STUDY OF DESERTED CONSTRUCTION PROJECTS IN MALAYSIA

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ABSTRACT

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One of the most significant sectors that contribute to Malaysia's economic growth is the construction industries and it supplies a great deal of opportunities to whom involved to flourish in this sector. Even so, deserted construction project (DCP) in Malaysia is considered as one of the most usual and serious problems existing in construction industry nowadays. The desertion of construction projects has resulted in many adverse consequences to the economic system, society and towards environment. This study suggests to identify the reasons that contribute to this problem in order to bring down the negative impact of DCP, and try to determine how to prevent DCP from happen again. Respondents selected for this study were from Class B Contractors to Class A Contractors in peninsular Malaysia that were listed in the current Construction Industry Development Board(CIDB) directory. 170 sets of questionnaires were distributed and 122 questionnaires were returned for further analyses. Foremost, the issues skirting the problem and existing literature on the reasons of DCP are reexamined. Besides, potential reasons of the DCP are also reviewed and summed up into 41 items to be rated in an industry wide questionnaire survey. An open-ended question were also included in the questionnaire to resolve DCP. Afterward, a series of ten semi-structured interviews were conducted to getting detailed opinions from experienced players in the industry concerning the reasons of DCP and how to solve the problems. The interviewees include architects, developers, property consultants, the honorary secretary general of the National House Buyers Association etc. to ensure a comprehensive view was obtained. Quantitative analyses include ranking of the 41 possible reasons of DCP with Spearman‟s ranking correlation between different groups of respondents, and factor analysis with Cronbach‟s α reliability analysis. Qualitative analyses include organizing the results of the open ended question and results of the semi-structured interviews. The discussions included interpret basic factors got from factor analysis based on the outcomes of the qualitative. The outcomes indicated that the owner is mainly responsible for DCP (i.e. cash flow problems, incompetence, siphoning out of money, etc.), followed by the role of government regulations. A risk management expert system module within BIM, a middle ground solution between the sell-then-build and build-then-sell schemes, and others are proposed.

ABSTRAK

KAJIAN PROJEK PEMBINAAN TERBENGKALAI DI MALAYSIA

Salah satu sektor yang paling penting yang menyumbang kepada pertumbuhan ekonomi Malaysia ialah industri pembinaan dan ia membekalkan banyak peluang kepadanya terlibat untuk berkembang dalam sektor ini. Walaupun begitu, projek pembinaan yang terbiar (PPT) di Malaysia dianggap sebagai salah satu masalah yang paling biasa dan serius yang sedia ada dalam industri pembinaan pada masa kini. The desersi projek-projek pembinaan telah menyebabkan banyak kesan buruk kepada sistem ekonomi, masyarakat dan terhadap alam sekitar. Kajian ini dicadangkan untuk mengenal pasti sebab-sebab yang menyumbang kepada masalah ini untuk mengurangkan kesan negatif daripada PPT, dan cuba untuk menentukan bagaimana untuk mencegah PPT dari berlaku lagi. Responden dipilih untuk kajian ini adalah dari Kelas B Kontraktor kepada Kontraktor Kelas A di Semenanjung Malaysia yang telah disenaraikan di Lembaga Pembangunan Industri Pembinaan (CIDB) dalam direktori semasa. 170 set soal selidik telah diedarkan dan 122 soal selidik telah dikembalikan untuk analisis selanjutnya. Yang paling utama, isu-isu menyusur masalah dan sastera yang sedia ada pada sebab-sebab PPT diteliti kembali. Selain itu, sebab potensi PPT juga dikaji dan disimpulkan ke dalam 41 perkara yang akan diberi dalam satu industri kajian soal selidik luas. Satu soalan terbuka adalah juga termasuk di dalam soal selidik untuk menyelesaikan PPT. Selepas itu, satu siri sepuluh temu bual separa berstruktur telah dijalankan untuk mendapatkan pendapat terperinci dari pemain berpengalaman dalam industri yang berkaitan dengan sebab-sebab PPT dan bagaimana untuk menyelesaikan masalah. Ditemubual termasuk arkitek, pemaju, perunding hartanah, Setiausaha Agung Kehormat Pembeli Rumah Kebangsaan Persatuan dan lain-lain untuk memastikan pandangan yang komprehensif telah diperolehi. Analisis kuantitatif termasuk ranking daripada 41 sebab-sebab yang mungkin bagi PPT dengan Spearman korelasi ranking antara kumpulan yang berbeza daripada responden, dan analisis faktor dengan Cronbach" s analisis kebolehpercayaan α. Analisis kualitatif termasuk menganjurkan keputusan soalan berakhir terbuka dan keputusan temuduga separa berstruktur. Perbincangan termasuk mentafsir faktor asas mendapat daripada analisis faktor berdasarkan hasil kualitatif ini. Hasil menunjukkan bahawa pemilik adalah watak yang bertanggungjawab bagi PPT (iaitu masalah aliran tunai, ketidakcekapan, menggoyahkan daripada wang, dll), diikuti oleh peranan peraturan kerajaan. A pengurusan risiko sistem pakar modul dalam tempoh BIM, penyelesaian jalan tengah antara jual-kemudian-bina dan membina dan jual skim, dan lain-lain yang dicadangkan.

