

DECISION MAKING PROCESS PRACTISED AT PLANNING PHASE IN MALAYSIA

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ABSTRACT

This study examines the decision making process practised by Malaysian housing developers at the planning phase for housing development. The theoretical process model is developed by integrating the process that has been established by numerous authors and researchers on the subject of decision making. Sets of the questionnaire are distributed to private housing developers and analysed using Statistical Package for Social Sciences (SPSS). Hence, this study provides a new process model for decision making at the planning phase of housing development in Malaysia and helps developers and governments to make better predictions before proceeding to the construction phase.

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INTRODUCTION

According to Zainal (2015), the process of development commonly begins with the initiation phase, planning phase, construction phase, control phase and close-up phase. Out of all these phases, planning is the most important phase to project success (Khanna, 2011; Robbins et al., 2011; RIBA, 2013). Some development projects will face problems if not planned properly and usually, it will affect the project timeline, budget set and the quality of the project. Moreover, the planning phase is rather challenging due to difficulties in making decisions faced by the housing developer who acts as a decision maker at the planning phase of the housing project.

Many issues arise when an improper decision is made during the planning phase for the housing project. One of them can be seen in Table 1 where the status of late and ailing private housing projects by the state has been set out by Kementerian Perumahan dan Kerajaan Tempatan (KPKT), (2018). The statistic shows a big number of troubled projects where the total of both late and ailing project is 337 projects. Selangor has the highest number of late and ailing projects which include 11 late projects and 86 ailing projects. While Perlis has the lowest number of troubled project with only one ailing project and no late projects. The total of both late and sick home units is 46 867 units. The high reading of the late and ailing home units is very upsetting. In essence, these issues come from the developers who are responsible for making a housing development decision (Khalid, 2005) starting from the planning phase. Thus, the objective of this study is to examine the decision making process practised by Malaysian housing developers at the planning phase of housing development.

Table 1: Status of Late and Ailing Private Housing Projects of Each State in 2018

STATES	LATE			AILING		
	NO. OF PROJECTS	HOME UNITS	NO. OF BUYERS	NO. OF PROJECTS	HOME UNITS	NO. OF BUYERS
Johor	2	132	50	17	5 034	2 259
Kedah	10	351	175	19	1 788	1 221
Kelantan	1	678	565	33	2 067	1 148
Melaka	2	416	324	11	1 883	614
N. Sembilan	-	-	-	12	1 037	824

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Pahang	-	-	-	35	2 939	1 763
Perak	4	97	55	22	1 498	810
Perlis	-	-	-	1	123	115
P. Pinang	10	2 375	1 077	13	813	496
Selangor	11	1 939	734	86	17 424	8 839
Terengganu	3	231	39	31	1 690	936
W.P. Kuala Lumpur	-	-	-	14	4 352	951
TOTAL	43	6 219	3 019	294	40 648	19 976

Source: Kementerian Perumahan dan Kerajaan Tempatan (KPKT), (2018)

LITERATURE REVIEW

Studies from numerous authors such as Ireland & Miller (2004), Harris (2012), Zainal (2015), Robbins et al. (2017), Dias (2017) and Zainal et al. (2019) have indicated decision making as a process of selecting, identifying, choosing and analysing the best alternative, situations and ideas which include the recognition process. Since a strategic decision is being made in a long time and on a detailed basis, the decision maker can use the models of decision making in their activity to be more effective (Oriana, 2014). According to Baker et al. (2001), Armesh (2011), Schoenfeld (2011) and Robbins et al. (2017), there are six main steps in the decision making process: identification of a problem, development of alternatives, analysis of alternatives, selection of an alternative, implementation of the alternatives and evaluation of decision effectiveness as shown in Figure 1.

