap and builds on the existing research. Lastly, the literature review in this chapter provides evidence that helped to explain the findings later on.

2.2 Malaysian Economic Overview & Construction Industry

Current Malaysian economic scenario is featuring a more resilient economic fundamentals where growth is driven by domestic spending and favourable labour market. Most economic analysts are confident that Malaysia’s economic growth will continue to be stable in the future in spite of the challenging global economy as we have a more diverse economic activities and strong position as an exporter. To further intensify our economic growth, the Government had taken several measures and initiatives as outlined by the Honourable Prime Minister. Major plans initiated by the Government such as the Government Transformation Program (GTP), the National Key Results Area (NKRA), Economic Transformation Program (ETP) based on the National Key Economic Activities (NKEA) and the Strategic Reform Initiatives (SRI) require total participation from various sectors to turn them into reality (CIDB, 2010).

The construction sector is anticipated to be among the eminent sectors in playing its critical role as the catalyst which will inject growth stimulant into the economic system and this is achievable through the provision of basic infrastructures to other economic sectors.

At the same time, the construction sector showed an encouraging performance with positive contribution to the Gross Domestic Product (GDP). In 2010, the construction sector registered a growth of 5.2% and contributed 3.3% to our GDP. Based on the 2011 Budget presented under the Prospering the Rakyat Strategy which
emphasize on re-energising the private sector’s investment and national infrastructure development, a total of RM114 billion was allocated to implement construction works which are planned until 2025. The amount includes various infrastructure development programs under different Ministries and Public-Private Funding Initiatives (PFI) (CIDB Annual Report, 2010).

This could be seen as to have a steadily growth on this sector which contributes towards the economic prospect of the country, and helps the labour market as well. By looking at the investments poured out specifically to this sector, it will be a great effect to the industry and to the economy, if any circumstances of uncontrollable losses happens here. This could relate to the issue of abandoned projects which does bring great loss to the industry and country as well.

2.3 Abandoned Projects

Based on the previous sub topics, thus when a progress of a certain work faces too many problems and seems to be impossible to continue further on resulting it to stop completely, it is therefore defined as abandoned project. According to Olalusi and Otunola, (2012), when a project has been started at an earlier date, but for some reasons has been stopped, it is described to be an abandoned project. Such abandonment are just not limited to buildings alone, but also to roads, industrial structures, bridges, factories, dams, electricity, communication projects and so on. The issue of abandoned projects for example in Nigeria, has started more than 20 years ago, where this could be seen in the study of Akindoyeni, (1989), where he has stated that if projects are to be executed completely, planning is the most important agenda to be carried out, which Ogunsemi (1991) further added that the successful completion of a project depends on adequate planning which also includes financial planning. Ayodele and Alabi, (2011), discussed that the mission in developing infrastructural projects are mainly to bestow new and beneficial product and services to the community and also to stimulate the aesthetic part of the built environment. This intention is somehow compromised and not accomplished due to the continual issue of project abandonment.
Nigeria is one of the countries which has high rates in abandoned projects since many years back. It was reported by Osemenan, (1987), that the construction industry of Nigeria has become the world’s junk-yard of abandoned projects, where these projects are estimated to be worth of billions. He further stated that Nigeria is a country which has many potential in the construction industry but to his surprise the country is experiencing such a magnitude of project abandonment. According to another report by Kotangora, (1993), the issue of abandoned project was not given an adequate attention for a long time which has resulted a negative effect not only towards the construction industry but to the national economy as a whole. For instance, there are about 4000 incomplete or abandoned projects belonging to the Federal Government of Nigeria with an estimated cost of above N300 billion which will take 30 years to complete. The Table 2.1 shows the abandoned projects along with its’ worth in Nigeria.

