

## Failure Reasons of PPP Infrastructure Projects: Case Study of Kuala Lumpur LRT Project

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**Abstract:** PPP is an alternative procurement method being adopted for public infrastructure development worldwide. In PPP method, public sector invites private agencies to bring their capital and technical assets for executing public projects. PPP is being popularized worldwide for its potential benefits. However, a number of projects with PPP process are failed in achieving the target in many countries. In Malaysia also, nowadays, Public-private partnership (PPP) has been widely used in large scale infrastructure projects. PPP is considered as derivative of privatization concept in Malaysian context. The success and failure of PPP project depends on the performance of both public and private sectors. Thus, in order to achieve successful projects, it is very imperative that the role and performance of the two sectors be clearly identified and studied. Further, for achieving successful PPP projects, it is also very essential to learn the lesson from the past fail projects. Hence, this paper presents a case study of LRT project of Malaysia to understand the reason of failure. Study highlighted that Kuala Lumpur LRT project was failed during the operation phase. Key reason of the failure was the financial crisis of 1997 where inflation rate increased from 8% to over 40%. This financial crisis resulted to the less profit rate, and the concessionaires were not able to repay the loan to the banks which they had taken for LRT construction works. Finally, through undergoing a legal process in 2002, Syarikat Prasarana Negara Berhad took over PUTRA-LRT and STAR-LRT on the behalf of the government of Malaysia.

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### 1. Introduction

PPP is an alternative procurement method being adopted for public infrastructure development worldwide. In PPP method, public sector invites private agencies to bring their capital and technical assets for executing public projects where the profits as well as risks associated with the projects are shared by public and private partners. Generally, private sector gets profit in the form of toll collection, received from the public on using the facility or in the form of payments directly from the government or public sector client. Public sector partners get profits in the form of developing public infrastructure facilities which results in extending the value for money (VFM) as compared to the conventional procurement methods. Currently, PPP models are becoming a central levy for governments around the world, especially in developing countries, to improve, develop and handle urban and national transportation networks. World Bank report also highlighted that, in developing nations, a total US\$273,596 million are invested in transportation projects since 1990 under the scheme of Private Participation in Infrastructure (PPI). This investment is excluding the cancelled and distressed transportation PPP projects (Soomro and Zhang, 2013)

In Malaysia also, nowadays, Public-private partnership (PPP) has been widely used in large scale infrastructure projects. PPP is considered as

derivative of privatization concept. Besides, PPP is also seen as a new alternative of financing new facilities, rehabilitate and expand existing infrastructure projects involving private entities. Initially, in 9th Malaysian plan (9<sup>th</sup> MP) Private Finance Initiative (PFI) which is a subset of the privatization policy was initiated as part of the procurement method under the PPP. It was expected that PFI will increase the participation of private sector in national development program (Public PPP Malaysia Guideline 2009). Consequently, a number of PPP projects have been executed successfully in the past decade in Malaysia, which includes North-South Expressway project, Paka and Pasir Gudang Power Plant, Penang Bridge and others. However, unsuccessful cases are also abounding, such as the Malaysian Privatized National Sewerage project and Batu Pahat Municipal Council Bus Station project.

The success and failure of PPP projects depend on the performance of both public and private sector. Thus, in order to achieve successful projects, it is very imperative that the role and performance of the two sectors be clearly identified and studied. Further, for achieving successful PPP projects, it is also very essential to learn the lesson from the past fail projects. Hence, this study is focusing on studying the reasons of failure in Light Rail Transit (LRT) Kuala Lumpur project which is major infrastructure project for overcoming the congestion

problem through the city areas. In this study failure is defined as the projects facing delay in construction period, quality of works not obtained and project not fulfilled client's requirement (UKAS, 2014).

## 2. Infrastructure Projects

Infrastructure projects refer to the development project required to satisfy human needs. Besides that, infrastructure projects are vital in developing national economic growth. Infrastructure projects are classified into two categories which are economic and social. Economic infrastructure projects are the projects which support productive activities to enhance country's economic growth (Grimsey and Lewis, 2004). Some of examples of economic infrastructure projects defined by Grimsey and Lewis (2004) and Wikipedia on infrastructure (2012) are:

➤ **Transportation Facilities:** Transportation facilities comprises of the network of tracks to connect various areas of the country inside as well as with other parts of the world. It includes road network, rail networks, mass transit systems, Air paths, bridges, terminals, signals and others.