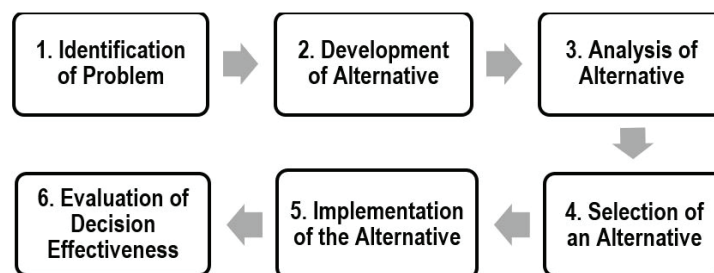


Figure 1: Fusion of Decision Making Process

Source: Baker et al. (2001), Armesh (2011), Schoenfeld (2011) & Robbins et al. (2017)

Furthermore, Chitkara (2014) defined planning as the process of developing the project plan and the plan outlines how the project is directed to attain the goals that have been set (Robbins et al., 2017). The planning process also helps the decision maker to determine the future course of action, based on discussions and decisions made on the current knowledge and estimation of future trends. A bad plan or having no plans can affect the purpose of the work undertaken (Zainal et al., 2019). In management, the planning is done by the manager who puts in his experience and expertise into the planning process. The work plan considers all the pros and cons of the work on hand and set forth elements of cost, time and quality in a satisfying and acceptable manner. The plan must reflect the total scope of work, the logical sequence of the various activities for completion, resource allocation, standards, procedures, alternatives, risk factors and the possible and actual constraints (Ramakrishna, 2010).

The summary of the planning phase can be seen in Table 2 where 17 processes have been listed by Chitkara (2014), Turner (2014), Project Management Institute (PMI) (2017), Royal Institute of British Architects (RIBA) (2013) and Angus (2003). Based on Table 2, all five researchers agreed that cost planning and budgeting, risk assessment planning and construction contracts procurement planning are crucial in the planning phase. While project planning and time planning also play a part in the crucial process of the planning phase where four out of five authors agreed with their importance in the planning phase. The remaining processes were ignored because of the lack of agreement from all five authors.

Table 2: Summary of the Planning Process

Processes/ Activities	Chitkara (2014)	Turner (2014)	PMI (2017)	RIBA (2013)	Angus (2003)	Total
Project plan		/	/	/	/	4
Designs and drawings planning	/			/	/	3
Time planning	/		/	/	/	4
Resource planning	/	/	/			3
Cost planning and budgeting	/	/	/	/	/	5

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Communications planning	/	/	/			
Quality planning	/	/	/			
Organisational planning	/		/			2
Const. contracts procurement plan	/	/	/	/	/	5
Resources mobilisation planning	/		/			2
Site administration & layout planning	/					1
Workers S, H & E protection plan	/			/	/	3
Risk assessment planning	/	/	/	/	/	5
Acceptance plan		/	/			2
Contract the supplier		/				1
Stage review		/		/	/	3
Project staffing			/			1
HRM planning	/	/	/			3
Stakeholder management plan			/			1

Source: Chitkara (2014), Turner (2014), PMI (2017), RIBA (2013) & Angus (2003)

METHODOLOGY

This study uses a quantitative method. So, to answer the objectives of this study, sets of questionnaire have been used as an instrument to collect data from respondents. Questions asked are regarding the decision making practised by the housing developers. 218 respondents were identified as a sample from 1150. Before handling the survey, a literature review is carried out by collecting all data related to the research. An extensive literature review is conducted on standards development writing, previous research on standard development, theoretical frameworks and models appropriate to this study. The review confirmed the need for this research and provides

support for the preliminary conceptual model. The sources of information used are books, articles, journals, reports, websites and thesis.

Also, the literature review is done to enhance a better understanding of this study. The issues pointed out in this literature review are related to the decision making process at the planning phase of housing development. This research is limited only to housing developers in Peninsular Malaysia. The housing developers were selected based on the registered list of developers with Real Estate and Housing Developers Association (REHDA) and the list is only available for developers in Peninsular Malaysia. Sabah and Sarawak are not included due to the differences in laws and regulation of housing development. Also, this sample is selected because the developers

involved with a high prospect in their work and it is important to determine whether the developers are in ethical or unethical decision making for housing development (Zainal, 2015). After that, data gathered is analysed using the Statistical Package for Social Sciences (SPSS) software. Descriptive analysis is conducted and the mean value from data examined are used to identify the objectives of this study. Later, the data that has been analysed is validated through surveys with 7 experts from housing development companies.