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LIST OF ABBREVIATIONS

DCP	Desertion/deserted construction projects
BIM	Building Information Modelling
BNM	Bank Negara Malaysia (Malaysian Central Bank)
BTS	Build then sell scheme
CCC	Certificate of completion and compliance
CIDB	Construction Industry Development Board of Malaysia
GNP	Gross national product
HBA	National House Buyers Association
HDA	Housing Development Act 1966
ICT	Information and communication technology
LAD	Liquidated and ascertained damages
MHLG	Ministry of Housing and Local Government
SEM	Structural Equation Modelling
STB	Sell then build scheme

CHAPTER 1

INTRODUCTION

The building industry takes on a really significant part in the economic system of a growing country like Malaysia. It had contributed over 3% of the overall gross domestic product over the concluding five years from 2008 to 2012 (BNM 2013). For example, the industry contributed RM 34.9 billion to the overall gross domestic product of RM 937.5 billion in 2012. The entire value of construction projects awarded in Malaysia in 2012 added up to RM 112.5 billion (CIDB Malaysia 2013) and has created a batch of job chances to help promote the country's economic system. The number of employed persons in the construction industry in Malaysia in 2011 is 1.134 million, which constitutes 9.2% of the entire 12.284 million employed persons (Department of Statistics 2011). Nevertheless, it must be mentioned that not all the construction projects are finished on time or ahead of schedule. It is also not uncommon for construction projects to be detained, or inward the worst scenario even deserted due to diverse reasons.

A project may be revoked at any stage of the life cycle and incur significant amount of loss. For a housing project, the Ministry of Housing and Local Government considers that it has been deserted if 1) there has been no substantial activity on site for six consecutive months, or 2) it is involved in a winding-up petition registered at the High Court under Section 218 of the Companies Act, or 3) it is under receivership, or 4) the developer has informed 2 the Housing Controller in writing of his inability to complete the project, or 5) the project has been certified to be deserted by the Minister

under Section 11 (1) (c) of Housing Development (Control and Licensing) Act 1966 (i.e. Act 118) (MHLG 2011). All the same, as aforementioned, this definition is only for housing projects, whereas this study cover all types of construction project which might not be governed by Act 118. Thus, for the purpose of this study a deserted project is set as a project which has either been completely deserted or indefinitely delayed.

The desertion of construction projects is not unique to Malaysia as it is also happening in other states, e.g., United States (Hicks 2008), Spain (Carrero et al. 2009), Dubai, Abu Dhabi, Saudi Arabia, Qatar, Bahrain, Kuwait, and Russia (SPIEGEL 2009). However, in Malaysia this problem has been plaguing long enough at a scale that deserves more attention. In 2000, there were 514 deserted housing projects in Malaysia with an approximated value of RM 7.5 billion (see Table 1.1). Even though the number has been gradually decreasing, it is reported that in September 2012 there are still a total of 95 deserted housing projects involving 37,316 units of houses and 26,170 house buyers (MHLG 2012). On top of the figure, there are also other, non-housing projects being given up throughout the age. For instance, the Plaza Rakyat, a RM 1.5 billion mix use project, remains deserted even though it was scheduled to be finished in 1998 (Jayaraj, 2009). These are some of the problems of deserted construction projects plaguing the construction industry in Malaysia.

