

THE CHALLENGES FACED BY GOVERNMENT CONTRACTORS IN
MANAGING THE FLYOVER PROJECTS

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TO MY WIFE, MY PARENTS,
MY BROTHER AND MY FAMILY MEMBERS
FOR THEIR ENDLESS ENCOURAGEMENT

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ABSTRACT

Flyover infrastructure development is regarded to be the best solution to Jakarta's serious traffic problem. Jakarta provincial government (JPG) engage capable contractors, such as government contractors or state-owned contractor enterprises (SOCEs) to ensure the flyover projects be completed on time and achieve the aim of reducing traffic congestion in Jakarta. However, the flyover projects are faced with several challenges that have impact on project performance. Hence, the aim of the research is to investigate the challenges faced by SOCEs in managing the flyover projects and to determine the involvement of quantity surveyors (QS) in the flyover project. Based on literature review, the challenges in managing the flyover project were categorized into six (6) categories. They were management process, money, material, construction method, machinery and manpower. This research used quantitative analysis method to investigate the challenges faced by SOCEs in managing the flyover projects and using qualitative analysis method to determine the involvement of QS in the flyover projects based on data collection by distributing the questionnaire to respondents who had been managing the project. In this study, the projects represented the flyover projects in Jakarta that were constructed since the year of 2010 and the construction of the project were undertaken by SOCEs. Based on to the analysis, the cash flow problem and project near traffic congestion were investigated as the challenges that brought major impact on project performance. In addition, regarding QS in flyover project, QS faced with difficulties to understand the lump sum and design & build contract due to this type of contract is first time applied by JPG on the flyover project since its commencement in 2015. By investigating the challenges in managing the flyover project and enhancing the role of the Qs, it will provide basis for project management team who will manage similar projects in the future to improve project performance.

ABSTRAK

Pembinaan infrastruktur jejambat dianggap sebagai penyelesaian terbaik untuk masalah lalu lintas yang teruk di Jakarta. Majelis Wilayah Jakarta (JPG) melibatkan kontraktor mampu seperti kontraktor negara atau SOCEs untuk memastikan pembinaan jejambat telah siap mengikut jadual dan mencapai matlamat untuk mengurangkan kesesakan lalu lintas di Jakarta. Walau bagaimanapun, kerja pembinaan jejambat berhadapan dengan beberapa cabaran yang memberi kesan kepada prestasi kerja pembinaan. Oleh kerananya, tujuan kajian ini adalah untuk mengkaji cabaran yang dihadapi oleh SOCEs dalam menguruskan kerja pembinaan jejambat dan untuk menentukan penglibatan juru ukur bahan dalam kerja pembinaan jejambat itu. Berdasarkan kajian literatur, cabaran dalam menguruskan kerja pembinaan jejambat itu dikategorikan kepada enam (6) kategori, mereka adalah pengurusan proses, wang, bahan, kaedah pembinaan, jentera dan tenaga manusia. Kajian ini menggunakan kaedah analisis kuantitatif untuk menyiasat cabaran dihadapi SOCEs dalam pengurusan kerja pembinaan jejambat dan menggunakan kaedah analisis kualitatif untuk menentukan penglibatan juru ukur bahan dalam kerja pembinaan jejambat berdasarkan kutipan data dengan mengedarkan soal selidik kepada responden yang kini atau sudah menguruskan kerja pembinaan. Dalam kajian ini, kerja-kerja pembinaan mewakili adalah kerja pembinaan jejambat di Jakarta yang dibina sejak tahun 2010 dan kerja pembinaan itu dilaksanakan oleh SOCEs. Menurut hasil daripada analisis data, masalah aliran wang dan tapak bina berhampiran kesesakan lalu lintas telah disiasat sebagai faktor cabaran yang membawa kesan yang besar kepada prestasi kerja pembinaan. Sebagai tambahan, berkenaan dengan juru ukur bahan dalam kerja jejambat, juru ukur bahan menghadapi kesukaran memahami kontrak kerja pembinaan jenis sekaligus dan rancang bangun dikeranakan jenis kontrak ini adalah kali pertama digunakan oleh JPG pada pembinaan jejambat yang bermula sejak tahun 2015. Dengan menyiasat cabaran dalam menguruskan kerja jejambat dan meningkatkan peranan juru ukur bahan, akan menyediakan asas bagi pejabat pengurusan kerja pembinaan yang akan menguruskan kerja pembinaan yang serupa di masa akan datang untuk meningkatkan prestasi kerja pembinaan.