➤ **Energy Related Projects:** These are the projects for generation and supply of various forms of energy to support social life, as well as transportation system and other human needs. Some of examples of energy related projects are electrical power plants, power distribution system, gas pipelines, petroleum storage and distribution system and others.

➤ **Water management projects:** These projects ensure the availability of water needs for daily life, agricultural purpose and as well as other ancillary activities which consume water. The examples of waste management projects are drinking water supply system, water filter plants, drainage and sewerage system including collection and disposal points, irrigation canals, dams, floodgates, dikes and others.

Besides these, communication related projects, solid waste management are also regarded as economic infrastructure projects. On the other hand, social infrastructure projects focus on welfare and well being of the nation such as education, health care, tourism and recreation facilities (Grimsey and Lewis, 2004). Some of the examples of social infrastructure projects defined by Grimsey and Lewis (2004) and Wikipedia on infrastructure (2012):

➤ **Governance projects:** These projects focus on providing the network for governance and protection to the community. The examples of governance projects include government offices, courthouses, prisons, police stations, fire

protection facilities, military bases, arms depots, training facilities, and command centers.

➤ **Health Facilities:** These projects focus on providing necessary arrangement to care about health of the citizens. The examples of health facilities are hospitals, clinics, educational institutes, research centers, elementary and secondary schools, universities and colleges, charity centers.

➤ **Cultural, sports and recreational projects:** These projects ensure the happiness and recreational caring of the nation. The examples of cultural, sport and recreational projects are parks, sport complexes, museums, libraries, theatres, convention centers, hotels, restaurants and others.

These infrastructure projects are very essential for improving the quality of human life and country's economic growth. Their importance is reflected in extended the expenditures for providing infrastructure facilities by government. Statistical record shows that, in Malaysia Government expenditure on infrastructure was increased year by year from 1965. Summary of the expenditures expansion since 1<sup>st</sup> Malaysian plan until 9<sup>th</sup> Malaysian plan is presented in Table 1 where it is evident that Malaysian government has invested a large portion of the total development expenditures on infrastructure development. A quite fast expansion of infrastructure capital stock for the past fifty years can be observed. In addition, after the privatization process started in early 1980s, which is currently adopted through PPP concept; still has transformed the infrastructure landscape in Malaysia. However, it is need to learn lessons and use of experience gained from the past for bringing positive improvements in the sector (Lee, 2011).

## 3. Benefits of PPP Procurement

PPP is a form of joint venture procurement which involves government and private sector to work jointly for public projects. PPP is successfully implemented for infrastructure projects worldwide. It has offered various benefits which motivate the private sector to work jointly with government. These benefits include risk transfer, cost, time savings and also partnering benefit. Among these, risk Transfer is a major benefit which allows public authorities and private sector to share their risk. With risk transfer, government has an advantage that public sectors construct and deliver the service using their capital assets. As an example of risk sharing, in any construction project the contractors have to bear the risk related to the construction process. Similarly, the risk associated to design work is transferred to the designer and the risk related to land, official approvals are barred by government (Cheung et al. 2010).

Table 1. Public development expenditure on infrastructure, 1965-2010 (Current Prices, RM Million)

Sector	1 MP (1966-70)	2MP (1971-75)	3MP (1976-80)	4MP (1981-85)	5 MP (1986-90)	6MP (1991-95)	7MP (1996- 2000)	8MP (2001-05)	9MP (2006-10)
Transport	544.9	1234.0	2842.8	12966	11216.4	1159.7	20484	30937	30304.4
Communication	152.0	174.9	1152.1	5034.0	4304.3	71.0	39.6	NA	NA
Electricity	530.8	122.7	1205.3	4828.7	7013.7	17581	26107.2	27961	29784
Oil & Gas					2923.1	10815	30400	48300	43800
Water Supply	150.8	163.1	377.2	3393.6	2467.0	2672	2382.7	3882.9	8203.6
Rural Water								733.9	1206.5
Sewerage	9.6	8.6	69.1	393.9	57.2	124.8	665.3	1347.9	3132.8
Total development Expenditure on Infrastructure	1387.9	1703.3	5646.5	26616	27982	42858	80079	113162	116431
Total development Expenditure	6887	14046	24243	62743	35300	54705	99037	17000	20000
Infrastructure's % share of development expenditure	20.2	12.1	23.3	42.4	79.3	78.3	80.9	66.6	58.2

Notes: MP: Malaysia Plan. NA: Not available

Cost Saving is another major benefit which can be achieved by implementing PPP procurement. Cost saving can be attained by reducing lifecycle cost of the project. Consequently, the profits margin will be maximized. This highly depends on strategic planning, expertise level of the private sector, use of advanced technology and creative thinking. A very significant portion of the cost can be saved by using a resilient material. This will definitely reduce the maintenance cost through the life span of the project (Corbett and Smith, 2006; Environment, Transport and Works Bureau, 2004; Grimsey and Lewis, 2004; Akintoye et al., 2003; Li et al., 2005a; So et al., 2007, Li, 2003; Efficiency Unit, 2002; European Commission, 2004; United Nations Economic Commission for Europe, 2004; British Columbia, 1999 cited by Cheung, 2009).