Despite the seriousness of the issue, there appears to be a lack of research. It is found that previous studies lack comprehensiveness, i.e. involving both questionnaire survey and interviews, involving all the key participants, and involving both housing and non-housing projects.

1.1 **RATIONAL FOR RESEARCH**

The desertion of construction projects has resulted in many adverse consequences to the economy, society and the surroundings. Economically, it is a waste of useful resources. The issues of deserted projects are far reaching as the construction industry takes on a major part in economic system of a developing country like

Malaysia. Moreover, a typical construction project involves many trades and participants, who associate with other upstream and downstream industries (Ng 2009b). These include suppliers of construction materials, transportation companies, manufacturers of plant and machinery, etc. who will be seriously affected if a construction project is being neglected. For a public project, if it is deserted the economic impacts are never directly felt by the general public as they are taken up by the government's reserves. Yet, very often there will be loss of opportunity for the public to benefit from the intended aims of the projects (Bavani 2009). Should additional public fund be used to revive such projects, it will incur additional opportunity cost, i.e. the cost of foregoing the opportunity to benefit from utilizing the public fund in other ways.

For private housing projects, however, tens of thousands of house buyers are immediately victimized every year (See Table 1.1). The impacts on the house buyers are twofold: Despite the fact that the purchased properties will not be filled in, the house buyers still have to service bank loans for the unfinished houses (NST Online 2009; Ng 2011; Rahman 2012) and in the meantime have to rent another house to stay (Chang 2009; Ng 2009b). They also suffer losses for being unable to reap the advantages from potential property value appreciation and rental collection (Chow 2009). Some house buyers have even been blacklisted by the banks as they fail to service their bank loans (Yip 2009b; Yip 2009a). Therefore, they are unable to purchase another property unless they pay back their loans (Yip 2009a).

House buyers of deserted projects have frequently been forgotten without any assistance from the developer and have to resort to the long-winded process of forming a committee to deal with the developers and the authorities (Ali 2011; Chang 2009; Chow 2009). There are cases which have been dragged on for so long that some owners have even passed away before any plan to revive the project is in place (Chan 2009). Although occasionally settlements are achieved between the developers and the house buyers, the settlement amount might be disproportionate to the actual losses sustained by the house buyers (Lim 2009; Yip 2009a). The buyers often have no choice but to

reluctantly accept the settlement offered as they become financially stressed. For some revived projects on leasehold land, owners are left with less years remaining on the lease after many years of desertion (The Star Online 2009). All these have negative effects on the image of the country in the eyes of foreign property investors (Chang 2009).

Table 1.1: Statistics on deserted housing projects

Year	Total number of deserted housing projects (Peninsular Malaysia)			
	No. of projects	**No. of houses**	**No. of buyers**	**Estimated Value (RM million)**
2000	514	107702	68340	7524.41
2001	544	125649	80070	9496.68
2002	-	-	-	-
2003	-	-	-	-
2004	227	75356	50813	7033.08
2005	261	88410	58685	8043.00
2006	-	-	-	-
2007	-	-	-	-
2008	270^{a}	87725^{a}	60159^{a}	-
2009/12/03	136^{b}	-	30567^{b}	-
2010/06/30	151^{c}	-	-	-
2011/02/06	104^{d}	34309^{d}	22558^{d}	-
2012/09/30	95^{e}	37316^{e}	26170^{e}	-
2013	-	61000^{f}	50000^{f}	9100.00
2014	-	72854	60215	-
Source	Unmarked - Ministry of Housing and Local Government (HBA 2006) a Ministry of Housing and Local Government (MHLG 2008) b Minister of Housing and Local Government (Kong 2009) c Kabit (2010) d Heng (2011) e Ministry of Housing and Local Government (MHLG 2012) f Ministry of Housing and Local Government (MHLG 2013)			

