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Implications of Project Delaying in Community Building Construction Towards Client Satisfaction

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Abstract: One of the main criteria for project success is the timely completion of building projects. In the end, a project's inability to be finished on time will cause a delay. The construction of community buildings in Felda was not an exception to the global phenomenon of construction delays. The main goals of this study were to pinpoint the implications of project delays as well as practical remedies to the issues. Several interview sessions were conducted to collect information from various viewpoints, experiences, and positions towards eight (8) participants. In this study, quantitative approach was used which was the thematic analysis method was used to analyse the data and identify themes for the implications of delays and effective solutions. This study identified several main themes, namely cost, quality, time, and client satisfaction. An effective solution was also found through the comparison of the participants' answers from the interview sessions. Project knowledge, management knowledge, and regular progress meetings were among the important techniques identified through the survey. The study conducted had been well implemented and had achieved the study's objectives which are implications and effective solutions for project delaying. The relevance of studying these issues were to gain a better grasp of the ramifications of the implications that will be accepted in terms of client satisfaction. The results of this study should help those involved in the construction of Felda community buildings in terms of making decisions and making appropriate preparations if a similar situation occurs in the future. Through this, researcher had list out recommendation which would help in future studies. The recommendation was made for students or researchers which aiming to continue in implementing research regarding this study of implications and effective solutions of project delaying in Felda Community Building. The researcher should focus and concentrate more towards the region and state which have larger amount of community building projects.

Keywords: Project delaying, community buildings in Felda, thematic analysis, construction delays

1. Introduction

In today's globalized world, Malaysia's construction industries are rapidly expanding. It plays a vital and integral part in enhancing the nation's competitiveness as it strives to achieve the position of developed nation. Thus, on-time completion of a construction project is critical since time is valued and time is money. Time is one of the aspects that should not be overlooked or minimised because it is a vital factor in a building project that will also affect the entire cost of the project. One of the parameters and indications for obtaining good firm performance is construction completion time. Even though timely completion is regarded as one of the most important factors for project success,

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delays in construction project implementation continue to plague the construction sector not just in Malaysia but globally.

Felda Land Development Authority (FELDA) has been involved in a variety of construction projects, including infrastructure upgrades, improvements, and community building projects. Felda Investment Corporation was established in 2012 with a primary role of property development, management, and engineering services for projects undertaken by FELDA the government entity for the development of land and relocation initiatives with the objectives of eradicating poverty among settlers and improving socioeconomic and quality of life which bridges the gap between urban and suburban areas).

FELDA typically manages communal structures such as remodeling and constructing new community complexes, halls, religious schools, and mosques. Therefore, this study aimed to identify the implications of the project delays in Felda's Community Building particularly toward client's satisfaction.

1.1 Background of Study

Delays in any form of building project can have a wide range of negative consequences for management, customer satisfaction and quality. The increased rate of project delivery delays, which causes projects to surpass the initial time and cost budgeted, is a major criticism facing the Malaysian construction industry. The development of a nation's economy depends greatly on the construction industry. Malaysia's construction industry is viewed as performing below average, particularly when it comes to the building of public projects (Jatarona et al., 2016). One significant obstacle for Malaysia's construction industry is delay. Therefore, there were few factors and implications of project delaying had been identified. The factors were poor project management and planning, financial and weather conditions.

Farah (2019) claims that inadequate project management and planning can have several detrimental implications on project duration and completion. Twenty-eight (28) well-known construction procrastination elements in architecture have been designed by (Raman et al., 2019) and specified into the primary eight divisions. In addition to exterior considerations, these include customer-related elements, broker-related elements, consultants-related aspects, material-related elements, labour and equipment-related dimensions, monetary-connected elements, and bond-associated factors.

To sum up, there are several ways that construction delays might affect a project's performance. Construction project delays have a significant influence on time and expense overruns. The main effects of delay include time overrun, cost overrun, wastage and underutilization of manpower, reduced profits, arbitration, litigation, disputes between parties, reduced economic growth, client resentment and tying up of capital due to incomplete or abandoned projects, and reduced economic growth.

In this research, implications of project delaying towards client's satisfaction were highlighted. Client's satisfaction towards construction of three community building projects located in Bukit Tongkat, Raja Alias 3 and Neram 2 were observed. By recognising the implications of project delays and suggesting effective remedies in community building construction projects, the statistical results of this study served as a guideline to certain parties engaged in identifying their vulnerabilities. Furthermore, it was intended that the outcomes of this study served as a guideline for construction players in terms of carrying out the works within time, money, and quality specified in the original plan and contract.