Other than cost saving, PPP process is very effective for time saving and often the projects are finished before the contract time, and the consortium can start generating revenue by opening the facilities or services to public. Further, private is motivated to finish the project earlier as with early completion they receive incentive but if delayed, it can cause compensation. Therefore, the consortium is often focusing on achieving all milestones on time, if not earlier (Chan, et al. 2006) and thus with the incentives approaches, PPP projects can proceed as scheduled (Environment, Transport and Works Bureau, 2004; Grimsey and Lewis, 2004; Akintoye et al., 2003; Li, 2003; Efficiency Unit, 2002 cited by Cheung, 2009). Besides these, PPP has potential of receiving partnering benefits. In these benefits, at the government side, PPP frees up financial funds which helps in managing cash flow as huge upfront capital outflow is substitute by periodic service payments. Further, the project projects delivered via the private sector mostly involve the financing done through private sector. Consequently, by using private sector funding, government transmit public expenditures to

support other divisions of higher priority required for welfare of nations such as education, healthcare and community services (Li et al., 2005b; Efficiency Unit, 2002). On the other hand, PPP enables the private sector to access to public sector markets. If a private sector has prepared accurate cost estimation of the facility, it will results in high profit turn out on investment on a long-term basis. Nevertheless, partnering benefit create co-operation among different collaborating parties and encouraged business opportunities to create the large scope of works (Environment, Transport and Works Bureau, 2004; Grimsey and Lewis, 2004; Boussabaine, 2007; European Commission Directorate, 2003; United Nations Economic Commission for Europe, 2004)

#### 4. Limitations of PPP implementation

Though PPP exerts various benefits to both public and private sectors, it also has some limitations such as political and social risks; unfavorable monetary and commercial conditions; high Transaction costs and lengthy lead time. Among these, political risk is the most significant limitation in PPP practices. Often public sector opposition and governmental limitations on imposed on private parties. This might be because the politicians are not aware of life cost of the project and hence they cannot observe the advantage of PPP process. Further, central government has also lack of knowledge on PPP implementations (Liu and Wilkinson 2011). Among private companies also, there is misapprehending regarding PPP as form of privatization (Grimsey and Lewis, 2004; Owles, 2008). This constructs impenetrability in persuading the different stakeholders on PPP policy. Though, traditional stakeholders are deemed to be inclined to support PPP, however, socialist stakeholders learn to view PPP as a removal of public assets into private hands (Liu and Wilkinson 2011). In developing countries, poor economic growth exerts the negative

impact in getting private sector in confidence for investment. Poor capital market also is a major hindrance in getting finance from private sector (Zhang, 2005). For example; remote topography such as New Zealand, where there is the small number of main contractors, investment banks and facility management companies of a suitable size, it is a big challenge to thrash about to pull competitive stakeholders (Liu and Wilkinson 2011). Besides these, international practitioners disparage PPP for the high transaction cost and lengthy lead time required for bringing infrastructure into service (Efficiency Unit, 2008; Zhang, 2005, Liu and Wilkinson 2011). In PPP, tender document preparation, making contractual agreement and negotiation process also takes relatively larger time (Liu and Wilkinson 2011). All these result in causing complexity of PPP bidding process. This complexity is classified into two categories of factors as an internal factor and external factors. Internal factor of complexity is related to the problem incurred by contractor's decision of bidding and their quoted prices. Other than this, the problems such as difficulties caused by project size, technological issues, accessibility to the site, quality of plans and specifications, government regulation and availability of other projects are regarded as an external factor. According to Russell (1996) there are various advantages and disadvantages of selecting most competent bidder which are:

1. It gives an opportunity of selecting the bidders with sufficient qualification and experience needed to carry out the project.
2. It gives an opportunity for recognizing the contractors who are overloaded due to their ongoing projects as giving a new project to them will affect their capacity and resources.
3. It reduces the chance of giving projects to the unsuitable bidder,
4. In developing, implementing and evaluating the contractor's qualification, relatively higher cost is spent
5. Developing qualification criteria in accordance with the project requirement for a specific project with certain change environment and circumstances in enable to make correct and logical decision is a difficult task

In addition, lack of proper regular project procurement process, poor project definition and demand of client's requirement at the tender stage often cause PPP process costly and lengthy (Aziz, 2007; Ke et al., 2011).