Table 2.1: Inventory of abandoned projects in Ondo State of Nigeria (Ondo State Ministry of Works, 2009)

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Location of site</th>
<th>Contract sum</th>
<th>Year of commencement</th>
<th>Year of completion</th>
<th>Duration of contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Ondo Road Akure</td>
<td>500 million</td>
<td>1986</td>
<td>-</td>
<td>12 months</td>
</tr>
<tr>
<td>B</td>
<td>Oba Ile Road</td>
<td>10 million</td>
<td>2001</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>C</td>
<td>Alagbaka Akure</td>
<td>15 million</td>
<td>2003</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>D</td>
<td>Akungba Akoko</td>
<td>11.5 million</td>
<td>2008</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>E</td>
<td>Alagbaka Akure</td>
<td>738 million</td>
<td>2008</td>
<td>-</td>
<td>10 months</td>
</tr>
<tr>
<td>F</td>
<td>Oke Aro Akure</td>
<td>11.5 million</td>
<td>2008</td>
<td>-</td>
<td>6 months</td>
</tr>
<tr>
<td>G</td>
<td>Akungba Akoko</td>
<td>44 million</td>
<td>1999</td>
<td>-</td>
<td>24 months</td>
</tr>
<tr>
<td>H</td>
<td>Iju Itaogbolu</td>
<td>3 million</td>
<td>2004</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>I</td>
<td>Iyere Owo</td>
<td>11.5 million</td>
<td>2008</td>
<td>-</td>
<td>6 months</td>
</tr>
<tr>
<td>J</td>
<td>Owo</td>
<td>17 million</td>
<td>2007</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>K</td>
<td>Okitipupa</td>
<td>800 million</td>
<td>2007</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>L</td>
<td>Ode Ekitan Ilaje</td>
<td>10 million</td>
<td>2008</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M</td>
<td>Ode Ekitan Ilaje</td>
<td>8 million</td>
<td>2008</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>N</td>
<td>Ode Aye</td>
<td>11.5 million</td>
<td>2008</td>
<td>-</td>
<td>6 months</td>
</tr>
</tbody>
</table>

As said by Olusegun and Michael, (2011), the construction industry plays a very dominant role in the economy of any nation, where a healthy economy usually experience an increase in construction activities, but in a depressed economy, the incidence of project abandonment tends to be more prevalent. According to Azhar, (2014), the issue of abandoned projects is one that happens across the globe, and is an issue that brings nothing positive to the stakeholders of those projects, let alone the public itself. The overwhelming issue of abandoned projects in the country Nigeria is
briefly discussed here to show and understand that this issue could be taken as a global concern for the best interest of the people in any countries who are affected by this.

Looking into this issue in Malaysia, the magnitude of this has grown to an unbearable state. For a better understanding of this issue in Malaysia, Figure 2.1 next shows the number of abandoned projects in Malaysia in the span of 20 years up to the year 2009 which shows almost all the states has some sort of abandoned buildings except for Terengganu, which has the only success rate of zero abandoned projects, which according to UHLG (2014), they have not established a significant factor yet for this in the case of Terengganu.

![Figure 2.1 – Abandoned Building Projects in Malaysia in the span of 20 years, showing the comparison of number of projects in each state. (National House buyers Association (HBA) 2009)](image-url)
A development of a country relies on the establishments of various sectors. In Malaysia these sectors comprise of agriculture, mining, manufacturing, construction, and etc. It is without doubt that the construction sector is also one of the contributing factor towards the Gross Domestic Product (GDP) in Malaysia, as shown in Table 2.2 along with other contributing sectors in the country. The construction sector comprises of many types of construction projects. Some of them are residential construction, commercial construction, heavy civil construction such as road, bridges, dams, tanks, sewer, piping, industrial construction and others. No matter what are the types of construction are, the construction sector on the whole contributes towards the economic growth of a country (CIDB, 2012).