2. Methodology

The methodology section describes all the necessary information that is required to obtain the results of the study. It consists of Research Design, Research Procedure and Research Instrument or other important information related to methodology.

2.1 Research Design

According to Jilcha (2019), asserts that questionnaires, surveys, and interview questions can be used to collect this data. Data that cannot be quantified but can be observed is referred to as qualitative data. Qualitative sources include field research and interviews. To accomplish the goals and objectives of this study, interview sessions were employed.

Qualitative research method was employed in this research with a variety of participants involved, including project manager, engineers, technical executives, and Felda's residents. Open-ended questions were the research tools utilised in the survey design. Interview sessions were held by individuals and groups. This design was picked because it works with the current situation, which comprises three projects in various locations. As a result, this strategy was used hybridly

2.2 Research Procedure

The research goals and the methodology that were employed were related. The flowchart was helpful in organising the work sequences and in the process of gathering data and information since it includes the steps that must be taken to achieve the goal of this research study. A flow chart was created to ensure that all activities were on track. As a result, the diagram in Figure 3.2 below was used to organizely illustrate the approach of this investigation.

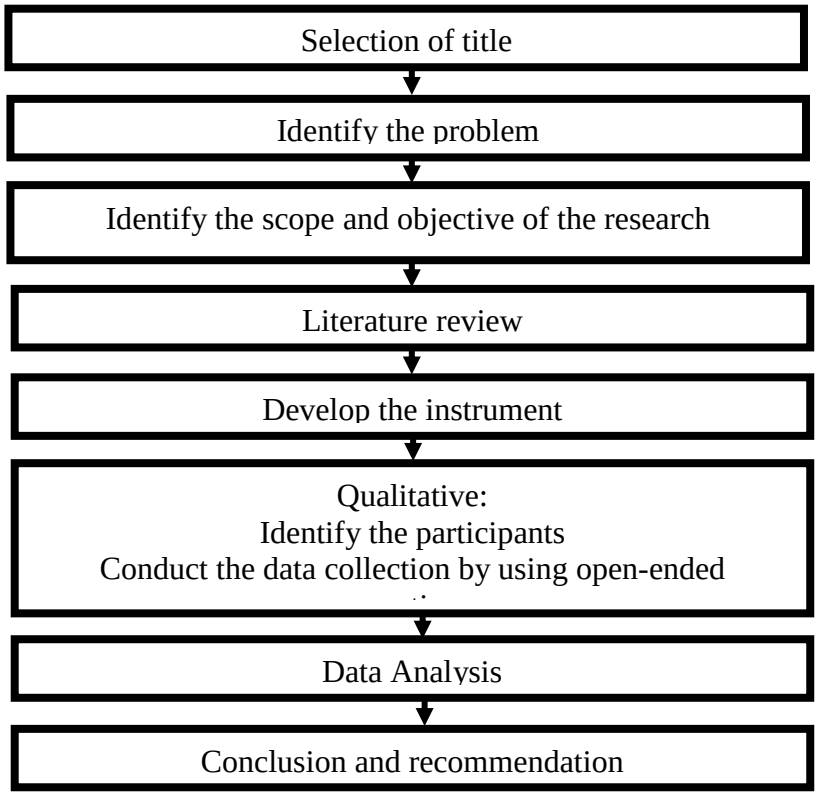

Fig. 1 - Methodology flowchart

2.3 Research Instrument

Qualitative data collection is the tool that was used as part of the instrumentation to carry out the research's goals. Gathering information from people with a variety of experiences could reduce the likelihood of biased data and boost the reliability of the data that were gathered. Open-ended questions were used as instruments. The research instrument which contains a set of questions was shown in Appendix 1. This set of instrument was reviewed and validate as shown in Appendix 2.

1. Results and Discussion

The results and discussion section presents data and analysis of the study. This section can be organized based on the stated objectives, the chronological timeline, different case groupings, different experimental configurations, or any logical order as deemed appropriate.

3.1 Results

The analysis of the data gathered was covered in this section. Data analysis' primary goal was to obtain accurate data that support the study's goal. Some software such as Excel and Thematic coding were helpful for data analysis. For creating graphs, tables, and charts, Microsoft Excel was employed while for coding frame, Thematic coding was used.

