A STUDY ON THE FACTOR EFFECTING PROJECT DELAY IN THE HOUSING CONSTRUCTION

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SUPERVISOR'S DECLARATION

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in terms of scope and quality for award of the degree of Bachelor Project Management.

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Date: 18 DECEMBER 2015

STUDENT DECLARATION

I declare that this thesis entitle “A STUDY ON THE FACTOR EFFECTING PROJECT DELAY IN THE HOUSING CONSTRUCTION” is the result of my own research expect as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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ABSTRACT

This research is about the factor effecting project delay in housing construction. The purpose of this study is to identify factor delay in the housing project, to find out lack of fund to finance the project to completion effected on project delay, to investigate mistakes during construction and project management problem influence on project delay and to identify subcontractor delays effected project delay. Besides that, this study focuses on construction industries at Kuantan. .

The technique to study this project is I'm use a method with distributes the questionnaire to people who related on this study. I distribute the questionnaire to 66 respondents on Kota Sas Company. After I'm distribute the questionnaire, I use the Statistical Package for the Social Sciences (SPSS) software to analyze the data to get the result. The specific implication from the finding reported in this study can be grouped into four category, compensation, need for achievement, equality theory and job performance.

ABSTRAK

Kajian ini adalah mengenai faktor yang mempengaruhi kelewatan projek dalam pembinaan rumah. Tujuan kajian ini adalah untuk mengenal pasti kelewatan faktor dalam projek perumahan, untuk mengetahui kekurangan dana untuk membiayai projek tersebut siap dilaksanakan pada kelewatan projek, untuk menyiasat kesilapan semasa pembinaan dan pengurusan projek masalah pengaruh ke atas kelewatan projek dan untuk mengenal pasti kelewatan subkontraktor kelewatan projek dilaksanakan. Selain daripada itu, kajian ini memberi tumpuan kepada industri pembinaan di Kuantan. .

Teknik untuk mengkaji projek ini adalah saya menggunakan kaedah yang dengan mengedarkan soal selidik kepada orang yang berkaitan dalam kajian ini. Saya mengedarkan soal selidik kepada 66 orang responden di Kota Sas Syarikat. Selepas saya mengedarkan soal selidik ini, saya menggunakan Pakej Statistik untuk Sains Sosial (SPSS) perisian untuk menganalisis data untuk mendapatkan keputusan. Implikasi khusus daripada dapatan yang dilaporkan dalam kajian ini boleh dibahagikan kepada empat kategori, pampasan, keperluan untuk pencapaian, teori persamaan dan prestasi kerja.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Project success can be define as meeting goals and objective as prescribed in the project plan. A successful project that the project has accomplished its technical performance and maintained (Yaw et al 2003). The business had demonstrated the agreeable economy for the nations on the grounds that it requests rely on upon the expanding of the developing economy. The declining of economy had appeared by the declining the development action which had shown up a considerable measure of issue in procedure to complete and after that show up the deferral in development venture which it scratching of picture of our nation. In addition, Hampson et al. (2001) stated that destruction conflict resolution leads to additional costs and delays to a project.

In construction, delay can be characterized as the time overwhelm either past culmination date indicated in an agreement or past the date that the gatherings settled upon for conveyance of a venture. It is a venture that nit on track over its arranged timetable and is considered as regular issue in development venture. Delay is one of the most serious issue regularly experienced on development undertaking destinations. Postponements can bring about negative effect, for example, build cost, misfortune efficiency and income numerous claims in the middle of proprietors and temporary workers and contract end. Chan and Kumaraswamy (1997) found that the five principal and common factors of delay to be poor risk management and supervision, unforeseen site conditions, slow decision making involving all project teams, client-initiated variations, and necessary variation of works.

A few selected article were presented in this section on causes and effect delay on construction works. Base on Yates (2003) has study construction delays, the study developed a decision support system for construction delay analysis called (DAS). The principle classifications of deferral in DAS as indicated by the study, incorporate gear designing. For the outer delays, work, administration, material, proprietor, subcontractors, and climate. Mansfield et. The outcomes demonstrated that the most critical components, for example, financing and installment for finished works, poor contract administration, changes at site conditions, deficiency of material, and disgraceful arranging. Project can be delayed for a large number of reasons and usually impact on cost and time by Al-Momani (2000).

Each undertaking has its own cadence and stream. Utilizing your insight into venture objectives, needs and venture group motion, you can get on the notice indications of pending delays and you will be in a superior position to settle on the intense choice. Surprising delays can be minimized through minimized through strategic planning. Each undertaking ought to start with a contemplated, workable venture timetable consolidating distinguished conditions, and benchmarks. Each project ought to be oversee mind build up, tried system for convenient, important status reporting, whether formal or casual, give key data to distinguish missed due dates and potential task delay. Moreover, Arditi and Mochtar (2000) argue that poor quality on projects results in rework which causes drop in productivity levels. They clarified that low quality radiated from the lack of a legitimately prepared workforce, which was insufficient level of preparing, notwithstanding the low quality of preparing procurement that brought about such aptitudes deficiencies. The instance of workforce abilities advancement and preparing as a huge component for enhancing development profitability execution.

1.2 PROBLEM BACKGROUND

One of the major problem in housing construction is a project delay. Project can be delayed for a large number of reasons and usually impact on cost and time. The causes of delay in the construction industry in Indonesia are influenced not only by labour, but

also by other factors such as equipment, material, construction method, site management and professional mangement by Alwi 2002. In addition, Hampson et al 2001 state that dstructive conflict resolution leads to additional costs and delay to a project. Similarly, Chan and Kumaraswary 1997 found that the five principle and common factors of dealys to be poor risk management and supervision, unforseen site condition, slow decision making involving all project teams, client-initiated variations, and necessary variation of work. Delays and interruptions are among the difficulties confronted over the span of executing development ventures. Delays and additionally disturbances are wellsprings of potential dangers that present studies are investigating approaches to oversee, for example, specialized, social, monetary, legitimate, money related, asset, development and business. The reason for this examination is to evaluate cause and effect and interruptions in development ventures. This study is illustrative, intended to acquire sees from customers, counseling firms, administrative sheets and development firms as to circumstances and end results of postponements in development ventures.

Other researchers looked into delay factors in construction projects. Chan and Kumaraswamy (1997) identified five principal delay factors which are: poor risk management and supervision, unforeseensite conditions, slow decision making, client-initiated variations and work variations. Other delay factors in a study by Kaming, Olomolaiye, Holt and Harris (1997) are classified under cost and time overruns. The study uncovers that the main considerations affecting expense overwhelm are: material expense increment because of swelling, off base material estimation and level of many-sided quality. Then again, under time invade, the most imperative components bringing about deferrals are: outline changes, poor work efficiency, deficient arranging, and asset deficiencies. Haseeb, Xinhai-Lu, Bibi, Maloof-ud-Dyian, and Rabbani (2011) point out that the most common factors of delay are natural disaster in Pakistan like flood and earthquake. The concentrate additionally recognized others which are financial and payment problems, improper planning, poor site management, insufficient experience, and shortage of materials and equipment.

Towhid Pourrostam said that the 10 most causes of delay were, delay in progress payment by client, change orders by client during construction, poor site management, slowness in decision making process by client, financial difficulties by contractors, late in reviewing and approving design documents by client, problems with subcontractors,

ineffective planning and scheduling of project by contractor, mistakes and discrepancies in design documents, and bad weather.

There are numerous element that incite delay on development venture, for example, as lack of funds to finance the project to completion , changes in drawing, absence of powerful correspondence among the gatherings included, absence of data from advisors, moderate choice making and contractual workers indebtedness, varieties among others. The temporary worker and proprietor were found to have contradicting perspectives, for the most part pointing the finger at one another for deferrals, while the advisor are seen having a more moderate perspective. Al-Kharashi and Skitmore (2008) point out that the main cause of delay in Saudi Arabia construction sector for public projects is the lack of qualified and experienced personnel. A study by Ahmed, Azhar, Castillo and Kappagantula, (2002)identified ten most critical causes in Florida as building permits approval, change order, changes in drawings, incomplete documents, inspections, changes in specifications, decision during development stage and shop drawings and approval. Sambasivan and Soon (2007) identify ten most important causes of delay in Malaysian construction industry contractor's improper planning, contractor's poor site management, inadequate contractor experience, inadequate client's finance and payments for completed work, problems with subcontractors, shortage in material, labor supply, equipment availability and failure, lack of communication between parties, and mistakes during the construction stage.

1.3 PROBLEM STATEMENT

Around the globe, numerous studies demonstrated the time and cost invade issue is a typical issue in development venture. Then again, no scientists explore this issue as indicated by the periods of development. Consequently, this study is to arrange the overwhelm variables into periods of venture life cycle which incorporate arranging stage, configuration stage, development stage and completing stage. past study including various diverse nations. This study was found that the critical delay reasons are cash flow and financial difficulties faced by contractors, contractors' poor site management and ineffective planning and scheduling by contractors. With this study we will find project delay cause by lack of fund to finanec the project to completion.

Cohen and Palmer (2004) identify sources of construction risks to include changes in project scope and requirements; design errors and omissions; inadequately defined roles and responsibilities; insufficient skilled staff; force majeure; and new technology. Baloi and Price (2003) categorize construction risks as technical, social, construction, economic, legal, financial, natural, commercial, logistics, and political. Similarly, Mills (2001) lists three most important risks to include: weather, productivity of labour and plant and quality of material. Other researchers such as Finnerty (1996), and Miller and Lessard (2001) have categorized same risks in addition to demand, supply, regulatory, operational, completion and sovereign. Noulmanee *(*1999) investigated causes of delays in highway construction in Thailand and concluded that delays can be caused by all parties involved in projects; however, main causes come from inadequacy of sub-contractors, organizations that lack sufficient resources, incomplete and unclear drawings and deficiencies between consultants and contractors. Al-Momani (2000) investigated causes of delay in 130 public projects in Jordan and found that main causes of delay were related to designer, user changes, weather, site conditions, late deliveries, economic conditions and increase in quantity.