Aside from house buyers, contractors, developers, banks, landowners, and government may also be the victims. Contractors may be the most severely affected victim after house buyers. Normally the contractors would not desert the projects if the developers have paid them accordingly. The contractors may be forced to wind up the

company just because of the failure of collection of payment from one single project. The consequences may be extended to businesses along the supply chain such as subcontractors, suppliers and construction workers. For the developers, they may suffer from a bad reputation and financial losses (Perumal 2009a). Banks may suffer because of bad debts (Kong 2009), while landowners suffer because their lands are stranded (Tan & Rajendra 2009). Government may have to pace in and use public fund to revive neglected construction projects (Gasper 2010; Cheong 2012). The Ministry of Housing and Local Government (MHLG) also has to be burdened with the task of mediating between all the parties involved (Kong 2009). When it comes to legal battles, it incurs huge amount of expenses to all the parties involved. The utilization of public fund in these ways comes with its opportunity cost as mentioned earlier.

Deserted construction projects also affect the society and environment negatively. For instance, some neglected projects have pools of stagnant water that serve as a breeding ground for mosquitoes (Bavani 2009; RC 2010; Stuart 2009) and threaten public health. Deserted construction projects as well draw people like drug users, criminals and vagrants to occupy the deserted sites (Chang 2009; Perumal 2009b; RC 2010) and hence threaten public security. Deserted construction sites may pose danger to the public, especially kids who venture into the area to play (Stuart 2009). Deserted construction projects affect the environment negatively as it may be applied as a rubbish dump (Bavani 2009) and for the sludge discharged (Phuah 2009). Likewise, some have become unsightly overgrown with undergrowth (Bavani 2009). In Spain, the unpleasant view caused by deserting projects is recognized to cut the value of the surrounding properties (Carrero et al. 2009).

Even though the problems of neglected construction projects are far reaching, there is hitherto a lack of research into this area. Khalid (2010), Dahlan (2010), Ibrahim (2006) and Rusli (2006) have done similar researches but only concentrated on housing projects. Carrero et al. "s (2009) research focuses entirely on the negative impacts of a deserted construction projects in the Spanish coast and its regulation in the law but not on the reasons of the problem.

Khalid (2010) investigated the reasons from the view point of neo-classical and institutional economic theories. According to Khalid (2010) the neo-classical economic view point emphasizes the importance of market data, whereas the institutional economic view point concerns formal rules or institutions and the unwritten rules or informal institutions that may affect the decisions of the market factors. Khalid (2010) conducted a literature review, interviews, and a questionnaire survey involving housing developers from six states in Peninsular Malaysia. However, the questionnaire survey did not involve other players of the industry like contractors and consultants. Dahlan (2010) examined the problems of deserted housing projects from the legal perspectives by conducting case studies and literature review on undergraduate theses and research stories. However, Dahlan‟s (2010) study did not involve a questionnaire survey. Similarly Ibrahim‟s (2006) and Rusli‟s (2006) studies also did not involve questionnaire surveys. Ibrahim‟s (2006) subject area was exclusively based on literature review, interviews and case studies; Whereas, Rusli‟s (2006) subject area was exclusively based on literature review and interview with the Ministry of Housing and Local Government. Thus, there is a need for a research that investigates the reasons of deserted construction projects from an industry wide perspective facilitated by a questionnaire survey and added on by semi-structured interviews involving all the key players (i.e. developers, contractors, and consultants) covering both housing and non-housing projects. This will permit for a more comprehensive perspective of the problem of deserted project in this country to be prevailed.

1.2 **AIM AND OBJECTIVES**

The purpose of this research is to look into the problems of deserted construction projects in Malaysia. This goal will be achieved through the following objectives:

- To study about deserted construction project in Malaysia
- To determine the reasons of the problems;
- To propose solutions to known problems.

