



# Key Success Factor of the Timeliness of the Regional Housing Project in Cibubur Indonesia

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**Abstract:** A construction project is a form of activity that takes place within a limited period of time, with certain resources to achieve the results of a certain form of building or infrastructure. The success of a project is assessed by the suitability of the schedule, cost and quality planned in the contract. In the implementation of construction projects there are often delays caused by the parties involved or from influencing factors. This study discusses material analysis, labor, and project management on the timeliness of housing projects in the Cibubur Indonesia. Delay in project implementation has an influence on planned budget changes. This research aims to find the dominant factor causing delays in housing projects in the Cibubur Indonesia. This research is a survey research which is a study that takes a sample from a population using questionnaires and interviews as a data collection tool that is distributed to respondents, where the number of respondents is 31 (thirty one) in the Cibubur area housing project. This study concludes that the dominant factors causing delays are as follows: (1) Late delivery of materials, (2) Limited number of workers, (3) Poor project land conditions, (4) Weak project management and implementation by contractors. The cause of the delay can be controlled by using anticipatory and preventive measures. The action was taken to overcome the impact due to the dominant factor that could cause the delay. This research is expected to be beneficial for contractor service business providers and project owners as the housing developer, so that the project can be anticipated and the next project can run according to the planned times.

**Keywords:** Delays, Labor, Material, Project Management

## I. INTRODUCTION

Currently the infrastructure development is being actively carried out by the Indonesian people. Development is an effort to create prosperity and welfare of the people [1]. The needs of the community for housing will increase with the times and the widening of the expansion of the city center. This makes the development of the property construction world around Jakarta and its surroundings. In the

concentration of projects that must be demanded quickly, projects are often found to be delayed. In practice, a project has limited resources, both in the form of human, material, cost and equipment. This is why a project needs project management from the initial phase to the project completion phase. Every project must have a plan of activity schedule and a project financing plan that is made during the work process in the field. The purpose of making the planning of activities and costs so that the project can run in accordance with the estimated time and costs. However, in its implementation, it is often found that project activities are not in accordance with the planned references. In practice, project delays are the biggest problem in the construction world. [2] [3] [4]

In carrying out construction projects on time, we can be sure to benefit both parties, therefore a good company will always try to carry out within the stipulated time or try to minimize delays by choosing corrective actions that need to be done and making decisions based on analysis of various delay factors. Therefore a study is needed to identify and analyze the factors that influence project delays. [1]

According to [5] that the number of building projects that were approaching on time (around 90% on time) was only 54.5%.

**Table- I: Number and Percentage of Projects Successfully Completed by Project Managers**

		Less than 70%	70-90%	Over 90%
On time	Number	10	5	18
	Percentage (%)	30.3	15.2	54.5
Within budget	Number	8	15	6
	Percentage (%)	27.6	51.7	20.7

Based on [6]DKI Jakarta Province Housing Statistics data, Results of the 2010 Population Census, BPS Catalog: 3303002.31, that there are around 47.45 percent of households in DKI Jakarta Province occupying their own home while the rest occupy contract homes (17.71 percent), rent (27 , 68 percent) and others (7.16 percent). According to the data, the highest percentage of households owning / mastering their own residential buildings is in the Thousand Islands Regency, which is 80.39 percent, quite different from other regions, ranging from 44.86 percent to 51, 59 percent. Even in West Jakarta and North Jakarta the percentage of households whose ownership / mastery status of their own residential buildings is still below the provincial figure. Based on these data, in DKI Jakarta Province, around 46.95 percent of male-headed households occupy houses that are self-owned.

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This percentage is lower compared to households headed by women, which is 50.16 percent. In contrast, households with contracted housing status were higher in households headed by men (28.61 percent) than those headed by women (22.64 percent).

**Table- II: Number and Percentage of Households by Status of Residence / Ownership in Jakarta, 2010**

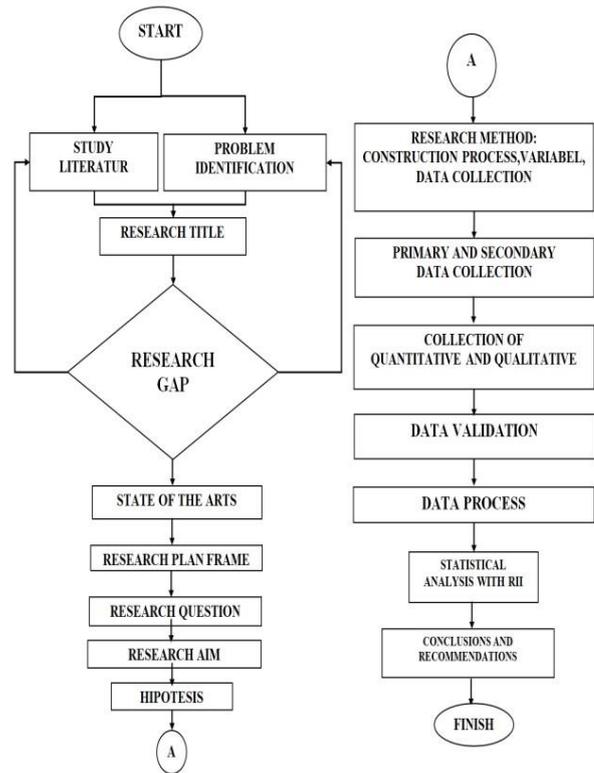
Ownership Status of Residential Buildings	Quantity	Percentage (%)
One's own	1.190.323	47,45
Contract	444.301	17,71
Rent	694.238	27,68
Others	179.484	7,16
Total	2.508.346	100,00