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LIST OF ABBREVIATION

AKI	= <i>Asosiasi Kontraktor Indonesia</i>
D&B	= Design and build
JPG	= Jakarta provincial government
PM	= Project manager
PMBOK	= Project Management Body of Knowledge
PN	= <i>Perusahaan Negara</i>
PT	= <i>Perusahaan Terbatas</i>
QS(s)	= Quantity surveyor(s)
RI	= Relative important index
SEM	= Site engineering manager
SOCE(s)	= State-owned contractor enterprise(s)
SOM	= Site operational manager

CHAPTER 1

INTRODUCTION

1.1 Background of Research

In Indonesia, the increased economic growth will boost demand for transport services, particularly on land transport. The fulfilment of the transport services is basically influenced by the availability of road infrastructure. Transportation encompasses moving or transporting activities and or goods from one place to another by using a vehicle or other transportation mode, where the products are transferred to the required destination.

The construction of roads and bridges is the of the land transportation programs undertaken by the Government of Indonesia. These activities necessitate road network planning and bridge in accordance with “*Peraturan Pemerintah Republik Indonesia No. 26. tahun 1985 tentang Jalan dan Jembatan*” (Number 26 of Government Regulation Republic of Indonesia year 1985 on roads and bridges).

In several cities in Indonesia traffic jam or traffic congestion is a common problem (see Figure 1.1). Road areas that contain intersections, place of interest, railway crossings may cause traffic congestion that maybe harmful to road users. The aim of new road construction is to overcome traffic congestion caused by the inability of the road to accommodate the number of vehicles. Since the year of 2010, Jakarta provincial government (JPG) initiated projects related to increasing road areas to reduce traffic congestion, in the form of flyover, underpass and outer ring road projects.



Figure 1.1 Traffic condition in the road intersection during peak hour, Jakarta

In 2010, JPG and its agencies commenced construction of Antasari - Blok M flyover project. The flyover project is located alongside dense traffic road from Antasari to Blok M. The project is divided into five (5) packages. They are as follows:

- a. Pasar Cipete package undertaken by PT. Pembangunan Perumahan (Persero), Tbk.
- b. Cipete Utara package undertaken by PT. Waskita Karya (Persero), Tbk.
- c. Taman Brawijaya package undertaken by Hutama – Nidya, KSO
- d. Prapanca package undertaken by PT. Yasa Patria Perkasa
- e. Lapangan Mabak package undertaken by Modern – Lampiri, KSO

Antasari - Blok M flyover project began its operation at end of year 2013. It aimed to separate road users with direct destination between Antasari and Blok M, or vice versa.



Figure 1.2 Antasari – Blok M flyover has been completed and operated, Jakarta

Figure 1.2 shows the completed of Antasari – Blok M flyover project, providing additional road space and as a solution to reduce traffic congestion in Jakarta.

At the end of 2010, JPG and its agencies also commenced the construction of Kampung Melayu – Tanah Abang flyover project. The flyover project is located alongside dense traffic road from Kampung Melayu to Tanah Abang. The project is divided into three (3) packages, which are as follows:

- a. Casablanca package undertaken by Wika – Jaya, KSO
- b. Dr. Satrio package undertaken by PT. Adhi Karya (Persero) Tbk.
- c. KH. Mas Mansyur package undertaken by Istaka - Sumber Sari, KSO

Kampung Melayu - Tanah Abang flyover project began operation at the end of 2013. It intended to separate the road users with direct destination between Kampung Melayu and Tanah Abang, or vice versa.



Figure 1.3 Kampung Melayu – Tanah Abang flyover with existing road below, Jakarta

Figure 1.3 shows the completed Kampung Melayu – Tanah Abang flyover project, providing additional road space and as a solution to reduce traffic congestion in Jakarta.