The study uncovers that the main considerations impacting expense invade are material expense increment because of expansion, wrong material estimation and level of intricacy. Then again, under time overwhelm, the most essential elements bringing about postponements are outline changes, poor work efficiency, lacking arranging, and asset deficiencies. This are error amid the development and task administration issue and it will make a venture get to be postpone. For example, if the undertaking under time invade, its can make venture won't complete in time so it will delay.

A typical reason for venture deferrals is subcontractors and experts. On the off chance that an organization contracts out work for particular activities, certain delay may happen as a consequence of the contracted work, making the venture get to be postponed. These circumstances are frequently troublesome for an association to expect and overcome and may require the association to endure the delay. A typical reason for subcontractor postponement results from subcontractors tackling an excess of activities in the meantime. Includes arranging, distinguishing, breaking down, creating danger taking care of procedures, checking and control. Venture colleagues especially

customers, experts and contractual workers ought to wipe out/moderate postponements when assuming their separate parts.

Noteworthy from this is subcontractor delay will bring about the undertaking get to be postpone. Since if the subcontractor postpone, for example, in the event that they taking an excess of undertaking in the meantime they can't deal with it and mybe they dont have enough laborers and this can make the task can't complete at the time, they have to add time to complete the venture. Along these lines, this will make the undertaking get to be postpone.

1.4 OBJECTIVE OF STUDY

The objective of this study is

1) To find out lack of financial that causes project delay
2) To investigate mistakes during construction and project management problem influence on project delay
3) To identify subcontractor delays effected project delay

1.5 RESEARCH QUESTION

This study on the factor of project delay in the housing construction will address the following question:

1) What is the effect on lack of financial that causes project delay in housing construction?
2) What is th effect of investigate mistakes during construction and project management problem in housing construction?
3) Does the subcontractor delays influence project delay in housing construction

1.6 SCOPE OF STUDY

The main focus of this research is to know what are the factor of project delay in housing construction. This study also aimed to the impact of the project delay in housing construction. The sample of this study cover contractor G5 and above in housing construction in Kuantan Pahang. The target population for this research is 100 employees but the size of sample limited to 80 respondents only.

1.7 SIGNIFICANT OF STUDY

The body of knowledge on project delay in Malaysia will grow with the contribution of this study. In Malaysia, there have been various studies conducted project delay in construction. Some of the study have been conducted on project delay in housing construction in Malaysia.

1.8 OPERATIONAL DEFINITION

For the purpose of this research the following concepts have been defined:

Project Delay

In study of Assaf and Al-Heijji (2006) construction delay was define as “the time overrun either beyond completion date specified in a contract, or beyond the date that the parties agreed upon for delivery of a project”. Delay was also define as an “act or event which extend required time to perform or complete work of the contract manifests itself as additional days of work” by Zack (2003).

Lack Of financial that causes project delay

Interest in a built office speaks to an expense in the transient that profits advantages just over the long haul utilization of the office. Along these lines, expenses happen sooner than the advantages, and proprietors of offices must acquire the capital assets to fund the expenses of development. A task can't continue without satisfactory financing, and the expense of giving sufficient financing can be very huge. Thus, consideration regarding venture money is an essential part of undertaking administration. Money is additionally a worry to alternate associations included in a task, for example, the general temporary worker and material suppliers. Unless an owner immediately and completely covers the costs incurred by each participant, these organizations face financing problems of their own, by Assaf, S.A. and Al Hejji, S. (2006).

Mistakes during construction and project management problem

At the point when coordinated changes or educated variety mandates are issued by the proprietor, numerous don't request that the contractual worker give a day by day record of work, hardware, materials, and so forth. Inability to acquire an every day record of the changed or variety work may prompt higher expenses. Inability to get and survey the every day record of changes or varieties denies the proprietor the chance to beware of moderation of harms. At the point when a coordinated change or taught variety order is issued, one of the terms ought to be that the contractual worker should give a definite day by day record of the work included in the change or variety to the proprietor. Chan and Kumaraswamy (1997) identified five principal delay factors which are: poor risk management and supervision, unforeseensite conditions, slow decision making, client-initiated variations and work variations.

Subcontractor Delays

Development botch may begin with a solitary subcontractor, and course through the work power chain to influence the calendar and prompting harms to various gatherings. Ng, Tang and Palaneeswaran classified subcontractors to, equipment-

intensive subcontractors (who are hired due to their specialized plant and equipments), and labor-intensive subcontractors those who are hired as a result of their specialized labor resources.

1.9 EXPECTED OUTCOMES

From this study, there will show that the factors of delay that influence the housing construction. So management can get clearly what is the cause of delay in order to achieve objective in the organization.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In the chapter before, the key terms, problem statement and also the most important for these studies have been discussed. The most specific research objective, hypothesis and framework of this study also were highlight.

A study of literature can be seen as an answer to the problem statement and support the researcher to comprehend the result of the empirical study. In this chapter a comprehensive literature overview of the constructs being investigated is provided. This chapter focus on defining delay and variety of factor delay.

A purpose of this chapter is to provide a review of past research efforts related to delay and the factors of delay. A review of other relevant study also was shown. The review is detailed so that the present research effort can be properly tailored to add to the present body of literatures well as justly the scope and direction of the present research effort.

2.2 DELAY

There are a number of definition for delay. In the construction management context, the simplest definition of a delay is made by Mubarak (2005) as “an event or a condition that result in finishing the project later than stipulated in the contract”. Callahan et al. (1992) define delay in construction claims as “the time during which

some part of the construction project has been extended or not executed owing to an unexpected event". In another study, Trauner et al. (2009) describe delay as "to make something happen later than expected or to not act timely". It is usual for delay to occur on construction project. Callahan et al. (1992) claim that schedule have an important role in construction delays; since the effect of delays on the project completion date can be displayed and future delays can be anticipated by rescheduling the project through the computer.

A few selected related articles were presented in this section on causes and effects of delay on construction works. Yates (2003) studied construction delays, the study developed a decision support system for construction delay analysis called (DAS). The principle classifications of delay in DAS as indicated by the study, incorporates designing, equipment, outside delay, work, administration, material, proprietor, subcontractors, and climate. Similarly, Mansfield et al., (1994) studied the causes of delay and cost overrun in construction projects. The outcomes demonstrated that the most imperative components are financing and installment for finished works, poor contract administration, changes in site conditions, deficiency of material, and disgraceful arranging.

Al-Momani (2000) said, conducted a quantitative analysis of construction delays by examining the records of 130 public building projects constructed in Jordan during the period of 1990-1997. Moreover, Assaf, Al-Khalil, & Al-Hazmi, (1995) for example, provide a concise summary of the methodologies used by transportation agencies to establish the contract duration used for highway construction projects, and also provides a schedule guide for field engineers during construction. Similarly, Mohammed & Isah (2012) conducted a review on project delays in developing countries during planning and construction stages. In their study they found that the delay and cost overruns of construction projects are dependent on the very early stages of the project. In another related study, Wilson (1992) examined the role of the owner and architect/engineer's roles in the prevention and resolution of construction claims. Wilson also abridged the reasons for development claims which include additional work, undertaking deferrals and quickening, absence of administration, constrained site get to and change in work routine

2.3 Lack Of Financial That Causes Project Delay

Cost is one of the significant contemplations all through the venture administration life cycle also, can be viewed as a standout amongst the most essential parameters of an undertaking and the main thrust of undertaking achievement. Notwithstanding its demonstrated significance, it is normal to see a development undertaking neglecting to accomplish its goals inside of the particular expense. Ihuah and Fortune, 2013 stressed that a major constraint to development projects completion since 1960 to the present state of affair is a lack of funds. This is particular to the wrong distribution of the obliged assets to improvement activities and this have the basic impact of making the task be relinquished.

Finance is the supporting variable for any venture achievement and where such is deficient or improperly allotted the undertakings have a tendency to endure surrender situations. Therefore, it critical that appropriate allotment of the required assets is made for any advancement tasks to maintain a strategic distance from the ventures injuring into relinquishment circumstance in the economy. In the meantime, the venture improvement timing ought to be appropriately conceptualized, arranged and executed as needs be.Those who cannot obtain loans from financial institutions usually turn to relatives, personal savings, or to private financiers or to money lenders who may charge interest rates as high as 10 percent per week (United Nations, 1987).

Financing low cost housing is a central issue. It is along these lines critical that extraordinary money related offices be accommodated this reason. These facilities have to provide for easy repayment terms and particular implementation policies have to be evolved which suit different situations and general development policies (Aziz, 1981).

2.4 Mistakes During Construction And Project Management Problem

Construction projects are innately perplexing and dynamic, and including various criticism forms. A considerable measure of members people and associations are effectively included in the construction project and they intrigues may be absolutely or contrarily influenced as a consequence of the task execution or project completion. Distinctive members with diverse experience and aptitudes generally have diverse desires and interest. This naturally creates problems and confusion for even the most

experienced project managers and contractors. Commitment from all the parties involved is essential for successful completion of any project (Iyer and Jha,2005).

First attribute site accidents due to lack of safety measures because of absence of wellbeing measures is because of absence of responsibility from both customer and contractual worker towards the venture. Site mishaps hurt people and devour time, as well as it is watched that profitability of work diminishes altogether after a mischance. Time is likewise squandered in taking care of mischances and supplanting the harmed individual by a man with lesser or superfluous aptitudes. This then identifies with the endeavors required on preparing and advancement. These can be kept away from if customer and contractual worker are resolved to suitable wellbeing measures embraced on the site. Second property absence of inspiration for temporary worker for ahead of schedule completion for example no incentive for early finish etc, plainly connections absence of duty from the customer and different partners. Development activities are completed inside of a predefined time the situation that calls for legitimate time administration specifically taking out all boulevards of postponements and interruptions. A study by Kumaraswamy and Chan *(*1998) on causes of construction delays found differences in perceptions as to causes of delays by different groups of participants in building and civil engineering works. They suggested that biases of different industry groups might direct blame for delays to other groups.