RESULTS AND DISCUSSIONS

A total of 70 questionnaires have been distributed to housing developers around Peninsular Malaysia and from that number, only 67 responses were received. Table 3 shows the important level of stages in the planning phase of housing development. The results showed that the majority of the respondents specified cost budgeting and procurement as the most important stage in the planning phase of housing development with the similar mean value of 4.2388. This indicates these two stages as the most critical stages. Decision makers need to pay more attention while making decisions in these stages to prevent any major problems in the next phase. Then, the respondent which is also a decision maker states that the other stages are important based on the mean value for each stage; project scope ($\mu= 3.9254$), time framework ($\mu= 4.1194$) and risk planning ($\mu= 3.8060$). Risk planning holds the lowest mean value, yet it is still ranked as an important stage in

the planning phase for housing development. Though, it is not as critical as cost budgeting and procurement stage.

Table 3: Important Level of Stages

No.	Stages	Mean	Importance Level
1	Project Scope	3.9254	Important
2	Time Framework	4.1194	Important
3	Cost Budgeting	4.2388	Very Important
4	Risk Planning	3.8060	Important
5	Procurement	4.2388	Very Important

Source: Author

On the other hand, Table 4 shows the analysis of the important level of activities for each stage of the planning phase in housing development. The first stage of the planning phase is the project scope. Each activity in this stage (project scope) must be done before proceeding to the next stage since all the activities are very important. The level of importance are ranked based on respondents' feedback where the mean value of the collect requirement is $\mu = 4.5161$, define the scope is $\mu = 4.6613$ and create WBS $\mu = 4.4355$. Next, the second stage of planning phase (time framework) shows that all activities are very important to be completed with the dissimilar mean values where for define task $\mu=4.6613$, sequence the task $\mu=4.5806$, estimate activity duration $\mu=4.6935$ and develop schedule $\mu=4.7258$.

After the time framework stage has been completed, decision makers proceed to the third stage which is the stage of cost budgeting. At this stage, all cost budgeting is done for the planning phase of the housing development project. Both activities in cost budgeting stage are ranked as very important where estimate cost ($\mu=4.8065$) as well as determining budget ($\mu=4.7903$). Besides that, in the risk planning stage, there are three activities ranked as very important that comprise risk analysis ($\mu=4.6129$), identify risk ($\mu=4.5806$) and plan risk response ($\mu=4.2419$). However, two activities in this stage are ranked as important with a mean value for qualitative risk analysis ($\mu=4.1129$) and perform quantitative risk analysis ($\mu=4.1613$).

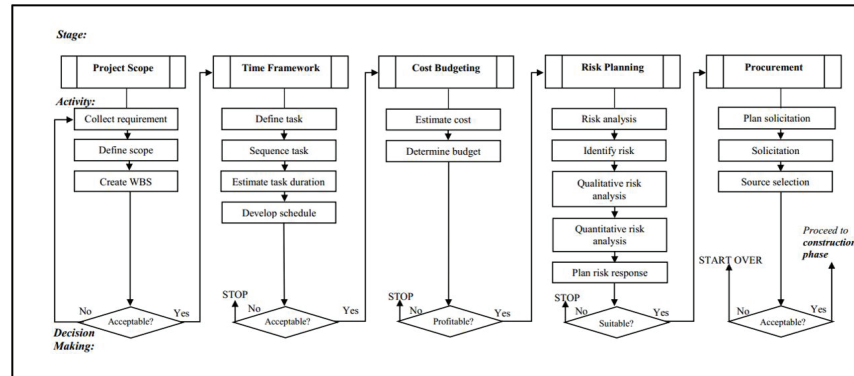
Finally, the last stage of the planning phase studied is procurement. All activities in this stage are ranked as very important with the following mean

values for plan solicitation ($\mu=4.5645$), solicitation ($\mu=4.4355$) and source selection ($\mu=4.6770$). Therefore, from this analysis it can be concluded that cost budgeting and procurement are critical in the planning phase for housing development with the highest rank in their activities where estimate cost ($\mu=4.8065$) and source solicitation ($\mu=4.6770$). Henceforth, extra attention is needed for both stages (cost budgeting and procurement) and activities (estimate cost and source solicitation) before proceeding to the next phase which is the construction phase.