A construction project is started with an objective of its’ own, therefore the management process during the development stage of the project should establish an effective project team which is united with the purpose and commitment to establish the intended objectives. As stated by Wideman, (2000), it is common and very reasonable to assume that the main purpose of a project is to establish the best possible facility with the budget provided. There are times when the process of managing a project through the development phase is frequently not well understood by the principal players, and the differences of interests may impact to the overall project objectives (Toor and Ogunlana, 2009). In the stage of establishing a conceptual project plan in terms of scope, quality, time and cost in the earliest phase of a project is the most common stage of a project, but yet the subsequent monitoring of the development phase against the plan may be anything but common or simple. The problem arises due to the financial viability of the project is put together in a way that it does not meet to the way the building is supposed to be built and this leads to consequent hard costs collected. Ho and Liu, (2002), further added that although showing the technical viability of a project is somehow possible, but the evaluation of the financial viability of it could be complex and challenging, due to the project’s scale, concession period and complexity.

The development of the construction sector has been one of the most important agendas in Malaysia, where construction in Malaysia began in the early days, together with the formation of the various states in the country (CIDB, 2008). In the spanning of more than 50 years there has been rapid development in the construction industry in
Malaysia, with numerous rises of various projects, skyscraper buildings and infrastructures. Even though the country has experienced such proud moments and success, it is still sad to say that there are some downfalls in the construction industry which is also experienced by the country as well, where in this case is the issue of abandoned projects. This issue has become a nightmare to the government and especially to the property purchasers involved. There has been researches based on this issue, and there are various factors that was identified which brings to the existence of such catastrophe.

According to Atan, (2012), the existence of many abandoned projects in the country has increased the nervousness of different parties, including buyers and the Federal Government. One of the government’s Key Performance Indicator (KPI) which is under the Construction Industry Master Plan (CIMP) roadmap, is about reviving abandoned projects. The government is ready to face any challenges or obstacles that may come in order to achieve this.
Table 2.2: Gross Domestic Product by Kind of Economic Activity at Constant 2005 Prices (RM million) 2013-2014 (Source: Ministry of Finance, Malaysia, October 2013)

<table>
<thead>
<tr>
<th>Kind of economic activity</th>
<th>2013(^{3})</th>
<th>2014(^{4})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture(^{1})</td>
<td>56,281</td>
<td>57,996</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>64,858</td>
<td>66,874</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>192,786</td>
<td>200,073</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td><strong>29,332</strong></td>
<td><strong>32,157</strong></td>
</tr>
<tr>
<td>Services</td>
<td>432,320</td>
<td>457,103</td>
</tr>
<tr>
<td>Utilities</td>
<td>19,829</td>
<td>20,919</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>112,948</td>
<td>119,641</td>
</tr>
<tr>
<td>Accomodation and restaurant</td>
<td>19,512</td>
<td>20,796</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>28,773</td>
<td>30,568</td>
</tr>
<tr>
<td>Communication</td>
<td>31,538</td>
<td>34,565</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>72,654</td>
<td>75,299</td>
</tr>
<tr>
<td>Real estate and business services</td>
<td>44,119</td>
<td>47,106</td>
</tr>
<tr>
<td>Other services(^{2})</td>
<td>39,890</td>
<td>42,368</td>
</tr>
<tr>
<td>Government Services</td>
<td>63,058</td>
<td>65,841</td>
</tr>
<tr>
<td>(+)Import duties</td>
<td>10,948</td>
<td>11,386</td>
</tr>
<tr>
<td><strong>GDP at purchasers’ prices</strong></td>
<td><strong>786,526</strong></td>
<td><strong>825,590</strong></td>
</tr>
</tbody>
</table>

Note: Figures in parentheses are annual percentage changes.

\(^{1}\)Includes livestock and horticulture.
\(^{2}\)Community, social and personal services, private non-profit services to households and domestic services of households.
\(^{3}\)Estimate.
\(^{4}\)Forecast.

