

The Framework of the Decision-Making Process for the Expenditure Stage at the Planning Phase of Housing Construction Projects

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Abstract:- The main concern in this study was the conflict or disagreement about the decision-making process in the planning activity of the developer on a housing construction project. The study consists of three objectives: identifying the activities that developers often use during the decision-making process for the level of planning at a housing construction project, identifying the method of decision-making often used by the developer for the planning stage at the planning stage of a housing construction project and analyze the relationship between decision-making activities at the expenditure stage and decision-making methods at the planning phase of a housing construction project. The questionnaire was distributed to 63 respondents consisting of respondents working in a developer company in Johor with 30% of respondents. Data were analyzed using a descriptive statistical method with Statistical Package for the Social Sciences (SPSS) software version 23. From this study, the researcher found that the most frequently used activities were spending determinations using financial analysis methods to carry out the decision-making process at the expenditure level. Planning stage in a housing construction project. Whereas the relationship between decision-making activities and decision-making processes at the planning stage is not related to each other, but the flexible decision-making process continues through the construction phase. The importance of this study is to help housing developers, academics, local authorities find the right activities and methods for making decisions on housing construction projects in Malaysia.

Keywords:- Decision-Making Process, Expenditure Stage, Planning Phase, Housing Construction Project.

I. INTRODUCTION

The construction sector is one of the catalysts in the transformation of the Malaysian economy through the implementation of infrastructure projects under the Tenth Malaysia Plan (10MP) (CIBD, 2017). According to Utusan (2018), the country's construction industry is growing in line with the Gross Domestic Product (GDP) of 5.5 percent (Utusan, 2018). Elcorp Technology Sdn Bhd (2017) states that the construction industry is an industry that contributes to the economic development of the country in line with

national goals. Decision-making is an important thing in an organization especially during the planning phase in a housing project. According to Kreitner (1996), decision-making is the process of identifying and selecting alternative courses of action in a similar way and in following with the demand or environment. The decision-making process, in a nutshell is to solve a problem, achieve the objectives of a housing project, find alternatives to solve the problem, assess risk and implement the agreed decision on a housing project (Sousa, 2015). Understanding how to make accurate and effective decisions can improve the quality of an organization by sourcing the right resources and references (Sousa, 2015)..

II. LITERATURE REVIEW

Decision-making activities in the construction industry are to select or to meet the objectives of a project (Harvey, 2007). Decision-making activities in an organization are fundamental to the success and positive growth of every organization (Grant, 2015). According to Sousa (2015), there are 5 factors influence the planning of the decision-making process. Among them are i) the nature of the problem whether new or old, ii) an organization's awareness of the problem in achieving objectives and finding alternative solutions to the problem, iii) the experience of an organization or an individual in decision-making, iv) the culture of an organization in handling risk in decision-making and v) the level of an individual's view of the problem or risk.

Expenditure Stage Definition

Expenditure means the process of preparation, implementation, and operation in spending against a financial plan in a short period of time (Wildavsky, 1986). Besides, expenditure is a human financial resource in managing a business. In addition, expenditure is also seen as the process of identifying, collecting, summarizing, and presenting the financial information of an organization (Wildavsky, 1986).

Expenditure Stage Activities

Expenditure is defined by CIMA (2016) as the establishment of a budget that associates superior responsibilities with policy requirements and a comparison between original expenditures and estimates or provides a basis for revision. Also, expenditure control is a system of

controlling costs, and resources that involves comparing actual performance with estimated performance and then acting on the results obtained to minimize variation and obtain the appropriate returns. Among the activities in expenditure are cost estimation, managing expenditure and determining expenditure (Bpayne, 2017).

Expenditure Methods

Once the project has been identified, the developer will need a decision-making process at the expenditure stage to determine whether the project should be continued or not. It is important to make detailed expenditure estimates at the planning phase. Thus, there are several methods for decision-making at the expenditure stage which are analytical hierarchy process, brainstorming, Delphi method, financial analysis, linear programming, SWOT analysis, and ratio analysis.