In 2015, JPG and its agencies built Kapten Tendean – Blok M – Ciledug flyover dedicated for Transjakarta bus way corridor 14 serving Kapten Tendean – Blok M – Ciledug. The construction project located is alongside dense traffic road from Ciledug towards Blok M and Blok M towards Kapten Tendean. The construction project is divided into eight (8) packages namely:

- a. Tendean package undertaken by PT. Adhi Karya (Persero) Tbk.
- b. Santa package undertaken by PT. Yasa Patria Perkasa
- c. Trunojoyo package undertaken by PT. Jaya Konstruksi Tbk.
- d. Taman Puring package undertaken by PT. Hutama Karya (Persero)
- e. Kebayoran Lama package undertaken by PT. PP (Persero) Tbk.
- f. Seskoal package undertaken by PT. Wijaya Karya (Persero) Tbk.
- g. Kostrad package undertaken by Istaka - Agabudi, JO
- h. Adam Malik package undertaken by PT. Waskita Karya (Persero) Tbk.

The construction of Kapten Tendean – Blok M – Ciledug flyover project is expected to be complete at end of 2016. It aims to avoid accumulation of traffic flow along the Transjakarta busway and regular vehicle between Kapten Tendean – Blok M – Ciledug, or vice versa.

Besides the Kapten Tendean – Blok M – Ciledug flyover project, there are two (2) other major flyover projects, which commence in 2015. They are Permata Hijau flyover project which is undertaken by PT. Brantas Abipraya (Persero) and Kuningan Sisi Selatan flyover project which undertaken by PT. Nindya Karya (Persero). With very limited road space in Jakarta, flyover infrastructure development is regarded to be the best solution to Jakarta's serious traffic problem. Since the year of 2010, there have been five (5) flyover projects developed by JPG in Jakarta, where they are divided into eighteen (18) packages separately.

JPG, as a client of the project wants the project to be completed on time, within agreed budget and meets the quality requirement. This will enable the project output to fulfil the main aim of reducing traffic congestion in Jakarta. Hence, JPG needs to engage the capable contractors, including government contractors or state-owned contractor enterprises (SOCEs) and private-owned contractors as well through selective tendering process in order to ensure the flyover projects to be completed on time and achieve the aim of reducing traffic congestion in Jakarta. Since the year of 2010, the SOCEs have been undertaking fourteen (14) packages from eighteen (18) packages of the flyover project developed by JPG.

According to “*Undang-undang Republik Indonesia nomor 19 tahun 2003 tentang Badan Usaha Milik Negara*” (Number 19 of Indonesian statute year 2003 on state-owned enterprises), the intention and purpose of the establishment of the state-owned enterprises (including SOCEs) are as follows:

- a. Contribute to the development of the national economy in general and state revenues in particular
- b. Earn profit

- c. Conduct activities for public benefit by providing goods and/or services with high quality and adequate for the fulfilment of public livelihood
- d. As business pioneer of activities that cannot yet be implemented by the private sector and cooperatives
- e. Actively participate to provide guidance and assistance for low-level entrepreneur or company, cooperatives, and public society

Since the beginning of development in Indonesia since 1960, SOCEs have participated on Indonesian development and the government has entrusted the SOCEs to undertake prominent projects in Indonesia, especially infrastructure projects to support Indonesian economic development, such as airports, ports, railroads, highways, toll roads, flyover and many others. Due to significant contribution to Indonesian development, SOCEs have been proven competent and are capable as contractor companies. According to data from “*Asosiasi Kontraktor Indonesia*” (Indonesian Contractor Association), SOCEs were categorized into grade seven (7) contractor companies.

Road infrastructure plays an important role in economic development as it is the lifeblood of the economy and supporting sectors for the activities of other sectors, such as agriculture, manufacture, mining, education, trading, health, financing, tourism or even supporting national defence. The government of Indonesia as a major investor in infrastructure development in Indonesia constructs the flyovers with the intention for public benefit.

The flyover is a vehicular structure, which crosses the existing road, rail or traffic junction and it provides additional road area beside the existing road. In metropolitan city like Jakarta, development of the flyover is important due to the inability of the existing road to accommodate the number of vehicles. Since the year of 2010, JPG has been developing the flyover infrastructure and constructions of the flyovers, which are divided into eighteen (18) packages, whereas, SOCEs undertaking fourteen (14) packages from eighteen (18) packages of this flyover projects.