Table 4: Importance Level of Activities for Each Stage in the Planning Phase

No.	Stages	Activities	Mean	Importance Level
1	Project Scope	Collect requirements	4.5161	Very important
		Define scope	4.6613	Very important
		Create WBS	4.4355	Very important
2	Time Frame-work	Define task	4.6613	Very important
		Sequence the task	4.5806	Very important
		Estimate activity duration	4.6935	Very important
		Develop schedule	4.7258	Very important
3	Cost Budgeting	Estimate cost	4.8065	Very important
		Determine budget	4.7903	Very important
4	Risk Planning	Risk analysis	4.6129	Very important
		Identify Risk	4.5806	Very important
		Perform qualitative risk analysis	4.1129	Important
		Perform quantitative risk analysis	4.1613	Important
		Plan risk response	4.2419	Very Important
5	Procurement	Plan solicitation	4.5645	Very important
		Solicitation	4.4355	Very Important
		Source solicitation	4.6770	Very important

Source: Author



Source: Author

Figure 2 above shows the overall process of the planning phase for housing development. The process consists of five stages that begin with (i) project scope, (ii) time framework, (iii) cost budgeting, (iv) risk planning and (v) procurement. Moreover, each stage comprise activities that need to be done before deciding to proceed to another stage of the planning phase. Project scope is the first stage in the development of the construction planning phase. Project scope or also known as project plan include a few activities: collect requirements, define the scope and create the Work Breakdown Structure (WBS). Angus et al. (2003) and Chitkara (2014) mentioned that a responsibility chart, a schedule and supporting documentation describing costs and budgets are also done during this stage. The preparation of project scope is required as it offers the way and provide guidance to the project team. The length of the project scope is based on the type and the level of investment of the project (Angus et al., 2003).

The second stage in the construction planning phase is preparing a time framework. In this stage, after the task has been defined as in WBS, it is then listed according to the priorities. The activity duration then is identified using a network known as the critical path method (CPM). Once the network has been numbered and the times or durations added, it is then analysed by utilising three main types of analysis which are arithmetical, graphical and computer analysis. After that, the schedule is developed. The third stage is the preparation of cost budgeting. The estimation of cost is required as it shows whether the project is over the budget or not. A few methods of cost estimate have also been identified. At that point, the budget

can be determined and this is an indicator whether the project is worthwhile or otherwise. In the following stage, the risk analysis is done. The activities include the identifying of the risk, performing qualitative and quantitative risk analysis and also planning risk response. Lastly, the final stage for the construction planning phase is procurement where all the bidding and tendering process are done. After successfully making all the decisions in each stage, the decision makers then can proceed to the next phase of the housing development that is the construction phase.

This study found that the current process in decision making model for housing development can be improved especially at the planning phase. Furthermore, the model developed can assist the decision-makers in predicting the success of a project which will lead to quality housing as the final product.

CONCLUSION

The study of this research is important in improving the present process and technique in decision making at the planning phase for housing development. Moreover, this research was conducted to create greater awareness among decision makers especially the developers about the element in the stage of a planning phase. Housing project may fail if the decision making function is weak. Increasing efficiency in decision making is vital since the planning phase is crucial in maximizing the effectiveness at work. For that reason, this study formulates a decision making process at the planning phase of housing development in Malaysia. Hopefully, future research will focus on adopting this process as an instrument to help the developer gain profit while preserving the quality of the projects to be developed.

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