2.5 Subcontractor Delays

Subcontractor expect toward temporary worker all commitments, rights, obligations and review that contractual worker accept toward proprietor and others under the agreement reports. Subcontractor is bound by all translations of the agreement records made by the proprietor or the designer/specialist and outfitted to it by temporary worker that are tying upon contractual worker. The agreement reports will be made accessible upon Subcontractor's solicitation.

At the point when the extent of work and sensible conditions between subcontractors works are not completely comprehend by general contractual worker and proprietors, it turned into a basic issue to the accomplishment of perplexing and quick paced ventures. Taken a toll case and disappointed clients because of the contention

between general contractual worker, subcontractors and other undertaking members would then took after.

Costantino, Pietroforte and Hamill revealed that labour-only subcontractor beneficial the subcontractor by reducing the cost of mobilization and purchasing material. Quality issues and claims may even now happen in getting the supply of material for utilization of this work just subcontractor. Along these lines, some broad contractual workers lean toward full subcontracting to move danger and risk. Subcontractor, or called multilayer subcontracting/dormant subcontractor, permit the subcontractor to be less defenseless against vacillation in business, have more adaptability in workforce coordination, and have the capacity to decrease expense of administration

2.6 SUMMARY

The detail of project delay have been studied accurately in this chapter. The review about the important of factor delay in housing conatruction was been detailed in this chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The central focus of this chapter is to outline the method to be used for the collection of data, presentation and analysis of data. This chapter will also discuss more on population, sample, sample size, sampling technique, source of data, research instruments, data analysis and statistical tool employed to test for the strength of relationship. This chapter will also cover the type of methodology used in this research work, the criteria for selecting the methodology is solely based on the problem that is found in this research and structured research questions. Research is a process of collected, analyzing and interpreted and interpreted information to answer question. But to qualify as research, the process have certain characteristic. The overall objective of this chapter is to describe the stage in the research methodology used in this study. The method used in research methodology is survey questionnaire technique. In survey technique use to formulating problem and develop hypothesis also know concept and theories already developed and background of the study.

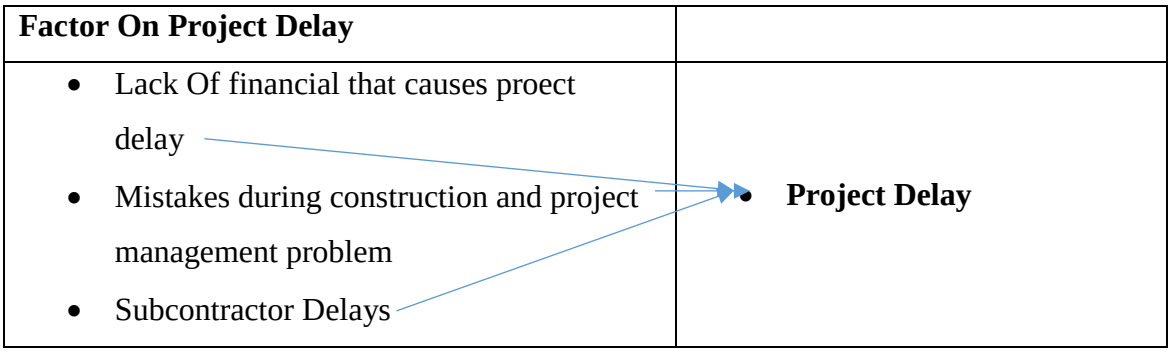
3.2 PURPOSE OF RESEARCH

Research problem is the first step in the progression of a research work, if this has been made known, then the aims and questions will follow suit. The priority is to show how the aims or objectives would be actualized (Walliman 2001).

The purpose of this research is to unearth the truth and also to know the answers to the structured questions through the use of scientific approaches.

3.3 CONCEPTUAL FRAMEWORK

Independent Variable Dependent Variable



3.4 RESEARCH PROCESS

Research process is a procedure of creating an empirical test to support or answer a claim knowledge. The purpose of research design is to ensure that the evidence obtained enables us to answer the initial objective clearly.

There are several type of research design and one of them is pre-experimental design. The pre-experimental design have three common design that is one-short case study, one-group pretest, post test design and intact-group comparison. The treatment X is tried on the single group and observation O is then made one of the member of the group to acess the effect of the treatment.

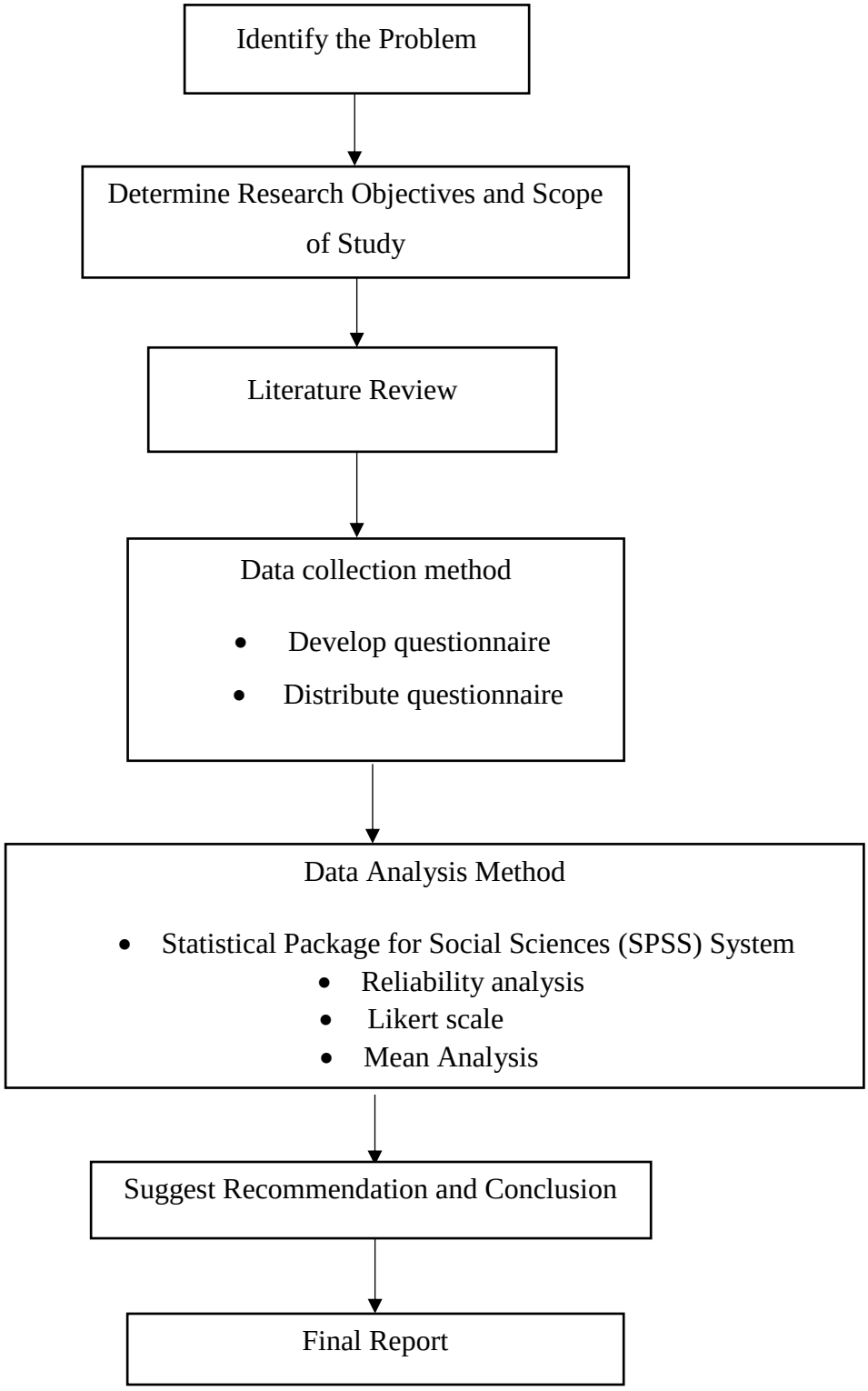


Figure 3.5: Flowchart of methodology

3.6 POPULATION AND SAMPLING

For any research, the samplesize of any study must be distinguished amid planning phase of the study. Then again, populace must be draw and after that decide the extent of the specimen taking into account the quantity of populace. According to Salant and Dillmon (1994), the number of sample is determine by four factor: 1) how much sampling error can be tolerate; 2) population size; 3) how varied the population is with respect to the characteristic of interest; and 4) the smallest subgroup within the sample for which estimates are needed.

Using Krejcie and Morgan (1970) theory, the estimation of sample size in this research is a commonly employed method. So, this study estimates the sample size using Krejcie and Morgan (1970).

The relationship between total population and sample size is establised in table 3.1. The table show that when population increase, the sample size is also increase. However, it is considered whether the sample size is enough to provide accurancy to base decision on the finding with confidence.

Table 3.6 : table for determining sample size from a given population.

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Source: Krejcie and Morgan, 1970

3.6.1 Population

For this resarch the terget will be in area Kuantan Pahang to participate in this study. The population tergeted for this study included all staff in of a particular contractor level G5 and above that had been choosen in housing construction, its include all the level in organization such as CEO, manager, supervisor and labor. The population target in this study is (N=80) resondents.

3.6.2 Sample

The relationship between total population and sample size is shown in Table 1 at the appendix. When the number of population is increase, the sample size also increase. According to Krejcie and Morgan (1970) when the population is N=80 the sample should be chosen is S=66.

3.7 DATA COLLECTION TECHNIQUES

Data is one of the important and vital aspect of any research studies. Every research is based on the data which is analyze and interprated to get information. There are two source of data have used in this research: primary data and secondary data.

3.7.1 Primary data

Primary data are the data collected for the first time like surveys, experimental or direct observation. The researchers are collecting the real time data from them means that the original data has been collected for the purpose in mind. This data also has not been published yet and is more realible, real, and objective than secondary data.