The objective of this section is to identify the implications of project delays in the Felda Community Building for client satisfaction. The data collected from individual and group interviews were analysed through Thematic Analysis as mentioned previously. A total of 8 participants were involved in this research. The analysis of this data investigates the implications of project delays on Felda Community Building construction activities for time management, overall cost, project quality and client satisfaction. Implications that were found from project delays have been identified and are categorized into codes and sub-themes as shown below.

This study used the Thematic coding to assess the relative frequency of delay effects and effective solutions to project delays. Yarnold et al., (2021), Elghaish et al., (2021), Hajirasouli et al., (2022), and Gharaibeh et al., (2022), have all employed this methodology, which is typical in survey research. The highest score/answer for coding were

implies perfect positive contribution to the issue. These rankings made it possible to cross compare the relative importance of the implications as perceived by the clients. Each individual impact's coding frame perceived by all respondents were used to assess the general and overall rankings to give an overall picture of the implications of construction delays in Felda community building construction. The same procedure was adopted for ranking the effective solutions.

An analysis of the participants' views on the implications of project delaying falls into 4 main themes. These main themes were, (i) Cost, (ii) Quality, (iii) Time, and (iv) Client Satisfaction. Figure 4.4 shows the main themes of project delays implications.

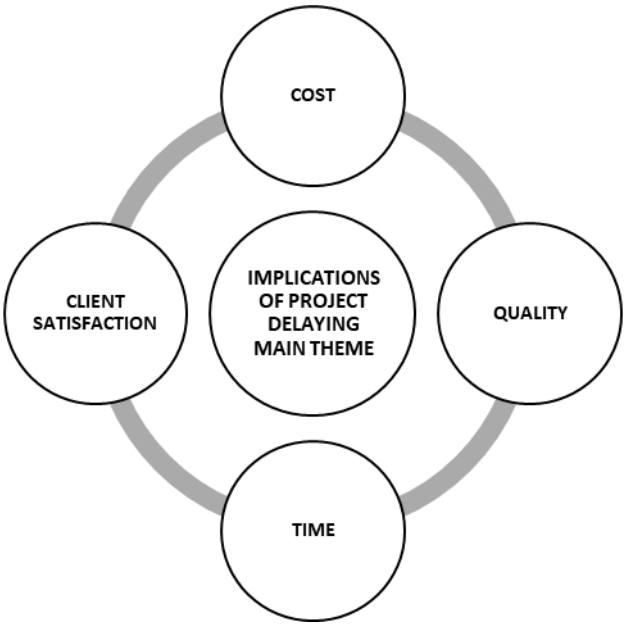

Fig. 2 - Implications of project delays main them

(i) Cost

Table 1 - Implications of delaying towards cost

Participants Statement from Interview	Initial Code	Sub-theme
Additional costs incurred by the contractor because of rising product prices. The Neram project is still in the approval stage for Variation of Price (VOP). Changes to the work were already made at the agreed-upon cost. The cost of the existing work will be applied to the new scope of work.	Fluctuating price of construction materials	Additional cost to contractor
In addition, for contractors, internal costs such as rolling money will increase.	Internal costs such as cash flow	
According to the contract, the cost does not increase. However, on the contractor's side, yes. In addition, he was also fined LAD.	Liquidated Ascertained Damage (LAD) towards contractor	
Costs incurred by the contractor because, for example, he rents machinery on-site and must pay the rental fee. And in the event of a delay, the rental period will increase. Costs are often heavy for contractors.	Long-term on-site machineries rental	
Delays in the completion of the project began with the increase in the scope of work and quantity.	Changes in scope of work and quantity	Additional cost for ongoing project
This decision was also influenced by the change in programme manager at that time. The opinions of the previous and current managers are not the same. Too many wishes and opinions from each	Multi-parties' intervention	
It is also possible that there will be a variation order (VO), which may cause an increase in cost. Perhaps we overlook BQ and other factors that can lead to VO. However, there are also some situations where, at that	Overlook works in Bill of Quantity (BQ)	

moment, the need for such a job is seen.		
In addition, there will be other additional charges to the consultant because it involves changes to the building drawings.	Re-draw the plans	Additional cost to consultant
The value of the contract did not change, but the operating costs increased. If the project is not completed, operating costs will continue to increase. in terms of mileage, employment, accommodation, and others.	Provision of project team operational cost increase	Additional operational cost