1.3 RESEARCH METHODOLOGY

The steps start with a comprehensive literature review of the issues and reasons of deserted construction projects in Malaysia. As there is a lack of research conducted and hence the lack of peer-reviewed articles published on the topic, the literature search is expanded to cover the potential reasons of deserted construction projects by reviewing factors that could negatively affect the success of a project. A list of 41 potential reasons is identified which is then applied as a fundament for an industry wide questionnaire survey involving clients/developers, consultants, contractors, and other relevant parties. Respondents are asked to rate each variable on a Likert scale. Besides, the questionnaire also includes an open-ended question on suggestions to solve desertion of construction projects.

The questionnaire study is followed by a series of semi structured interviews carried on some of the questionnaire respondents who were involved in a deserted building project, and individual professionals in the industry who is recognized to be well received. The interviewees include architects, developers, property consultants, and the honorary secretary general of the National House Buyers Association etc. to ensure a comprehensive view was obtained. The semi-structured interviews serve to complement and provide detailed information on the problems.

Quantitative data from the questionnaire survey are analyzed using basic descriptive methods, ranking of potential reasons with Spearman‟s ranking correlation coefficient, and factor analysis with Cronbach‟s α reliability analysis. Qualitative data from the open ended question in the questionnaire on solving desertion of construction projects, and from the semi-structured interviews are grouped into themes/categories by means of assigning categories/labels/codes to segments of the data, followed by studying of the interrelationship between the themes/categories. The research is finalised by writing up discussion of the results, conclusions, proposals to manage the problem, limitations and implications.

1.4 ORGANIZATION OF CHAPTER

This thesis is organized into three chapters as detailed below:

Chapter 1 – Introduction: This chapter discusses the background of the problems of deserted construction projects in Malaysia, including definition of deserted projects, the rationale behind this research, the aim and objectives of this research, the research methodology, and the organization of chapters.

Chapter 2 - Reasons of Deserted Construction Projects – A Review of the Literature: This chapter covers the review of existing literature on the reasons of deserted construction projects. It also reviews existing literature on possible reasons of deserted construction projects by reviewing factors that could negatively affect the success of a project.

Chapter 3 – Research Methodology: This chapter traces the methods practiced in this research to accomplish the aim and objectives. It reviews existing literature on the meaning and background philosophy of research and research methodology. It also reviews the quantitative, qualitative, and triangulation methods, with discussions on the selection of a suitable method for this research. This is followed by discussions on the methods used in this research, i.e. literature review, questionnaire survey, and semi-structured interviews. Then, the techniques applied for analysis of data are also presented.

CHAPTER 2

REASONS OF DESERTED CONSTRUCTION PROJECTS – A REVIEW OF THE LITERATURE

INTRODUCTION

This chapter covers the review of existing literature on the reasons of neglected construction projects. It also reviews existing literature on potential reasons of deserted construction projects by reviewing factors that could negatively affect the success of a project.

2.1 REASONS OF DESERTED CONSTRUCTION PROJECT IN MALAYSIA

Despite the seriousness of the problem, there is hitherto a lack of research in this area. It is found that the existing literature on this issue is restrained to the types of roots such as unpublished thesis, conference papers, and particularly news articles. Furthermore, the types of project discussed in these sources are mainly housing projects. This may be due to the larger number of neglected housing projects and the fact that it holds a bigger immediate impact to the general public than commercial (e.g. office building) and government projects. Broadly speaking, the reasons of deserted building projects which were identified from existing literature can be generally grouped into five categories, i.e. 1) mismanagement, 2) unfavourable government policies, 3) inefficient public delivery system, 4) unfavourable economic conditions, and 5) financial problems.

2.1.1 Mismanagement

Mismanagement is mentioned by the Ministry of Housing and Local Government (MHLG) (Kaur 2011) as one of the reasons of desertion housing projects. Mismanagement may happen due to the lack of experience of the developers (Ibrahim 2006). Examples of mismanagement that may lead to deserted housing projects include 1) lack of proper feasibility studies (Ibrahim 2006) particularly inaccurate market research (Khalid 2010; Kong 2009), 2) unattractive marketing strategies (Ibrahim 2006), 3) fraud (MHLG, as cited in Kaur 2011; Khalid 2010), 4) conflict among project participants (Dahlan 2010), and 5) incompetent and poor financial management by the developers (Ibrahim 2006; Khalid 2010).