Primary data also not change or converted by human beings; therefore its validaty than secondary data.

The collection data tool that has been chosen in this study is quetionnaire. Most commonly use the quetionnaire in the survey. Quetionnaire have a list of quetions whether in an open-ended or close-ended for which respondents will give an answer according to their knowledge. It is can be conducted via email, telephone,in an institute, live in a public area, through electronic mail or fax and other methods.

3.7.2 Secondary data

Data that have been collected by others is a secondary data. This data may be available in the published or unpublished form. The researchers will find the secondary data when it is not possible to collect the primary data. Basically, secondary data provide the researcher to understand more about the topic and give clear perspective and view on the current study.

One of the secondary data that have been used in this study is journals, industry surveys, academic material and web site. This research usses more journals and book to obtaining data. Journals provide up-to-date information compare book which is sometimes used old information on the specific topic on which the researchers are searching rather than talking about more general topics.

Nowsday, books are available for any subjects that need to inquire about. Generally, the book are utilized before the theme of exploration have chosen. Books give understanding on the amount of work has as of now been done on the same points and thencan prepare the literature review.

3.8 QUESTIONNAIRE

The questionnaire survey is used a quantitative data collection method. the questionnaire is easy to distribute to the respondents in the employee an organization at

company, which it is simple for them to answer, the respondents only need to tick for the answer, so not too much time is consume by using this method. The respondents also have two options which are to answer it at that moment and collect the questionnaire after they are finish or give them period of time at least one week to answer the questionnaire after one week all the questionnaire will be collected. By using this method more data be collected and according to what we want the respondent respond because it was the close ended questionnaire. There are four scale that can be used to the measurement of the variable, which is the nominal, ordinal, interval and ratio scale. According to Cavana and Delahaye (2001) the nominal scale with respect to the difference through classifiying object or person into groups and provides the least amount of information on the variable. The measurement of ordinal scales are requiring that higher numbers represent higher values and the lower number and the lower number represent the lower value. The number will choose depend on this statement giving in the questionnaire.

In this research the nominal scale are used to develop question about certain categories or group. For example, through to the variable of gender, respondent can be group into two categories, which is male and female. Beside, in design the quetionaire, these researches also use the interval scale. According to Cavana and Delahaye (2001), interval scale allows us to perform certain arithmetical operation on the data collected from the respondent. In the interval scale in the respondent have a several option to choose, starting from strongly disagree, disagree, neither agree, agree and strongly agree.

In this research, for the instruction and organizing the questions we divide the sample questionnaire in two section. The first section is demographic data. According to Cavana and Delahaye (2001), demographic data is the personal data which when to be organized. For example age, gender and others. The other section is sensitive personal data.

3.8.1 Design of questionnaire

Measurement and scaling used for the design is based on what variable to be measured in this study. The design of question section is as below:

Section A: Demographic

In this research the Section A is about demographic question. For the demographic scaling are used is nominal for their age, gender, their working experience, education level and others. The respondent only have to tick the right information about them self and if there are other information they can write on 'others' and specify the information. So, nominal scala is suitable to measure the demograpic respondents. Basically, nominal data will be measure by frequency distribution.

For ratio-level scale, data show the characteristic of interval measurement and there exists a true zero like salary, age and years of service in organization.

Section B: Factor On Project Delay

For the section B, the question will ask about the factor of delay in housin construction. The questions is will be identified about objective of this study related with the factor of delay in housing construction. The questionnaire for this objective is self-administered which take from the literature review and based on the past review from others study.

There are three part in section b. For part one is about the first factor that is financial and in factor financial its have six question that is does the salary been paid on time, does the project always follow the schedule, does the material use from the high quality, does the project inaccurate cost estimates happened, does incomplete design at the time of tender happened and does the fluctuation of price material effected finance the project. Second factor is mistaken during subcontractor and project management problem. There are six question in this factor that is does the company use high quality

equipment, does quality of equipment is important to construct a strong housing construction, does effective project management determine completion project on time, does project management will effective monitor project site to determine the completion of project, does poor understanding of the project happened and do have procurement problem. The last factor is mistaken during construction and project management problem. There are six questions in this part that is does the company use high quality equipment, does quality of equipment is important to construct a strong housing construction, does effective project management determine completion project on time, does project management will effective monitor project site to determine the completion of project, does poor understanding of the project happened and do have procurement problem. The respondent have to tick in the box that has been placed beside the questions.

3.9 DATA ANALYSIS

Statiscal method can manipulate, interpret, summarize and describe the quatitative of data collection. All the data that collected will be gather to be usedfor further research. To analyze the data collection, the researcher will be using the Statistical Package for the Social Sciences (SPSS) software. The respondent demography variable which include age,gender, position and other else. This software will determine the information according to data from questionnaire.

Each answer from respondent will be labelled for easier to key in the SPSS. The stastical techniques enable to analyse the raw data preciecly obtained from the measuring instrument.

3.9.1 Reliability Analysis

Reliability analysis will used to compute the Cronbach's Coeffiecient Alpha. Thus, Cronbach's Coefficient Alpha was measured to check the reliability of the collected data and to examine the internal consistency of the items of the questionnaire when research variables were on Likert scale. The values between 0.5 until 0.7 are

mediocre, value between 0.7 until 0.8 are good, values between 0.8 until 0.9 are great, and the value 0.9 above is superb according to Hutcheson and Sofroniou (1999).

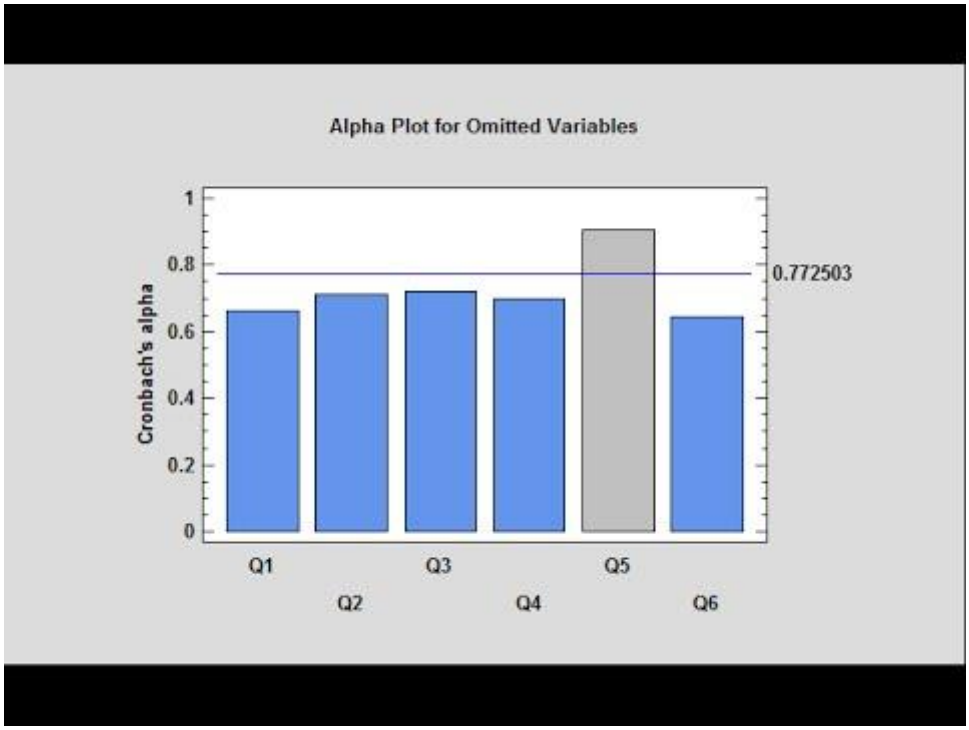


Table: Reliability Analysis

3.9.2 Likert Scale

Originally developed by Rensis Likert (1932), this type of rating is the most widely used attitude scaling technique. Likert rating scales are used in various settings, including clinical, educational, administrative, and organizational contexts. The reasons for its popularity including relatively easy to construct, yields reliable scores and flexibility in its ability to measure many types of affective characteristics.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

Table: Likert scale

3.9.3 Mean Analysis

Mean analysis will be computed using answers obtained through the questionnaires. Through formula below:

$$\text{Mean Index} = \frac{\sum \alpha i x i}{N}$$

Where:

αi = constant expressing the weight to each response (1 to 5)

xi = frequency of the response

N = total number of response

CHAPTER 4

DATA ANALYSIS

4.1 INTRODUCTION

This chapter will discuss about the result and discussions of data analysis that has been collected from Kota Sas at Indera Mahkota, Kuantan, the questionnaire has been distribute for 66 respondents from 80 sample. After that, data will be analyze and will be going through with several process of coding, checking and editing to process generate of secondary data using SPSS software. Therefore, it is structure by Pilot Test is conduct to check whether the questionnaire is valid or not, follow by Normality test to know the data normal. After that, general information and respondent demographic will be analyzed, and then descriptive analysis will contribute about perception on service dimensions in fast food. Lastly, Person Correlation Analysis is to verify the relationship between dependent variable and independent variable. Finally, at the end of chapter, there will be summary about the research founding to answer the research objective.

4.2 PILOT TEST

Pilot test is a test to verify the questions made is correct in terms of the sentence, or typographical errors .Pilot test will be distributed to small-scale respondent to answer questions and to comment about the question if there have error. Pilot test distributed to 16 respondents with percentage of 10% from the total respondent. Once completed, the data were analyzed using the reliability analysis. The result showed that the Cronbach's

Alpha is 0.854, that it is very strongly relationship due to the rule of thumb is 0.70 is the acceptable level. After that, questions can be distributed to all respondent in Kota Sas Company.

Table 4.1 Pilot test

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.854	.843	25

4.3 DESCRIPTION ANALYSIS

A total of 66 questionnaires were completely collect from employees in Company Kota Sas, Kuantan. Thus, for the demographic of respondent, there included gender, age, race, education, marital status, service and salary. Then, for the general information, there have two section that is section A and B.