(ii) Quality

Table 2 - Implications of delaying towards quality

Participants Statement from Interview	Initial Code	Sub-theme
The quality of the project changes when the time frame of the original project has changed. After that date, the contractor will apply for an extension of time (EOT). In that time, the contractor will be in a hurry to complete the remaining period of work to avoid being fined.	Limited time to finish all balance works	Receiving bad end-project quality
Perhaps the quality of the work will be affected because the contractor, who is in a hurry to complete it, will cause the workers to be careless in observing the quality of the work. This building was recently vandalized, according to information I received. In addition, complaints related to water use or so-called water theft at the site	Carelessness of site supervision	
This material has its own lifespan. For example, doors Once installed but not ready until the end of the year, it will be inconvenient. An exchange will be needed by that time.	Lifespan of certain materials installed earlier	
There are also situations where, when the project takes too long to complete, the quality of the workers themselves decreases. The employees often avoid attending meetings and give various reasons. The discipline of the contractor's own employees and management is decreasing over time.	Avoidance of meetings and discussion	Maintaining the quality of workers

(iii) Time

Table 3 - Implications of delaying towards time

Participants Statement from Interview	Initial Code	Sub-theme
The use of community buildings by the public is also affected when they are late for work. Residents of the plan began to inquire when they could use the hall because they were captivated by the same progress.	Due to delay in work progress	Delay in handover process
The contractor was eligible for EOT, but the contract period had to be extended, and the completion was later than scheduled. The first and second owners had some doubts and misunderstandings. So, the second owner is worried about carrying out the remaining work where there is uncertainty that when a claim is made, it will go into his account or not.	Apply EOT to committee	Need to reschedule project timeline

(iv) Client Satisfaction

Table 4 - Implications of delaying towards client satisfaction

Participants Statement from Interview	Initial Code	Sub-theme
FICIPM also receives complaints from clients.	Receive comments and review	Bad relationship and engagements with clients
Customer satisfaction. We promised to complete it at the beginning of the year, but until now, it still has not been completed. We also received some complaints from clients.	Delay of handover date	
Our relationship with the client can be slightly strained due to our performance in managing the project. There will be new competitors that can make it more difficult for us to get projects as usual because projects often experience delays.	Bad reputation from previous project management	

The second objective of this section is to identify the effective solutions to avoid project delays in Felda Community Building towards client satisfaction. The data collected from individual and group interviews were analysed through Thematic Analysis as mentioned previously. A total of 8 participants were involved in this research. The analysis of this data investigates the effective solutions of project delays on Felda Community Building construction activities towards time management, overall cost, project quality and client satisfaction. Effective solutions that were expressed from participant's opinions have been identified and are categorized into codes and sub-themes as shown below.

An analysis of the participants' views on the effective solutions falls into 4 main themes. These main themes were, (i) Cost, (ii) Quality, (iii) Time, and (iv) Client Satisfaction. Figure 4.5 shows the main themes of project delays implications.

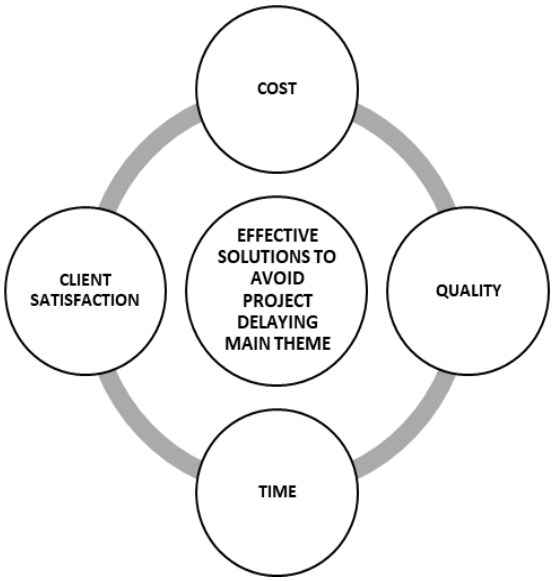

Fig. 3 - Effective solutions to avoid project delaying main theme

(i) Cost

Table 5 - Effective solutions of delaying towards cost

Participants Statement from Interview	Initial Code	Sub-theme
Procurement systems and contract management also play a role. When you want a quick tender, you want a quick contract, so it's not clear in general. Preliminary investigation of the site is very important. This project is often requested early but will be late during the tender process. During that period, changes to the manager took place, and from there, other changes will	Rushing in making decisions	Proper preliminary investigation at proposed site