The Importance of Expenditure

Controlling expenditure in an organization or a project does not guarantee anything but it can help the organization or project from falling apart. By practicing proper expenditure control it benefits an organization or construction project. The importance of expenditure in organizations and construction projects are i) assist in decision-making at the planning phase, ii) reduce unproductive operations and iii) useful management control tool.

Definition Planning Phase

The planning phase is defined as the basis for managing a project including implementation of objectives, product delivery, procedures in the organization, and organizational finance (Sharanyasreenivas, 2017). Meanwhile, according to Elliot (2014), planning is a process, procedure, or method for setting goals, identifying, and evaluating options and constructing strategies to achieve desired options.

III. METHODOLOGY

This study focuses on three (3) research questions and is followed by three (3) research objectives. The question of this study helps to solve the problem that is the conflict for the decision-making process in expenditure stage activities at the planning phase from the top management in a housing construction project.

Questionnaire Distribution

Researchers used Krijie Morgan's (1970) method to select the number of samples for this study. This questionnaire is divided into 2 parts, which are Part A: Organization/Respondent Information and Part B: Activities and Decision-Making Methods for Expenditure Control at Planning Phase. Respondents for this study consisted of housing developers from the state of Johor. The questionnaire was analyzed using the Statistical Package for the Social Sciences (SPSS), index averages, and descriptive statistics.

Research Population

The study population for this study is focused on housing project developers in the Johor area. This is because the number of developers in the state of Johor has recorded a total of 450 developers have registered (JPN, 2017). A developer is an individual or organization that is the main financier in a construction project (Fellows, 2019).

Data Processing

This study was analyzed using the Statistical Package for the Social Sciences (SPSS). All data obtained will be entered into SPSS for accurate analysis. Data were analyzed in the form of frequency, mean, and correlation.

IV. DATA ANALYSIS

The General Data

The population of this study is focused on developers around Johor. The sample required for this study is 210 respondents. A number of questionnaires distributed and received are 63 respondent forms were received, which is 30%.

Decision-Making Process Activities at the Planning Phase in Housing Construction Projects

The highest position for decision-making activities at the planning phase in housing construction projects is the activity of determining expenditure as shown in Table 1.1. The second position is the activity of managing expenses and the activity of controlling expenses. Next, followed by fourth place which is the activity of estimating expenses. While the least practiced activity in the decision-making process at the planning level is the activity of preparing expenses. These results show that the activity of determining expenditure is an activity that is often practiced in the decision-making process for the expenditure stage at the planning stage of housing construction projects.

Table 1.1 The Activities of Decision-Making Process in Expenditure Stage in Planning Phase

Activities	Mean	Frequency	Position
Determine the Expenditure	4.48	High	1
Manage Expenditure	4.41	High	2
Control Expenditure	4.41	High	2
Estimate Expenditure	4.35	High	4
Provide Expenditure	4.30	High	5

Relationship between Decision-Making Process Activities and Decision-Making Process Methods

According to Table 1.2, the housing developer used the financial analysis method, SWOT analysis, and brainstorming as a decision-making process method in activity of providing expenses. Next for manage expenditure activity, the first decision making process method used by the developer is financial analysis followed by brainstorming and the Delphi method.

Also, decision-making process methods for estimate expenditure activities are brainstorming, financial analysis, analytical hierarchical process, and linear programming. The decision-making process method for the activity of determining expenditure is financial analysis, SWOT analysis and, brainstorming. Next, the decision-making process methods that are often practiced for control expenditure activity are assessment, financial analysis, and ratio analysis.