While carrying out the flyover project, SOCEs have been facing with difficulties due to project locations being adjacent to traffic, and such location have serious implication on project performance, which includes, as limited workspace, limited access, submissive with safety regulation and local regulation, traffic management, environmental impact, social impact and many others. Hence, these difficulties trigger the challenges faced by SOCEs in managing the flyover project.



Figure 1.4 Construction of flyover project adjacent to dense traffic, Jakarta

Figure 1.4 shows the current flyover project alongside dense traffic and fairly limited workspace.

1.2 Problem Statement

There are many areas in Jakarta that are facing traffic congestion. A flyover project is one of the main programs for reducing traffic congestion in Indonesia, especially in Jakarta. These projects are faced with several challenges, such as

limited workspace, limited access, submissive with safety regulation and local regulation, traffic management, environmental impact, social impact and many others.

The challenge in managing the flyover project may have impact on project performance, such as leading to lengthen completion time, over budget or poor quality of work. Hence, it leads the client to sue the contractor due to delay of completion, defective work and other contractual liabilities.

It is important to avoid the project being ineffective, an increase in operational budget stipulated by top management, lengthen completion time, poor reputation due to unavailability to respond to the challenges impacting on the performance of the work from the client's viewpoint, and may lose opportunity in obtaining future project. Hence, it is necessary to investigate the challenges faced by the SOCEs in managing the flyover project. This will provide a basis for improving project performance in the future.

1.3 Objectives of the Research

The objectives of the research are:

1. To investigate the challenges faced by the government contractor or State-Owned Contractor Enterprise (SOCE) in managing the flyover projects
2. To determine the involvement of quantity surveyors (QS) in the flyover project

1.4 Scope of the Research

The scope of this research is limited to:

1. The construction of flyover undertaken by SOCEs.
2. The flyover projects in Jakarta, Indonesia, which have been constructed since the year of 2010 and they are as follows:
 - a. Kampung Melayu – Tanah Abang flyover projects
 - b. Tendean – Blok M – Ciledug flyover projects
 - c. Permata Hijau flyover project
 - d. Kuningan sisi Selatan flyover project

1.5 Significance of the Research

The research will be able to provide useful information on the challenges in managing the flyover projects to project management team, such as project managers, operational managers, and engineering managers who will manage similar projects in the future.

The research will also contribute to an understanding on the importance of QS in a construction project. Hence, SOCEs may enhance the role of the QS in improving project performance.

1.6 Research Methodology

Research methodology consisted of several processes beginning from the background of the study and collecting data using questionnaire. After that, these data were analyzed to fulfil the objectives of the research and finally conclusions were drawn.

1.6.1 First Phase: Background of the Study

This phase involved literature review related to construction industry, managing the project, construction of the flyover project in Indonesia from books, journals and websites to develop problem statement, determine objective of the research and scope of the research.

1.6.2 Second Phase: Data Collection

The data on the challenges faced by the government contractor in managing the flyover project were obtained using questionnaire. Research design and variables were obtained from literature review and inputs from practitioner in related field.

1.6.3 Third Phase: Data Analysis

This part undertook analysis of data from questionnaire. The data were analyzed using both of descriptive quantitative statistic analysis and qualitative analysis method to achieve the objectives stated before.

1.6.4 Fourth Phase: Conclusion

This part concluded the research. The conclusions were drawn from the results obtained from the analysis of data undertaken.