Table 4.2 Desriptive Analysis

Descriptive Statistics

	N	Mean	Std. Deviation
Gender	66	1.29	.456
Age	66	2.24	.681
Race	66	1.92	1.194
Education	66	2.09	.872
Marital_Status	66	1.64	.694
Service	66	3.20	1.056
Salary	66	3.65	1.307
Valid N (listwise)	66		

Table 4.3 Frequencies Gender

Statistics

Gender

N	Valid	66
	Missing	0
Mean		1.29
Median		1.00
Mode		1
Std. Deviation		.456

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	47	71.2	71.2	71.2
	Female	19	28.8	28.8	100.0
	Total	66	100.0	100.0	

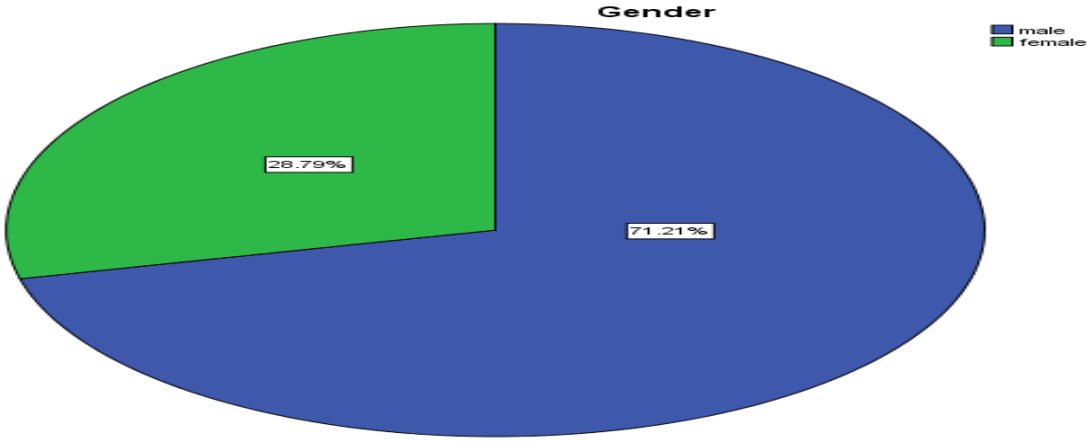


Figure 4.1 Gender

According to pie chart at the top, it shows that the majority of male respondent is greater than female. For male respondent the frequency was 47 by percentage is 71.2%. However for the female they only 19 respondent from total 169 by percentage is 28.8%.

Table 4.4 Frequencies Age

Statistics

Age

N	Valid	66
	Missing	0
Mean		2.24
Median		2.00
Mode		2
Std. Deviation		.681

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20	9	13.6	13.6	13.6
	20 to 35	32	48.5	48.5	62.1
	36 to 50	25	37.9	37.9	100.0
	Total	66	100.0	100.0	

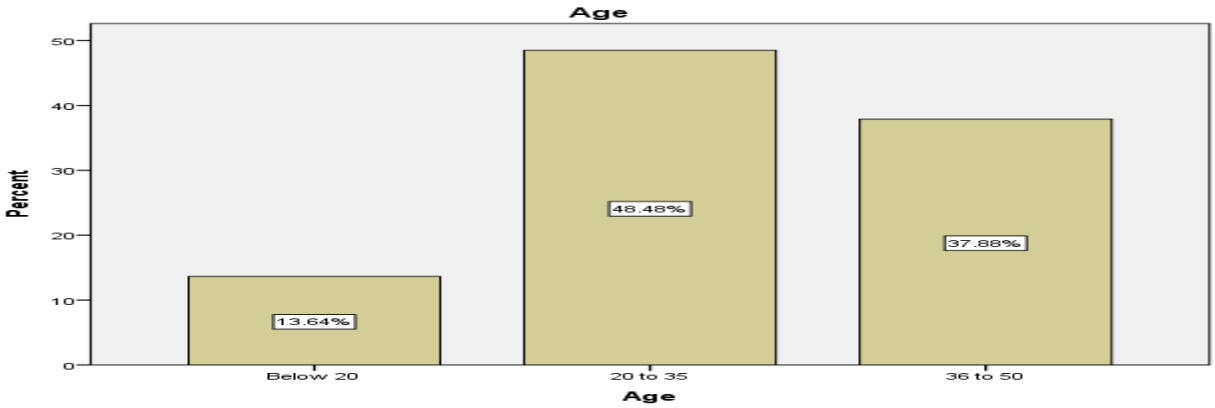


Figure 4.2 Age

The number of age below 20 years old is 9 persons with (13.6%), 20-35 years old was 32 persons with 48.5%, 36-50 years old was 25 persons with 37.9%. It means the majority of respondent age between 20-35 years old had answer the questionnaires and the minority of respondent age is below 20 years old.

Table 4.5 Frequencies Race

Statistics

Race

N	Valid	66
	Missing	0
Mean		1.92
Median		1.00
Mode		1
Std. Deviation		1.194

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	37	56.1	56.1	56.1
	Chinese	9	13.6	13.6	69.7
	India	8	12.1	12.1	81.8
	Other	12	18.2	18.2	100.0
	Total	66	100.0	100.0	

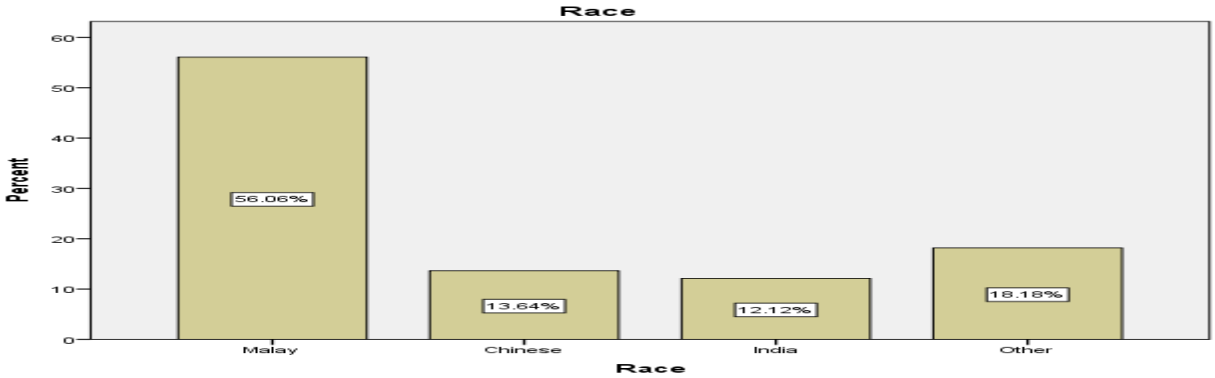


Figure 4.3 Race

The number of race Malay is 37 person with 56.06%, Chinese is 9 person with 12.64%, India is 8 person with 12.12%, and others is 12 person with 18.18%. It mean the majority of respondent race is Malay had answer the questionnaires and the minority of respondent is India.

Table 4.6 Frequencies Education

Statistics

Education

N	Valid	66
	Missing	0
Mean		2.09
Median		2.00
Mode		2
Std. Deviation		.872

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below SPM	16	24.2	24.2	24.2
	Postschool diploma orcertificate	33	50.0	50.0	74.2
	Bachelor degree	13	19.7	19.7	93.9
	Master	3	4.5	4.5	98.5
	PHD	1	1.5	1.5	100.0
	Total	66	100.0	100.0	

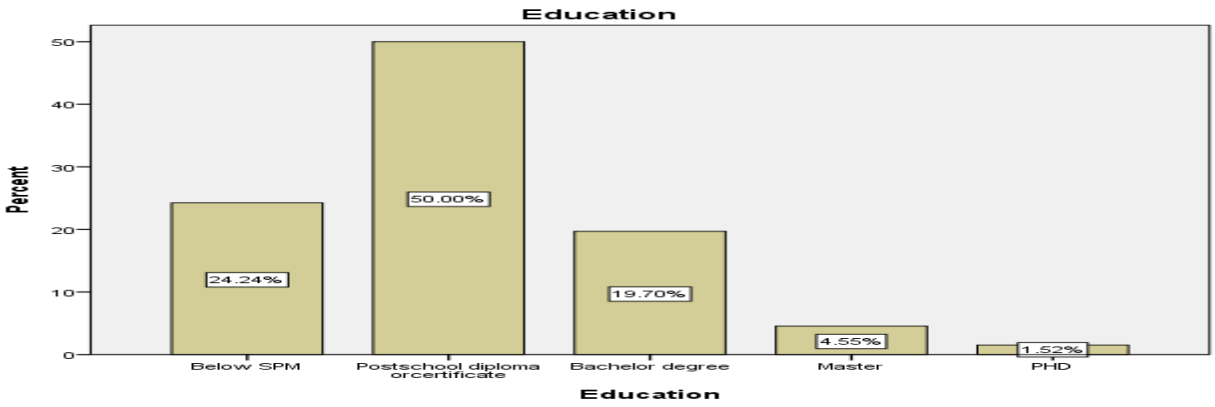


Figure 4.4 Education

The number of education below SPM is 16 with 24.2%, diploma is 33 with 50.00%, degree is 13 with 19.70%, master is 3 with 4.55 and PhD is 1 person with 1.52%. It mean the majority of respondent education diploma had answer the questionnaires and the minority of respondent education is PhD.