The first two of these examples is particularly concerned with the sales of house units as an important source of cash flow for housing developers. The lack of proper feasibility studies and inaccurate market research may result in inaccurate forecast of demand and supply for certain types of properties as well as unsuitable project scheme to be undertaken for the prevailing market (Kaur 2011). Unattractive marketing strategies may further exacerbate a less attractive scheme of project already undertaken by a developer. Khalid (2010) points out that the developer will face problems in obtaining bridging loans from financial institutions to continue with a housing project if the sale percentage is less than 80%. One particular example of the deficiency of proper feasibility is when the developer of a housing project issued a stop work order by the authorities for failing to strengthen a slope near the construction site (Ali 2011). The developer did not include the strengthening of the slope in their feasibility studies therefore the houses sold do not include the additional price. The viability of the project was affected, the project had to be given up and the developer had to repay the house buyers. Another aspect of the deficiency of proper feasibility studies is the failure to distinguish the problems by the presence of illegal squatters on the project website, i.e. the difficulty and cost incurred in getting rid of them could lead to desertion of housing projects (Dahlan 2010).

An example of fraud is non-payments or arbitrarily reduced payments of progress billings which can result in cash flow problem of contractors, subcontractors and suppliers and eventually late delivery or desertion of projects (Home Guru 2011). Fraud may also be due to extravagant dissipation of purchasers‟ fund that contributes to the desertion of housing projects (Dahlan 2010). Another example of fraud is the involvement of developers in fraudulent claims (Khalid 2010; Cheong 2012). Developers collude with their architects so that the architects issue progress claim certificates that falsely reflect higher levels in the progress of construction, then the developers siphon the money out of the project (Cheong 2012). Dahlan (2010) points out that conflict that may lead to desertion housing projects involves developers, land proprietors, purchasers, contractors, consultants and financiers. As for how poor financial management by the developers reasons desertion of construction projects, however, Ibrahim (2006) and Khalid (2010) did not provide any detailed elaboration.

2.1.2 Unfavourable Government Policies

Reasons of deserted housing projects related to unfavourable government policies include 1) the sell then build system (Chang 2009), 2) the unavailability of Home Indemnity Insurance (Ibrahim 2006), 3) the limitation of the jurisdiction of the Tribunal for Homebuyer Claims (Ibrahim 2006), and 4) the requirement for private developers to build 30% of low cost houses (Khalid 2010).

2.1.2.1 Sell Then Build System

Former Prime Minister Abdullah Ahmad Badawi (HBA 2006) and the President of Federated Association of Consumer Malaysia (FOMCA) (as cited in Khalid 2010) told the sell-then-build system as one of the reasons of deserted housing projects. The sell-then-build scheme is designated to enable more houses to be built at a faster rate and a lower price (Chen 2007). As the name implies, houses can be sold before the houses are being built, therefore there is more cash flow from the start of the construction phase and less requirement for the developer‟s own capital. This has

enabled more developers of smaller capital to be involved in the business (Alagesh 2013). According to Chang (2009), however, having smaller developments in the housing industry is the main reasons that lead to desertion of housing projects. Being small, these developers have to rely critically on their sales to meet their cash flow. When the sales are not up to expectation, the cash flow might be affected. Consequently, the projects may be detained and eventually some might get deserted. The sell-then-build system is also less risky than a build-then-sell system from bankers' point of view (Teoh & Lim n.d.). This might have resulted in banks not exercising a duty of care by often relying on architects employed by the developer to sign off progress certificates, knowing that they can still collect repayment from house buyers even if a project is deserted (Heng 2011). This might encourage over claiming of funds by the developer, either resulting in mismanagement of fund or fraud and eventually desertion of the project.