also take place. During the initial investigation, QS must use common-sense logic to assess the situation.		
In addition, before the tender process, it is necessary to relook, because the problem is that many things are overlooked in the BQ. When something is related to PBT, it will cause a delay.	Overlooked scope works in BQ	
Furthermore, it may be possible to set the specification to be slightly lower than the current level while still maintaining quality.	Too high specification	Set standard quality
In terms of control over the project, this is also very necessary. Every two weeks, a progress meeting is held. A mitigation plan also needs to be prepared every time there is a problem.	Close monitoring on site	Proper management on construction phase

(ii) Quality

Table 6 - Effective solutions of delaying towards quality

Participants Statement from Interview	Initial Code	Sub-theme
In addition, material approval also needs to be sent by the contractor so that we know that the materials used are not of poor quality.	Complete documentation regarding quality	Requirement in pre-construction phase
If it does not follow the specified specifications, it is only necessary to remove the NCR. The responsible party needs to check or make a thorough inspection, such as an RFI. If the work is too slow, we need to issue a memo. If there is no change, for example, at Felda, 10% progress late will result in a first warning, 20% progress late, a second warning, and 30% progress late, a third warning, and then recommended contract termination.	Releasing memo/warning letter	Actions taken during construction phase
Close control at the construction site is also very important.	Close monitoring on site	
There should be awareness about quality for the workers who don't know. We also need to apply for contractors. For example, there is a CIDB rating named QLASSIC that has a certain score. This is a good thing to apply to employee values.	Lack of quality awareness	Project team attend courses

(iii) Time

Table 7 - Effective solutions to delaying time

Participants Statement from Interview	Initial Code	Sub-theme
When the initial investigation was carried out, which was before 2020, I was not involved, and only the consultant was involved in carrying it out. So, by changing the project team periodically, it is quite disruptive to the work.	Changes of project team regularly	Possible actions within construction phase by project team
At the initial stage, when the contractor sends the CPM, we need to review, and comment based on logic. For example, prefix work is cleaning work. Make sure this work is done early so that it is not repeated. We also need to make sure that the work is carried out according to the prescribed schedule so that there are no delays.	CPM monitoring	
At the initial stage, each party needs to get clear information, and coordination with each other needs to be very good.	Coordination within project team	
In addition, we need to define procedures, delivery times, objectives, stakeholders, and project teams. This	Creating standard procedures in project	

matter is important, and the success of a project depends on it.		
Perhaps at this stage of the tender process, we need to hire a contractor who has experience with our company. For example, a typical contractor knows more about the ins and outs of work, so he will avoid repetitive work.	Wisely choosing contractor based on experience	Pre-construction setting
We need to increase the number of employees, such as technical executives, who are seen as lacking at this time. to ensure our management is at a satisfactory level.	Lack of manpower	Human resource actions
In addition, our company also takes several courses that must be attended by employees such as engineers and others who are seen to be less efficient. This is to ensure the quality of our employees' work in handling and managing the project to avoid the problem of delays.	Efficiency of workers potential declining	

(iv) Client Satisfaction

Table 8 - Effective solutions to delaying client satisfaction

Participants Statement from Interview	Initial Code	Sub-theme
Hold regular meetings to answer all questions and doubts raised. Every problem that arises needs to be answered and resolved promptly.	Held meeting and discussion to solve problems	Taking fast action
After receiving a complaint, the action from our side is to inform the contractor again. Then, they will go to make a review. This proves that we are sensitive and always take action on the matter discussed.	Perform quick checking and inspection on site	Taking fast action

3.1 Discussions

This research discussion was to evaluate the data collected through the research conducted to ensure it was aligned and achieved the objectives which had been mentioned previously. There were two (2) objectives which had been selected during this research. The first was to identify the implications of project delays in Felda Community Building Construction for client satisfaction and second was to propose effective solutions to avoid project delays.