Table 4.7 Frequencies Marital Status

Statistics

Marital_Status

N	Valid	66
	Missing	0
Mean		1.64
Median		2.00
Mode		2
Std. Deviation		.694

Marital_Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	30	45.5	45.5	45.5
	Married	32	48.5	48.5	93.9
	Divorces	2	3.0	3.0	97.0
	Windowed	2	3.0	3.0	100.0
	Total	66	100.0	100.0	

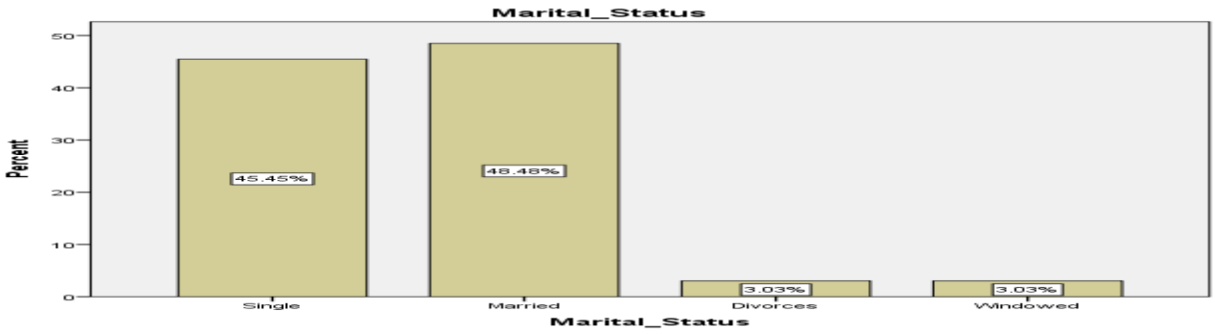


Figure 4.5 marital status

The number of marital status single is 30 with 45.45%, for married is 32 with 48.5%, for divorse is 2 with 3.0%, for windowed is 2 with 3.0%. It mean the majority of respondent marital status is married is 32 and the minority and respondent marital status is divorce and windowed.

Table 4.8 Marital status

Statistics

Service

N	Valid	66
	Missing	0
Mean		3.20
Median		3.00
Mode		3
Std. Deviation		1.056

Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 1years	2	3.0	3.0	3.0
	1 to 2	15	22.7	22.7	25.8
	3 to 5	27	40.9	40.9	66.7
	6 to 10	12	18.2	18.2	84.8
	Above 10 years	10	15.2	15.2	100.0
	Total	66	100.0	100.0	

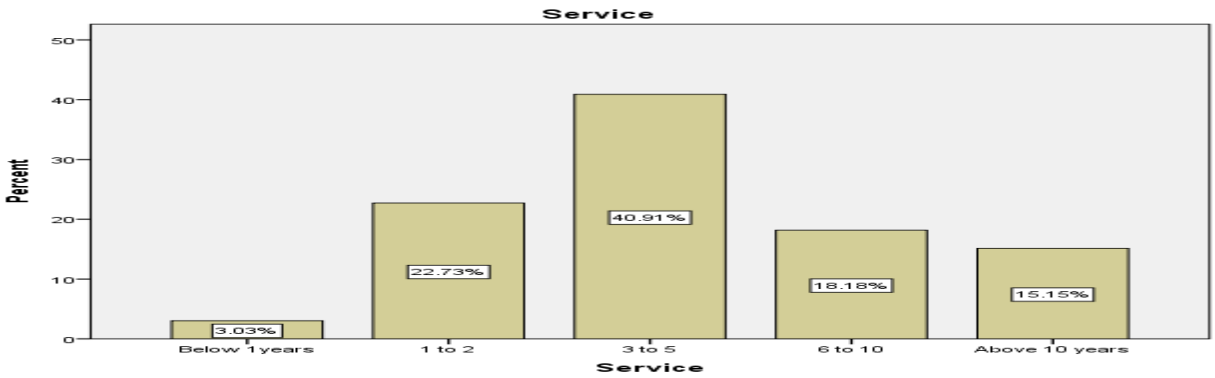


Figure 4.6 Service

The number of service below 1 years is 2 with 3.03%, for 1 to 2 years is 15 person with 22.73%, 3 to 5 years is 27 person is 40.9, for 6 to 10 years is 12 person with18.2% and above 10 years is 10 person with15.2%. It mean the majority of respondent service is 3 to 5 years and the minority is below 1 years with 3.03%.

Table 4.9 Frequencies Salary

Statistics

SAlary

N	Valid	66
	Missing	0
Mean		3.65
Median		4.00
Mode		4
Std. Deviation		1.307

Salary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BelowRM1000	4	6.1	6.1	6.1
	RM1001 to RM1500	8	12.1	12.1	18.2
	RM1501 to RM 2000	16	24.2	24.2	42.4
	RM2001 to RM 2500	24	36.4	36.4	78.8
	RM2501 to RM3000	7	10.6	10.6	89.4
	Above RM3000	7	10.6	10.6	100.0
	Total	66	100.0	100.0	

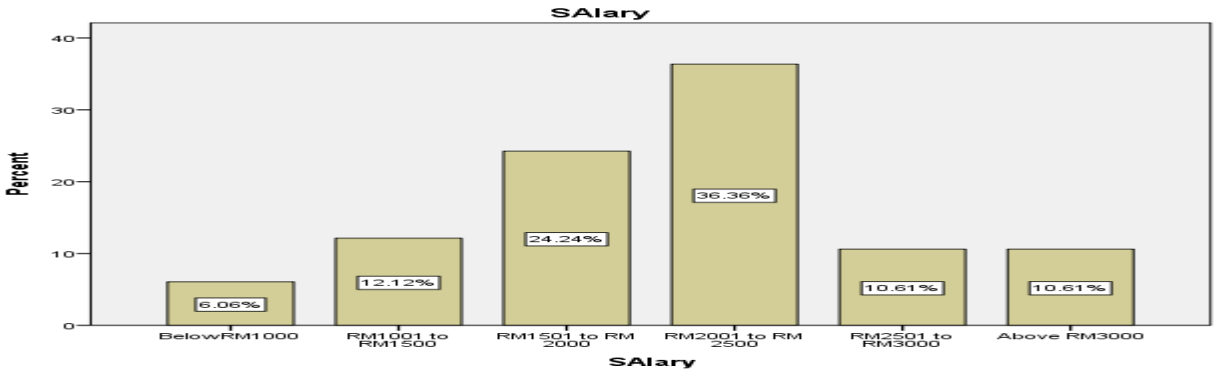


Figure 4.7 Salary

The number of salary below RM1000 is 4 with 6.06%, next is RM1001 to RM1500 is 8 person with 12.1%, RM1501 to RM2000 is 16 person with 24.24%, for salary RM2001 to RM2500 is 24 person with 36.36%, RM2501 to RM300 is 7 person

with 10.6% and above RM3000 with RM10.61. It mean the majority of salary RM2001 to RM2500 and the minority is below RM1000.

4.4 DESCRIPTIVE ANALYSIS (factor of delay)

Table 5.0 Descriptive Analysis

Descriptive Statistics

	N	Mean	Std. Deviation
B_F1	66	3.86	.910
B_F2	66	3.74	.900
B_F3	66	4.02	.794
B_F4	66	3.92	.708
B_F5	66	3.82	.783
B_F6	66	4.00	.894
B_C_PMP1	66	3.89	.844
B_C_PMP2	66	4.00	1.137
B_C_PMP3	66	4.47	.533
B_C_PMP4	66	4.47	.561
B_C_PMP5	66	3.82	.802
B_C_PMP6	66	3.68	.880
B_SD1	66	3.98	.920
B_SD2	66	3.86	.762
B_SD3	66	3.83	.756
B_SD4	66	3.94	.802
B_SD5	66	3.82	.910
B_SD6	66	4.17	.776
Valid N (listwise)	66		

The factors of delay in housing construction were ranking according to their mean score on the above table. The highest rank among the factors delay is in second factor that is does the effective project management determine completion project on time and also from second factor that is the question is does project management will effective monitor project site to determine the completion of project with total means is 4.47. The second higher is with mean 4.17 and the question is does the difficulty of coordination between various parties such as owner, consultant that working on the

housing construction in the third factor. For the least total mean after all with the value only 3.68 in second factor that is do have procurement problem. Therefore, for overall conclusion mistakes during construction and project management problem.

4.4.1 Factor of Financial

Table 5.1 Factor of Financial

Descriptive Statistics

	N	Mean	Std. Deviation
B_F1	66	3.86	.910
B_F2	66	3.74	.900
B_F3	66	4.02	.794
B_F4	66	3.92	.708
B_F5	66	3.82	.783
B_F6	66	4.00	.894
Valid N (listwise)	66		

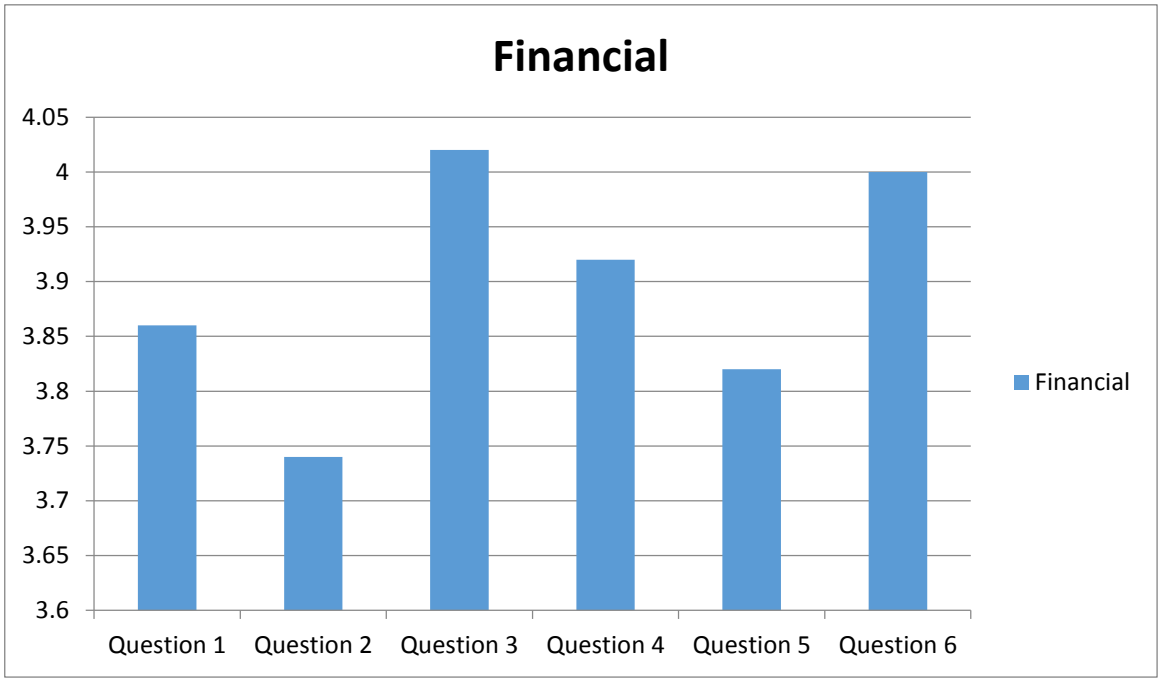


Figure 4.8 Financial

The factors of financial is does the material use from the high quality is the first ranked with mean 4.02 are question 1. Second rank is means 4.00 are question 6, the

question is does the fluctuation of price material effected finance the project. The medium means is 3.92 are question 4 with the question is does the project inaccurate cost estimate happened. The least the value mean after all with the value only 3.74 are question 2, that is does the project always follow the schedule.