2.1.2.2 Unavailability of Home Indemnity Insurance

Home Indemnity Insurance, as practiced in Western Australia, is an insurance policy which a builder is required by law to take out on behalf of the house buyer to assist to ensure that the house can be finished in the event that the builder dies, disappears or becomes insolvent (Anon n.d.). This insurance is applicable to residential building work worth over 20,000 Australian dollars. In the event of any claims, the law requires the insurance company to pay up to 100,000 Australian dollars or the value of the contract work, whichever is lesser. For loss of deposits, the law requires the insurance company to pay no more than 20,000 Australian dollars. However, this is not practiced in Malaysia (Ibrahim 2006). Thus, when the developer in this country is ineffective to proceed with the growth of the project, there is no similar protection for the home buyers.

Related to this, in February 2011, the Real Estate and Housing Developers Association of Malaysia (REHDA) proposed a home completion guarantee scheme (Heng 2011). Under this scheme, the government and the developer will each contribute

5% and 2% of the gross development cost of a project respectively into a fund managed by an independent third party. The project would be rated first before entering into this scheme, and a seal will be provided to signify a guarantee that the project will be completed.

2.1.2.3 Limitation of the Tribunal for Homebuyer Claims

The Tribunal for Homebuyer Claims is a channel for aggrieved homeowners to look for redress against developers without having to pass through a prolonged legal procedure in Malaysia (Chen 2007). Ibrahim (2006) found that the limitation of the jurisdiction of the Tribunal for Homebuyer Claims is one of the reasons of deserted housing projects, but contrary to Ibrahim‟s (2006) finding, Chen (2007) claimed that the Tribunal for Homebuyer Claims has proven to be very effective. However. it is believed that the developers being sued are often insolvent and getting compensation is highly unlikely.

2.1.2.4 The Requirement To Build 30% Of Low Cost Houses

Khalid (2010) found that the government's requirement for private housing developers to build 30% of low cost houses contribute to the desertion of some housing projects. The reason given is that the developers will deserted lower cost projects if the number of purchasers is low, rather than finish the housing projects and struggle to find purchasers. The low number of purchasers may partly be due to the fact that the low cost houses can only be sold to the lower income groups, and that the locations of the projects lack purchasers from these groups. This requirement to build 30% low cost houses is especially affecting smaller size projects as these projects are less flexible in terms of cross subsidy from the non low cost to the low cost housing units.

2.1.3 Inefficient Public Delivery System

Delivery system is "a means or procedure for providing a product or service to the public" (Anon 2003), usually by the government. Chen (2007) argues that it is the inefficient public delivery system rather than unfavourable government policies that causes the deserted project problem. A number of sources have mentioned the lack of enforcement of control and monitoring by the government as the reason of deserted housing projects (Dahlan 2010; Heng 2011; Ibrahim 2006; Khalid 2010). Ibrahim (2006) states, among others, that there should be stricter licensing for developers, more beneficial system to detect desertion of projects, harsher punishment for errant developers, and less bureaucracy in the approval process of housing programs. On October 2010, the Minister of Housing and Local Government stated that many developers have been blacklisted by the ministry, and the ministry would tighten conditions on developer's licenses to avoid the problems of deserted projects (The Star Online 2010). Corresponding to this, HBA has proposed to change the deposit to get a housing developer's license from RM 200 thousand to 5% of construction costs (Heng 2011). Still, it is unclear whether blacklisting by the ministry alone is capable to prevent rogue developers who had become insolvent to use the identity of others to register another company to start another new development. Developers may also use a proxy to protect themselves from being liable in case of desertion of the project (Heng 2011). As of 2010, the Minister of Housing and Local Government reported a remarkable improvement in planning and building plan approval (Phoon 2010). But, whether or not this will lead to less desertion of housing projects is left to be seen.

2.1.4 Unfavourable Economic Conditions

There is a consensus that economic crisis or financial crisis is one of the reasons of deserted construction projects (eg. Carrero et al. 2009; Fernandez 2009; Lim 2009; Ng 2009a; RC 2010). Other unfavourable economic conditions that may lead to the problem include 1) the rise of the prices of raw material such as steel and cement in 2008 (Cheah 2008), 2) "selfish" financial system, i.e. one that "lends an umbrella on a