Implications of project delay in Felda Community Building Construction towards client satisfaction

By using the qualitative method which was interviewing towards selected participants respectively. This research highlighted four main implications that had been caused by project delays, which included cost, quality, time and customer satisfaction implications. After the data had been analyze, researcher had identified that the implications with the highest sub-theme among the other implications, was cost, with the total of four (4) sub-themes. While the lowest sub-theme was client satisfaction, with only one (1) sub-theme.

- Additional cost to contractor
  The increase in the material price, which was uncertain throughout the contract period after the project, has caused a delay problem. During the extended period requested by the contractor due to changes in the scope of work, there has been an impact on the cost because the price calculation of the contract value entered at the beginning of the tender was different from the latest price.
- Additional cost for ongoing project
  Participants informed that the wishes and opinions requested by the region manager, which often change during the project delay period, will increase the cost of the ongoing project. An increase in the scope of work and quantity can also happen on projects that have been delayed for too long. Oversight of the Bill of Quantity (BQ) provided by a certain party can cause an increase in Variation Order (VO), which can also contribute to an increase in cost for an ongoing project. Thus, this result was supported by research made by Yang and Wei (2010), the main causes of delay in the planning and design phases of construction projects in Taiwan are changes in the client's requirements, poor scope definition, an unrealistic and impractical initial plan, modification orders by the customer, and project complexity.
- Additional cost to consultant

Other than that, the consultant will then have to redo the drawing plan if the project is delayed because of significant modifications to the structure's scope of work. Due to increased paper usage, approved mileage, and other costs, the consultant's expenditure will rise as a result.

- Additional operation cost
  As a result of having to extend the payment period for the project group in terms of mileage, employment, lodging, and other expenses, this research also discovered that a project management company's operating costs significantly increased. The participants of interview sessions concurred that the operational cost value increased with the number of project teams offered in a team.

Effective solutions to avoid project delays

The second objective was also achieved by using the qualitative method, where the selected participants were interviewed and required to respond regarding the research of effective solution to avoid project delays which was the second objective of the research. This research contains four themes of effective solutions which include cost, quality, time, and client satisfaction. After the information were gathered and data was obtained, the result were shown that the highest effective solution proposed by the participants was towards theme cost and quality with three (3) sub-themes each, while the lowest proposed solution was client satisfaction theme with one (1) sub-theme.

- Proper preliminary investigation at proposed site
  According to the research findings, the participants recommended conducting the initial investigation accurately. This is since it was a crucial process to guarantee that there was little risk involved in expanding the scope of the operation. This statement was proven by research done by Ali Al-Keim (2017), reducing modifications during construction helps to reduce cost and time by ensuring that project components are approved prior to construction. A key factor in assuring the accuracy and reasonableness of the scope of work detailed in the Bill of Quantity (BQ) is the procurement and contract management systems. Hasty judgments about the BQ outline and the tendering procedure will cause significant errors during the building phase and cause the project's completion date to be extended. The interview participants also strongly recommended a proper review of the BQ because, in their experience, issues with local authorities might drag out and result in an extension of time.
- Set standard quality
  In addition, the study also found that setting quality standards such as specifications that were not too high in line with the budget could reduce the risk of increased costs in project delays.
- Proper management on construction site
  Other than that, the interview participants also emphasised how crucial it was to constantly keep a close eye on the project's development. Participants agreed that creating a mitigation strategy and holding meetings at least once a month were effective ways to prevent issues that result in higher expenses.

2. Conclusion

According to the study's findings that have been analysed, the researcher can conclude that participants, which consist of project teams, were aware of the current situations, which caused implications of project delays. Furthermore, because of the findings of this study, the researchers were able to analyse the most effective solutions to cope with the current problems. This indicates that participants were knowledgeable and concerned about surrounding situations and found solutions to ensure the matters wouldn't be repeatable. Therefore, it is expected that the findings and recommendations of the analysis presented in this study could provide helpful input and contributions to the parties involved in increasing the awareness of project delays towards Felda Community Building.

Based on the research which had been conducted, the researcher had found out several limitations which occurred during the research period. Through this, researcher had list out several recommendations which would help in future studies. These suggestions will also enable other scholars to access a large body of literature pertaining to this topic. Future research could focus and concentrate more towards the region and state which have larger amount of community building projects. Beyond that, similar study might be conducted in the future using a variety of data collection techniques. Using quantitative techniques or document analysis, for instance. Future researchers might also increase the number of participants to ensure an endless supply of data.

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