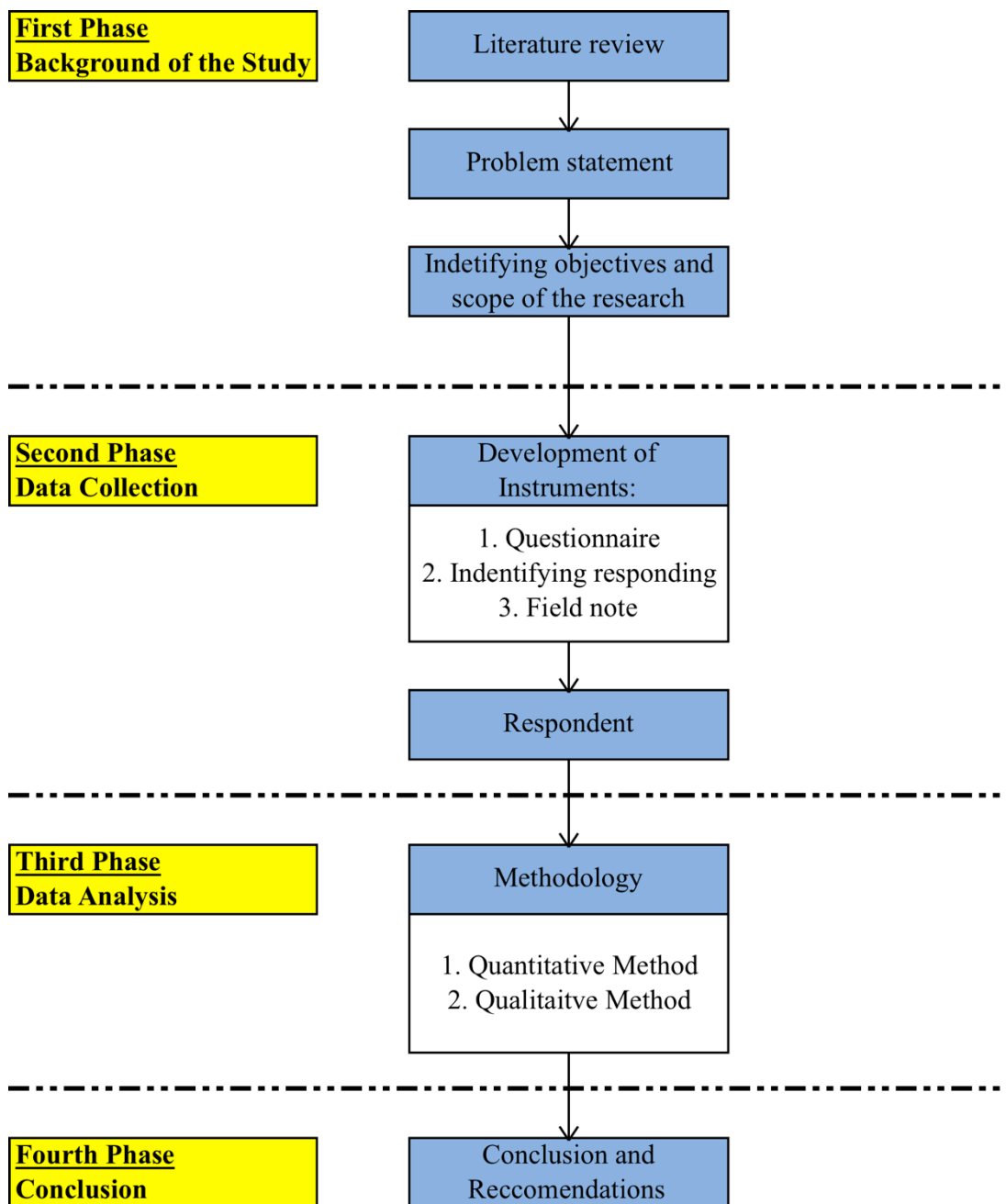


Figure 1.5 Research flow chart

1.7 Organization of the Thesis

The thesis format follows the logical steps of establishing the research question, developing the methodology, gathering and analyzing data and drawing conclusions. The thesis is organized into five chapters, which are as follows:

1.7.1 Chapter 1 – Introduction

Introduction is made on the general information regarding to condition of traffic in Jakarta, the flyover projects in Jakarta, SOCEs, and challenges that arise in managing the flyover project. The chapter also discusses the backgrounds of the research by highlighting the problem statement of the research, research objectives, scope of the research, significance of the research, brief research methodology, and organization of the thesis.

1.7.2 Chapter 2 – Literature Review

This chapter will briefly discuss the basic theory of project management, construction industry, construction industry in Indonesia, and challenges in managing flyover project. The sources of literature drawn from several references in the form of books or journals that have published research in this area are stated in this chapter.

1.7.3 Chapter 3 – Research Methodology

This chapter will briefly discuss the research methodology used in this research. Data collection and data analysis methods to achieve the objectives of the research will be discussed in this chapter.

1.7.4 Chapter 4 – Data Analysis and Results

All collected information, primary data from respondents are arranged, analyzed and interpreted in this chapter. The chapter also discusses findings generated from this analysis.

1.7.5 Chapter 5 – Conclusion and Recommendations

This chapter will summarize the findings of this research according to the research objectives. Recommendations for future research are also provided in this chapter.

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