Based on [7] [8], affordable housing projects develop need to consider external environment factors. It is recommended that policy makers to handle issues related to controlling the safety and health performance. Government agencies that regulate physical development should intensify public education, particularly on responsibilities and obligations, especially among self-builders. [9]

Based on the proximity of the Cibubur area housing project location, this project can use sand of Karawang. Sand of Karawang used for the manufacture of concrete normally good enough. A combination of 20 % sand of Kelud with 80 % sand of Karawang can increase the compressive strength of concrete by 15 % at the age of 3 days. [10]

**II. RESEARCH METHODOLOGY**

The research methodology begins with the following steps: 1) Work begins with gathering literature studies and identifying problems with delays in housing projects from international journals and national journals; 2) From the literature study and identification of problems, the title of the research can be obtained and continued by conducting a research gap to ensure research gaps are available; 3) Arranging State of the Arts in order to ensure there are no similar studies and avoid plagiarism in this study; 4) Formulate the problem (Research Question) about timeliness of housing project and set research goals (Research Aim) to answer the Research Question and compile the research hypothesis; 5) Compile research methods that include the process of construction work, identification of variables, data collection and compiling testing models and hypotheses; 6) Collect primary and secondary data and qualitative and quantitative data; 7) Continued by validating the data process with statistical analysis using the RII (Relative Importance Index) method, where this method has been used throughout the world in research; 10) From all the steps above, conclusions and suggestions can be drawn for the next step of the research. A detailed description of the research design can be seen in figure 1. [11] [12] [13]



**Fig. 1. Research Methodology**

The results of data collection from all respondents illustrate that the questionnaire data sent by the author of 35 pieces and who returned 31 the number of questionnaires has met the minimum requirements for use in research by following the minimum number of respondents. The details of the return of the questionnaire are as follows in Table- III:

**Table- III: Data Collection**

Questionnaire	Sent	Returned	Percentage (%)
	35	31	89

Based on Table- IV, it is known that the characteristics of respondents based on position are 1 respondent as site manager, 7 respondents as supervisor, 12 respondents as quantity surveyors, 2 respondents as quality control, 1 respondent as drafter, 6 respondents as admin, and 2 respondents as logistics. Based on this number, the majority of respondents in this study have jobs as quantity surveyors.

**Table- IV: Respondents Position**

No	Position	Quantity	Percentage (%)
1	Site Manager	1	3,22
2	Supervisor	7	22,58
3	Quantity Surveyor	12	35,48
4	Quality Control	2	6,45
5	Drafter	1	3,22
6	Admin	6	19,35
7	Logistic	2	6,45



Based on Table- V, it is known that the characteristics of respondents based on work experience are 27 respondents have 0-5 years work experience, 3 respondents have 6-10 years work experience, and 1 respondent has 11-15 years work experience. Based on this number, most respondents in this study had an average work experience of 0-5 years.

**Table- V: Work Experience of Respondents**

No	Work Experience (years)	Quantity	Percentage (%)
1	0-5	27	87,09
2	6-10	3	9,67
3	11-15	1	3,22

Based on Table- VI, it is known that the characteristics of respondents based on education are 3 respondents have High School/ Vocational School education, 20 respondents have Diploma 3 education, and 8 respondents have Bachelor education. Based on this number, most respondents in this study had an average education of Diploma 3.

**Table- VI: Respondents Education**

No	Education	Quantity	Percentage (%)
1	High School/ Vocational School	3	9,67
2	Diploma 3	20	66,67
3	Bachelor	8	25,80

### III. RESULT & DISCUSSION

The result of analysis are shown in Table- VII below

**Table- VII: The Most Influential Variables**

Rank	Sub Factor
1	Material delivery delays
2	Limited number of workers
3	Poor project land conditions
4	Weak project management and implementation by contractors
5	Poor quality of materials
6	Material order delays
7	The quality of the existing workforce is poor
8	Poor availability of materials and equipment from local suppliers
9	Error in choosing contractor by owner
10	Weak use of tools by labor

Delays are as a result of factors emanating from various sources which include, owners (or self-builders), consultants, builders/subcontractors, regulatory bodies, building planning, land tenure, materials, labour, construction techniques, and suppliers among others. [14] [15] [16] [17]

### IV. CONCLUSION

Based on the dominant factors causing delays in the Cibubur area housing project are as follows:

1. Material delivery delays.
2. Limited number of workers.
3. Poor project land conditions.

4. Weak project management and implementation by contractors.

The parties involved in the regional housing project in Cibubur Indonesia must pay attention to the four dominant factors above so that they can maintain the timeliness of project implementation.

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