### 5. Failure Cases of PPP Project

Although PPP is very effective procurement method, but due to misunderstanding and limitations

as discussed in an earlier section, there are various PPP projects which failed in achieving their goals. These failures are caused by various reasons such as financial issues (Arboleda and Ricaurte) and complex institutional arrangements especially in the case when public partners are accountable to multiple government agencies and regulators. For example: In case of a railway project, for approval of the concessioner scheme, the public partners are accountable to Ministry of Finance, local government are involved for clearance of right of the way; designs are approved by railway regulation authority and so on (Soomro and Zhang 2011). Therefore, in many countries, governments have established a separate unit for handling PPP projects like in Malaysia, UKAS was established to replace EPU for enhancing the capability of the unit to deliver an efficient PPP projects. But yet, there are many projects failed worldwide. As an example Batu Pahat Municipal Council (BPMC) in Malaysia executed with PPP along with the failure reasons adopted from Singaravelloo (2010) is discussed here.

BPMC project is the development of a bus station located at Jalan Rogayah in Batu Pahat, Johor. The surrounding area was unsystematic where buses and taxis were parked randomly. It was full of a number of hawker stalls for selling foods to passengers. Overall, the site was considered immature as the whole area was dirty and unattractive. Hence, BPMC, the owner of the land planned redevelopment of the area for providing a systematic transportation to public. For this, BPMC took initiatives for redeveloping the existing facilities and encouraging better economic activities within the building and its surroundings. For executing the project, a private developer ABEEI (full name withheld for confidentiality) was invited who produced the design of the services. The design was scrutinized by the management and approved by board council meeting and the state government. The scope of the work assigned to the developer is shown in table 2.

Table 2. Summary of Scope of the Project

Floor	Use	Floor Space (sq. ft.)
Ground Floor	Shopping complex	13,800
1 <sup>st</sup> Floor	Shopping complex	41,232
2 <sup>nd</sup> Floor	Shopping complex	40,735
3 <sup>rd</sup> Floor	Shopping complex	22,147
4 <sup>th</sup> Floor	Shopping complex	19,026
5 <sup>th</sup> and 6 <sup>th</sup> Floor	271 units of parking bays	
7 <sup>th</sup> to 15 <sup>th</sup> Floor	Office space	

Source: Singaravelloo, 2010

The agreement took place with the condition that, from the car parks managed by the developer, the profits will be shared with ration of 60:40 where

council will take the largest share and the complex will be owned by the council after 60 years. But, in 1996 when the council could not pay the management fees to the developer, the contractual problem started to occur. To manage the expenses, the developer refused to pay assessment tax with the justification that the council is failed in paying the management fees. Since 2006, the council started to occupy the floor from 11 to 14 while the developer was not willing for further negotiation and did not precede any marketing plan for interested parties who were ready to move to the complex. The developer offered BPMC to take over complete complex and manage themselves because of the no-payment of management fees. BPMC refused that condition and took a legal action against the developer in 2008. Due to financial problem, the developer could not pay electricity bill and also could not manage the complex. Consequently, power supply was disconnected. This caused disruption with elevator, lift and air-conditioning facilities. Hence, the developer had a hard time with tenants and customers associated with the complex and many tenants declined to pay management fees. One of the major reasons for this failure was that the consortium partner was not selected through open bidding process. Finally, the council took charge of BPMC and bared administration and maintenance expense of the complex. Other than this, there are various cases of failure occurred in PPP project worldwide. Some of the projects are summarized in table 3.

## 6. LRT Case Study Findings

Case study was carried out through face to face and telephonic interviewing with the personnel from LRT companies involved in the contract. The data gathered and findings are discussed in following sections.

### 6.1 Project History and Brief

Due to rapid development, Malaysia is experiencing growth in population. This has resulted in increasing number of vehicle on the road especially in the city of Kuala Lumpur. The citizens often face problems because of congestion around the city. To overcome this problem, government has stepped forward with LRT projects which are very effective solution of congestion. Besides this, LRT is an efficient alternative to reduce and avoid pollution since the system also used modern technology with electrically-powered trains. LRT network connected with important key districts such as banks, government offices, sport complex, hotels, light industrial area and shopping mall which facilitate citizens for easy movement from place to place quickly (Kuala Lumpur LRT, 2012).