Table 1.2 The relationship between Decision-Making Process Activities and Decision-Making Methods

Activity \ Methods	Provide Expense	Manage Expense	Estimate Expense	Determine the Expense	Control Expense
Brainstorming	0.063	-0.019	0.023	-0.094	
	0.200	0.882	0.857	0.124	
Financial Analysis	-0.157	0.078	0.036	-0.044	0.177
	0.219	0.542	0.778	0.731	0.166
SWOT Analysis	0.086			0.023	
	0.500			0.858	
Delphi Method		-0.044			
		0.735			
Analytical Hierarchy Process			-0.188		
			0.140		
Linear Programming			0.160		
			0.210		
Ratio Analysis					-0.108
					0.400
Assessment					-0.091
					0.478

Indicator:

- Pearson Correlation Value, r
- Level of Interest, p

The Relationship between Decision-Making Process Activities and Decision-Making Process

The activity of providing expenditure has a flexible decision-making process with a moderate level of negative correlation as shown in Fig. 1.1. The activity of managing expenditure can continue the decision-making process to the next activity because it has a moderate level of a positive relationship. The relationship between activity estimating expenditure and profits does not show any relationship and is weak.

Variables \ Activity	Provide Expenditure	Manage Expenditure	Estimate Expenditure	Determine the Expenditure	Control Expenditure
Decision-Making	Flexibility	Flexibility	Profit	Flexibility	Profit
Pearson Correlation Value, r	-0.585	0.587	0.179	0.405	0.189
Level of Interest, p	0.000	0.000	0.159	0.001	0.138
Correlation Size	Moderate	Moderate	Weak	Moderate	Weak
Relationship Stage	Moderate	Moderate	Weak	Moderate	Weak
Correlation Strength	Negative	Positive	None	Positive	None

Fig. 1.1 The Relationship between Decision-Making Process Activities and Decision-Making Process

V. RESULT AND DISCUSSION

The findings obtained for the study are based on data obtained from the distribution of questionnaires to respondents. A total of 210 sets of questionnaires were distributed. However, only 30% of the total questionnaires

received, which is 63 sets of questionnaires. The researcher used Statistical Package for Social Science (SPSS) software to analyze the data obtained. Data are analyzed and explained through pie charts, tables, and diagrams to better understand.

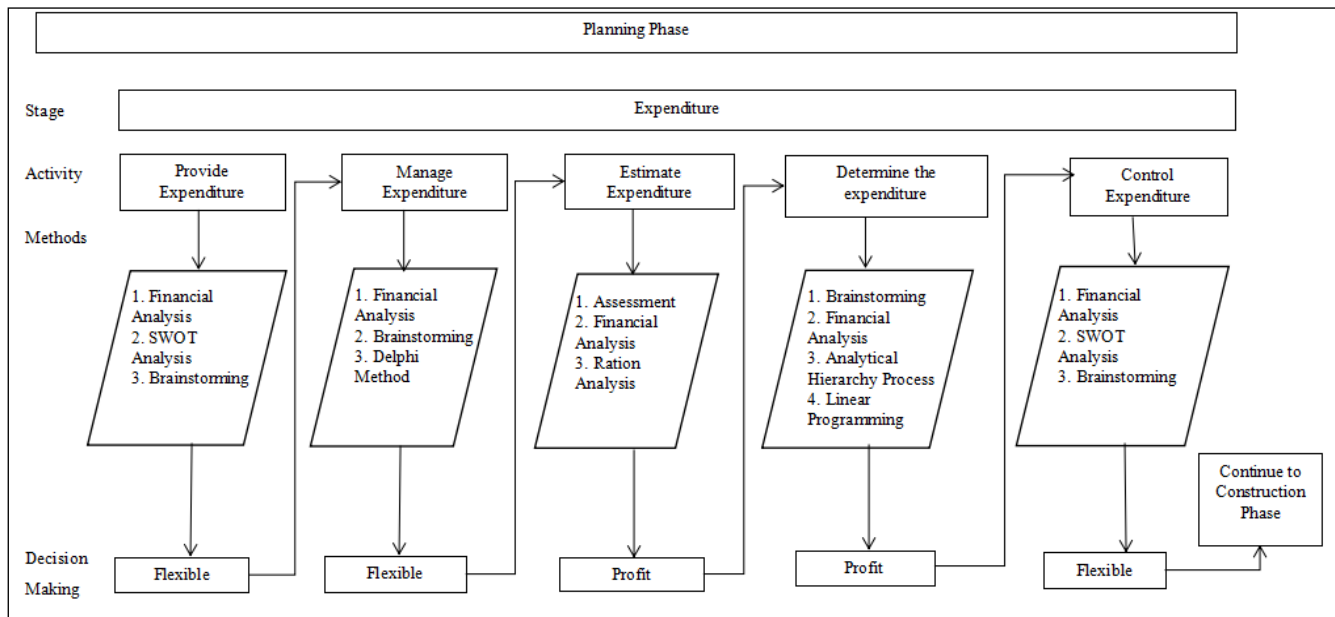


Fig. 1.2 The Framework of Expenditure Stage at the Planning Phase of Housing Construction Project