From the Table 2.2, the construction under the column “Kind of economic activity”, shows the growth of GDP for this particular sector from the year 2013 (RM 29,332) to the year 2014 (RM 32,157), which clearly marks the importance of this sector in the country. Therefore, it could be stated here that the issue of abandoned construction projects is one that has tremendous effects on the industry and economy of a country, and needs a more serious outlook on this issue to have a better understanding of the problem so that the government could take the necessary steps to overcome this issue.
2.4 A Review on the Causes of Abandoned Projects in other Countries

The issue of project abandonments is plaguing the construction industry in some countries. Types of abandoned construction projects are building projects, roads, industrial structures, bridges, factories, dams, electricity, and communication projects, and so on. The abandonment of a project gives an adverse effect on parties such as the developer, contractor, consultant, and client. Ahmed et al., (2000), as stated that the effects on these parties are in terms of adversarial relationships, distrust, litigation, arbitration, cash-flow problems, and a general feeling of apprehension towards each other. So, it is essential to define the actual causes of project abandonment in order to find its’ prevention.

Kolawole, (2006), have stated in his study that there are several building projects which have been seen to be having good potentials are abandoned at different stages of the design and construction process. Makalah, (2008) and Oyelola, (2010) has more or less the same reasoning on the failure or abandonment of a project, which are: a) incorrect estimation; b) unskilled personnel; c) inadequate planning; d) poor risk management; e) misunderstanding of the work requirement; f) poor quality control by regulatory agencies; g) corruption and communication gap among the personnel. They also further on added the other factors are a) cost; b) the developer and the contractors where the clients have difficulties in engaging with the contractors and as well as with the designers where they do not meet to the expectations of the clients; and c) contractors fail to prepare vital inputs such as materials, manpower and machines efficiently on time. However, Hussin and Omran, (2011), have stated that there are situations that are not able to be predicted at the earlier stage, such as the Asian financial crisis which occurred from the year 1997-1998, causing an increase in the cost of building materials which ultimately led to project abandonment in some of the Asian countries. Even many years back, Dawodu, (1987), after conducting his study, is in the opinion that when all activities in a construction site stops completely, therefore the project is considered to be abandoned, whereas in more current years, Akindoyemi, (2005), has a different opinion where he states that as long as the possessor is facing some shortages financially, and is unable to continue with the project, therefore the project should be defined as suspended and not abandoned, where the project could be resumed once the possessor is financially stable.
The other causes of project abandonment given by Adeleke, (2005), are government policies that are always inconsistent which brings to the lacking of accountability. He also added that there are high level of corruption which affects the construction projects, incompetent contractors, building materials which are not enough or unavailable, lack of utilities or infrastructural facilities, unsuitable locations and so on, has been identified as some of the causes of project abandonment. Hicks, (2008), has admitted that abandonment is a well-known concept on construction projects in California, and this is due to the project's design which is so deficient that the contractor performs a massive amount of change orders and extra work, which ultimately causes the abandonment of the project.

So far the causes of abandoned projects based on the studies conducted by researchers from different countries apart from Malaysia has been discussed here. Therefore, it is incorrect to say that project abandonment only happens in the third world or developing countries but it happens in developed countries as well.

The next Table 2.3 is the matrix on the causes of abandoned projects identified by various researchers from different countries and years. The interrelation of each causes in Table 2.3 is presented in Figure 2.2, for the purpose of showing how could each factor of causes have the possibility to relate to one another in the incompletion of a building project. It could be seen in Figure 2.2 that one certain main cause has its’ other contributing causes towards it, and also those contributing causes are repentance to other main causes as well. The main causes mentioned in Figure 2.2 are labelled with alphabet A to G. The contributing causes that are repeating for instance in both A-Improper Management and B-Incompetent Contractor share “leadership instability” as the contributing causes towards them. This situation could be seen in other main causes as well. By conducting a thorough literature review and establishing the matrix table as in Table 2.3 has contributed for a better understanding of the interrelations among these causes which ultimately brought to the illustration of these causes as in Figure 2.2.
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