4.4.2 Factor of Mistakes Construction and Project Management Problem

Table 5.2 Factor of Mistakes Construction and Project Management Problem

Descriptive Statistics

	N	Mean	Std. Deviation
B_C_PMP1	66	3.89	.844
B_C_PMP2	66	4.00	1.137
B_C_PMP3	66	4.47	.533
B_C_PMP4	66	4.47	.561
B_C_PMP5	66	3.82	.802
B_C_PMP6	66	3.68	.880
Valid N (listwise)	66		

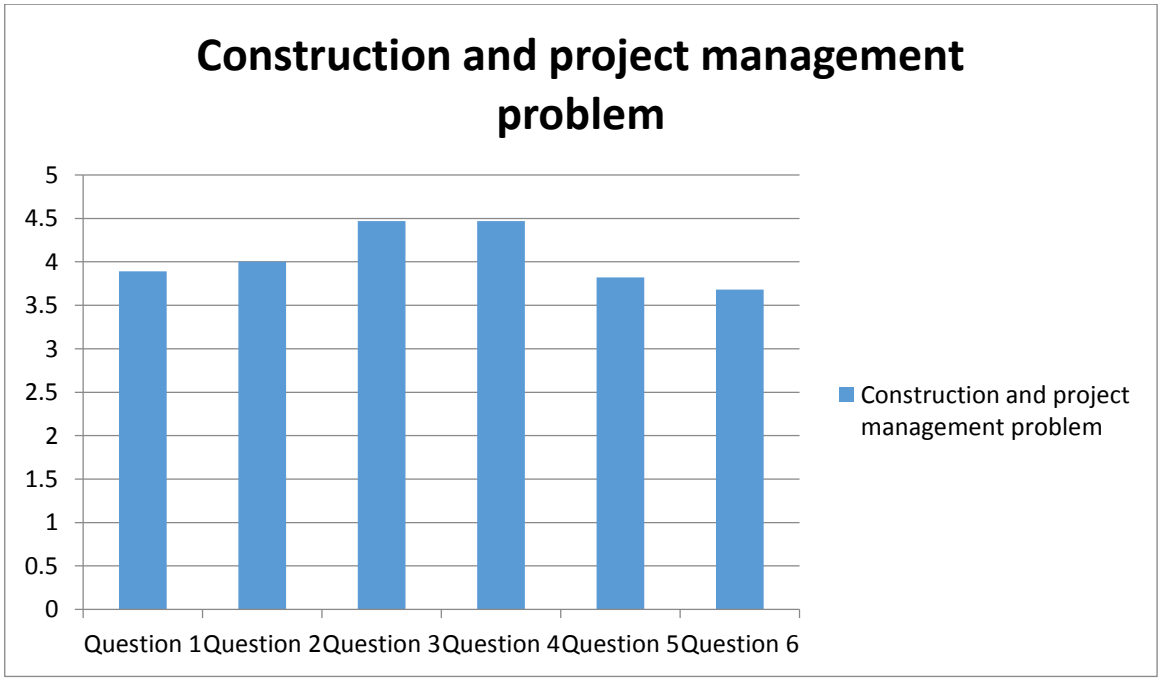


Figure 4.9 Construction and project management problem

The second factors that are mistake during construction and project management problem were ranking according to their mean score on the table above. The highest rank among the factors is does the effective project management determine completion project on the time and does project management will effective monitor project site to determine the completion project with the mean is 4.47 are question 3. The medium means is 3.82 with the question does poor understanding of the project happened. The lowers means is 3.68 with the question 6 do have procurement problem.

4.4.3 Factor of Subcontractor Delay

Table 5.3 Factor of Subcontractor Delay

Descriptive Statistics

	N	Mean	Std. Deviation
B_SD1	66	3.98	.920
B_SD2	66	3.86	.762
B_SD3	66	3.83	.756
B_SD4	66	3.94	.802
B_SD5	66	3.82	.910
B_SD6	66	4.17	.776
Valid N (listwise)	66		

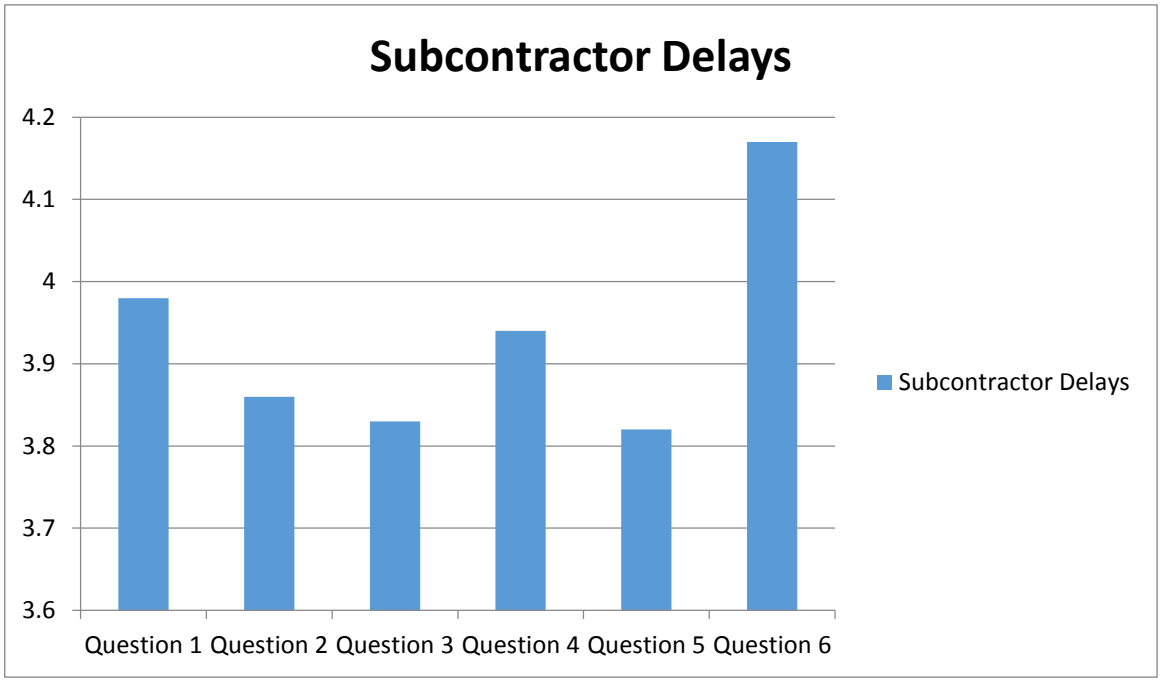


Figure 4.10 Subcontractor Delay

The third factor is subcontractor delay was ranking according to their mean score on the table above. The highest rank among the question is does difficulty of coordination between various parties such as owner, consultant that working on the housing construction with the value means is 4.17 are question 6. The medium mean is 3.86 are question 3 that the question is does the subcontractor have equipment that necessary. The least the value means with the value only 3.82 are question 5, that is does mistakes in design document happened.

4.5 PEARSON CORRELATION

Table 5.4 Pearson Correlation

Correlations

		Financial	MPM	SubconDelay
Financial	Pearson Correlation	1	.489**	.444**
	Sig. (2-tailed)		.000	.000
	N	66	66	66
MPM	Pearson Correlation	.489**	1	.604**
	Sig. (2-tailed)	.000		.000
	N	66	66	66
SubconDelay	Pearson Correlation	.444**	.604**	1
	Sig. (2-tailed)	.000	.000	
	N	66	66	66

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation analysis is conduct to verify relationship between independent variable and dependent variable. For this study, independent variable is a quality service dimension and dependent variable is customer's satisfaction. From the Pearson correlation, it can be determined either the variable have positive, negative or no relation. In correlation analysis, it is found that all of the dependent variable are positively correlated to all variable is at 0.01% significance level.

From the table 4.8, there is result of correlations analysis, it is found that mistake during construction and project management problem is positively correlated with variable at 0.01% significant level (2tailed). Then, reliability has strong positive correlation with miatake during construction and project management problem and financial (0.489). Furthermore, responsiveness show the strong positive correlated with subcontractor delay and financial (0.444) and subcontractor delay and mistaken during construction and project management problem (0.604).

Total Means

Factors	Means
Factor Financial	**3.89**
Factor Mistakes During Contruction and Project Management Problem	**4.06**
Factor Subcontractor Delay	**3.93**

Table: total means

In section B there are there part that representive factors of delay that is financial, mistakes during construction and project management problem and last factor is subcontractor delay. This table show the total means of factors in project delay. The highest rank among the the factor is mistaken during construction and project management problem with the total velue of all the question in this factor is 4.06. So this mean show that this factor is the main factor that occur in project delay. The medium mean is for factor subcontractor delay with total means is 3.93. This are the second factor that made delay always happend. For the last factor with the lowers total mean that is 3.89 with the factor is financial. This factor are the lowers factor that will make project delays happend.