Among the activities in the decision-making process are preparing expenditure, managing expenditure, estimating expenditure, determining the expenditure, and controlling expenditure. Activities provide expenditure, the majority use financial analysis methods to carry out the decision-making process for the expenditure stage at the planning stage. Expenditure management activities also adopt financial analysis methods in the decision-making process at the planning phase in housing construction projects. Brainstorming methods have been used in the activity of estimating expenditure for the decision-making process. The assessment method is practiced in the last activity which is expenditure control.

VI. CONCLUSION

As conclusion of the study found that each decision-making process activity for the expenditure stage at the planning phase has its own decision-making method that is often practiced among developers. On the other hand, the decision-making process activity that is often prioritized is the activity of determining expenses. Meanwhile, the activities that are less practiced in the decision-making process for the expenditure stage at the planning stage are the activities of preparing expenditure. This means that the majority of respondents or developers do not feel that expenditure preparation activities at the planning stage in a construction project are appropriate which is important and should be practiced.

Decision-making process the most commonly used method is the financial analysis method. Financial analysis is used because developers can assess the expenditures they have incurred throughout the housing construction project (Henry, 2011). In addition, the relationship between decision-making process activities and decision-making methods for expenditure level at the planning stage in housing construction projects shows a weak relationship but decision-making process can continue without specific use for each decision-making process activity at the expenditure level.

VII. LIMITATIONS AND FUTURE STUDIES

The researcher focused on housing developers in the state of Johor only. This is because according to the National Housing Department (2017), the list of developers in Johor has a total of 450 developers and has 44 abandoned housing projects. Johor is a developing state in the housing sector compared to Selangor. With the selection of the state of Johor, the scope of the researcher population will be smaller than the selection of housing developers in the state of Selangor.

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REFERENCES

- [1]. Bpayne & Watt A. (2014). 12.Budget Planning. Project Management. Publish by Power Press in 2014. Retrieved on August 7, 2019 from <https://opentextbc.ca/projectmanagement/chapter/chapter-12-budget-planning-project-management/>
- [2]. Elliot M. (2014). *History and Theories of Planning. School of City & Regional Planning*. Retrieved on May 22, 2019 from https://georgiaplanning.org/presentations/AICP_exam_reviews/2014_AICP_Exam_Prep_Theory_History.pdf
- [3]. Fellows M. (2019). What is a Construction Developers? Retrieved on July 29, 2019 from https://www.ehow.com/info_8736957_construction-developer.html
- [4]. Henry E., Robinson R. T. & Greuning V H. J. (2011). *Financial Analysis Techniques*. CFA Institute.
- [5]. National Housing Department, JPN. (2017).National Housing Department Statistics.Ministry of Housing and Local Governance. Retrieved on May 6, 2019 from file:///C:/Users/User/Downloads/PERANGKAANJPN_2017.pdf
- [6]. Kretner R. (1996). The Decision Making in Organization. Department of Home Science, Sadar Patel University.
- [7]. Sharanyasreenivas J., Gajalakshmi G. and Ravi T.K. (2017). *Project Planning of Quality Assurance Control Documents*. International Research Journal of Engineering and Technology (IRJET) Vol. 4, Issue 11.
- [8]. Sousa W. H., Galante Porto M.C. , M. I. P. Marcantonio et al. (2015). Planning the Decision-Making Process: A Multiple Case Study. Engineering Management Research. Vol 4 No. 1.
- [9]. Wildavsky A., B. (1986). *A Comparative Theory the Budgeting Process*. Business and Economy