4.6 SUMMARY

This chapter are to find out the test on the data that had been collected in this study. The result will show that the research question are suitable or not. The actual survey is conducted in Company Kota Sas at Indera Mahkota, Kuantan, Pahang with 66 respondent. The analysis from result shows the data is normally distribution.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

In this chapter, highlights the implication and conclusion of the research undertaking. This researcher will be discovered some limitations occur throughout the research. On the other hands, recommendations for the further research will also be included. This chapter will summerize the overall finding of objective which are develop in chapter 1.

Lastly, conclusion and recomendation of overall research finding will be in the last part of this chapter. In the begining, the researcher wanted to research about factor of project delay. The survey was at Kota Sas in Kuantan Pahang. It aimed the factor that will make project housing construction delay.

5.2 DISCUSSION

From the analysis in frequencies we can see that the majority respondent are Malay male above 20 to 35 years old which is education are from diploma were married and the length services is 3 to 5 years with salary RM2001 to RM2500.

There are independent variable and dependent variable which is factor in financial, factor in mistaken during construction and project management problem and subcontractor delay. For dependent variable is delay in housing construction. In section B there are there part that representive factors of delay that is financial, mistakes during construction and project management problem and last factor is subcontractor delay. From the questionnaire we can conclude that the highest rank among the the factor is mistaken during construction and project management problem with the total velue of all the question in this factor is 4.06. This mean show that this factor is the main factor that occur in project delay. The medium mean is for factor subcontractor delay with total means is 3.93. For the last factor with the lowers total mean that is 3.89 with the factor is financial. This factor are the lowers factor that will make project delays happend.

5.5 CONCLUSION

In conclusion, the highest influence factor that made project delays is mistaken during construction and project management problem. Then, it followed by subcontractor delay. The least contribution factor is financial. Therefore the finding of this study manage to contribute a new literature factor that having positive relationship with delay in housing construction. Furthermore, the result from the analysis done were effectively answering research question for this study.

From the result of analysis data, it can be concluded that the factor that should be avoid from happend in construction company. This is because, this factor will make made the company become delay and its nit good for company reputation.

5.4 RECOMMENDATION

There are several recommendations for further research in the future. Firstly, other researchers should be considered all of the others factors and strategies proposed

and make a though investigation upon it. This is due to the scored of the total mean and the total rank of others factors and strategies that can be classified as good enough. Deeper researcher on the above matter might result with new finding that will contribute towards the project delay.

Recommendation for further research of this title are, it should be more project managers participate as the respondent to get the bigger data and valid result to answer the research objective more specifically. To get more data in large amount the researcher could use an e-Mel as other method to get data from respondent because e-Mel can be faster way to reach the respondent that far away if the researchers used the bigger scope such as in Malaysia or Asian country as the researcher areas.

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APPENDICES

QUANTITATIVE QUETIONNAIRES

SOAL SELIDIK KUANTITATIF

Dear respondent,

This survay formed for my Bachelor thesis. This purpose of the research is to get a better understanding of project delay in housing construction. These quetionnaire have three section: section A and section B.

You are invited to participate in this survey. Please answer ALL the question as best you can. Try to be honest ans accurate as you ca, base on your experience. Your answer is very important, as it contribute to the mentioned purpose above. Your answer will be keep with utmost confidentiality. Only aggregate data will be reported on. If you have a problem with the question in the survey, you can contact me.

Thank you for your participation and co-operation in this study.

Kepada responden,

Kajian ini dibuat untuk Projek Sarjana Muda saya. Tujuan kajian ini adalah untuk mendapatkan maklumat mengenai kuasa dikalangan pekerja dalam sektor industri pembuatan. Soal selidik ini mempuyai tiga bahagian: bahagian A dan bahagian B.

Anda di jemput untuk mengambil bahagian dalam soal selidik ini. Jawab semua soalan dengan sedaya upaya mungkin. Jawab dengan jujur dan tepat berdasarkan pengalaman anda. Jawapan anda adlah penting dalam menyumbangkan kepada tujuan yang disebutkan di atas. Jawapan anda akan di simpan dengan penuh kerasiaan. Hanya data yang perlu akan di laporkan. Terima kasih di atas penyertaandan kerjasama anda dalam kajian ini.

FATIN FAZLINDA BINTI HAMZAH

EMAIL: fatin_fazlinda@yahoo.com

SECTION A: DEMOGRAPHIC DATA

BAHAGIAN A: LATARBELAKANG RESPONDEN

Instruction: Complete the following quetions to reflect to your background. Please mark the appropriate box in your answer choice with an "**X**".

1. Gender (*Jantina)*

☐ Male
Lelaki

☐ Female
Perempuan

2. Age(*Umur)*

☐ Below 20 years old
Bawah 20 tahun

☐ 20 to 35 years old
20 hingga 35 tahun

☐ 36 to 50 years old
36 hingga 50 tahun

3. Race (*Bangsa)*

☐ Malay
Melayu

☐ Chinese
Cina

☐ Indian
India

☐ Others
Lain-lain

4. Education Level (*Peringkat pendidikan)*

☐ Below SPM
Bawah SPM

☐ Post school diploma or certificate
Diploma atau sijil

☐ Bachelor degree
Ijazah sarjana muda

☐ Master degree
Master

☐ PHD degree
Doktor falsafal

5. Marital status (*Status perkahwinan)*

☐ Single
Bujang

☐ Married
Sudah berkahwin

☐ Divorce
Bercerai

☐ Windowed
Duda atau janda

6. Lenght of service in the organization (*Tempoh perkhidmatan dalam organisasi)*

☐ Below 1 year
Bawah 1 tahun

☐ 1 to 2 years
1 hingga 2 tahun

☐ 3 to 5 years
3 hingga 5 tahun

☐ 6 to 10 years
6 hingga 10 tahun

☐ Above 10 years
Ats 10 tahun

7. Monthly Salary (*Pendapatan Sebulan)*

☐ Below RM 1000
Bawah RM 1000

☐ RM 1001-RM 1500
RM 1001-RM 1500

☐ RM 1501-RM 2000
RM 1501-RM 2000

☐ RM 2001-RM 2500

RM 2001-RM 2500

RM 2501-RM 3000

RM 2501-RM 3000

Above 3000

Atas 3000

SECTION B FACTOR OF DELAY

Please choose the answer that suits you the most

Sila pilih jawapan yang paling sesuai dengan anda.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Financial					
1) Does the salary been paid on time? 1) *Adakah gaji di bayar pada masa yang di tetapkan?*	1	2	3	4	5
2) Does the project always follow the schedule? *2) Adakah projek sentiasa mengikut jadual yang di tetapkan*	1	2	3	4	5
3) Does the material use from the high quality? *3) Adakah barang yang digunakan adalah dari kualiti yg terbaik?*	1	2	3	4	5
4) Does the project inaccurate cost estimates happend? *4) Adakah terjadi tidak tepat angaran kos ?*	1	2	3	4	5
5) Does incomplete design at the time of tender happend? *5) Tender reka bentuk yang tidak dapat di siapkan pada masanya*	1	2	3	4	5

6) Does the fluctuation of price material effected finance the project? 6) Adakah turun naik harga barangan memberi kesan kepada kewangan projek?	1	2	3	4	5

Mistakes during construction and project management problem					
1) Does the company use high quality equipment? *1) Syarikat ini menggunakan peralatan yang berkualiti tinggi?*	1	2	3	4	5
2) Does quality of equipment is important to construct a strong housing construction? *2) Adakah peralatan yang berkualiti penting untuk membina bangunan yang kukuh?*	1	2	3	4	5
3) Does effective project management determine completion project on time? *3) Adakah pengurus project perlu cekap untuk menyiapkan projek dalam masa yang di tetapkan?*	1	2	3	4	5
4) Does project management will effective monitor project site to determine the completion of project? 4) *Adakah pengurus projek perlu cekap memantau tapak projek untuk memastikan projek di siapkan?*	1	2	3	4	5
5) Does poor understanding of the project hapend? 5) Adakah berlaku kurang pemahaman sesuatu projek?	1	2	3	4	5
6) Do have procurement problem? 6) Adakah ada masalah dalam contract?	1	2	3	4	5

Subcontractor Delays					
1) Does the subcontractor understood about the project? *1) Adakah subkontraktor memahami mengenai*	1	2	3	4	5

projek?					
2) Does the subcontractor have equipment that necessary? *2) Adakah subkontraktor ada peralatan yang mencukupi?*	1	2	3	4	5
3) Do the subcontractor have enough employee? *3) Adakah subkontraktor ada pekerja yang mencukupi?*	1	2	3	4	5
4) Does the subcontractor always monitoring the project? *4) Adakah subkontraktor sentiasa memantau project itu?*	1	2	3	4	5
5) Does mistakes in design documents happened? *5) Perbezaan dalam reka bentuk dokumen*	1	2	3	4	5
6) Does Difficulty of coordination between various parties such as owner, consultant that working on the housing construction? *6) Adakah sukar untuk menyelaras antara pelbagai pihak* seperti pemilik, perunding yang bekerja dalam pembinaan perumahan?	1	2	3	4	5

GANTT CHART PSM 1

WEEK / ACTIVITY	1	2	3	4	5	6	7	8	9	10	11
Briefing with FYP coordinator and Supervisor											
Define Problem Background & Problem Statement											
Define Research Objective & Research Question											
State Scope of Study											
Finding Material (journa/article/etc)											
Writing literature Review											
Determine Research Methodology & Research Instrument											

GANTT CHART PSM2

WEEK / Research Activity	1	2-9	10	11	12	13	14
Briefing on FYP 2	■						
Meet supervisor & discuss on Data Analysis	■	■	■				
Submit first draft FYP report and poster to supervisor Student.				■			
Supervisor comment and advice for any correction				■	■		
-Student submits 1 hardcopies of FYP 2 report. -Student sends softcopies to report to turnitin. -Student obtains FYP 2 approval from the supervisor. -Submit corrected for printing.					■		
Student compulsory to attend FYP 2 poster presentation.						■	
Submit corrected Report with table of correction to supervisor.							■
Weekly meeting with supervisor to complete FYP report.	■	■	■	■	■		