The route of Kuala Lumpur LRT is divided into two routes. Route 1 is known as Ampang Line, which connects Ampang and Sri Petaling lines. Route 2 Kelana Jaya Line which connects Kelana Jaya with Gombak. LRT project was implemented with Build Operate Transfer (BOT) type of contracting. The contract was carried out between Malaysia Government, Sistem Transit Aliran Ringan Sdn Bhd (STAR-LRT) and Projek Usahasama Transit Ringan Automatik Sdn Bhd (PUTRA-LRT). The agreed concession period for both the train lines is 60 years (Lee, 2011).

Among the contract parties, PUTRA-LRT owned by Renong Bhd, was assigned for carrying out design work, actual construction, operate and maintenance. The selection of this company was done based on its past effective reputation in executing engineering and management field. The company had vast experience of handling highway, power generation and infrastructure projects. The contract signature was executed on 7th August 1995 for 29 km long line with 24 stations. Among these, 5 stations were underground, 18 elevated and 1 at-grade at distant of 1.1 km. Execution of PUTRA-LRT included 2 segments where segment 1 connected Lembah Subang with Pasar Seni while segment 2 connected Pasar Seni with Ambang Park and Gombak. For executing project successfully, the financial loan was arranged by involving 4 major groups which are Commerce International Merchant Bankers Bhd (CIMB), Bank Bumiputra Malaysia Bhd (BBMB), Commerce MGI Sdn Bhd (CMGI) and Bank Islam Malaysia Bhd (BIMB). These groups involved 27 various financial partners to support the financial needs of the project.

Another party involved in LTR contract was STAR-LRT in which a British company, Taylor Woodrow was the largest shareholder. This group had financed and constructed the project with a value of 850 million creating one of the largest privately financed infrastructure projects in the world. Hence, Taylor Woodrow and Adtranz formed a consortium to finance and execute Malaysian LRT project. Led by Taylor Woodrow, the consortium developed the system through to the operational concept and formed the operating company called STAR. Hence, STAR-LRT and Malaysia Government signed a concession agreement for 60 years. The agreement was executed in two phases separately for LRT linking central business district with the eastern suburbs and commonwealth games village with a northern extension of the city centre on 22 December 1992 and 26 June 1995 respectively. LRT work comprised 27 km track where cost for Phase 1 was RM 1.2 billion and for phase 2 was RM 2.2 billion. For executions work, STAR-LRT took a loan of RM 800

million for phase 1 and loan of RM 1.32 billion for phase 2 works from Bank Bumiputra. Overall, finance for construction cost was met through 24% equity, 60% commercial loans and 16% government

loans with a total of 55% financed by Malaysian financiers, 30% held by consortium and 15% from international financiers (Kuala Lumpur LRT, 2012).

Table 3. Example of PPP Failed Projects and Failure Reasons

No.	Project Name	Country of origin	Type of failure
1	Belgrade Novisad Motorway	Czech Republic	Concession cancelled
2	D47 Motorway	Czech Republic	Concession cancelled
3	Horgos-Pozega Highway	Serbia	Concession cancelled
4	M9 Motorway	Pakistan	Concession cancelled
5	Mexico Toll Road Program	Mexico	Concession cancelled
6	Mumbasa container terminal	Kenya	Concession cancelled
7	Trakia Motorway Project	Bulgaria	Concession cancelled
8	Transgabonais	Gabon	Concession cancelled
9	Jakarta Outer Ring Road	Indonesia	Concession cancelled + Project nationalization
10	Bangkok Elevated Road and Track System	Thailand	Concession cancelled
11	D5 Motorway	Czech Republic	Concession tender cancelled
12	M3/M30 Toll Road	Hungary	Concession tender cancelled
13	M7 Toll Road	Hungary	Concession tender cancelled
14	M9 Danube Toll Bridge at Szekszárd	Hungary	Concession tender cancelled
15	Pitesti-Bucharest-Lehliu (140 km) First Phase	Romania	Concession tender cancelled
16	Argentina Toll road program (first generation)	Argentina	Contract suspension
17	Beiras Litoral / Alta Shadow Toll Road	Portugal	Project Halted
18	91Express Lanes California	USA	Project nationalization
19	Camino Colombia Toll Road	USA	Project nationalization
20	London Underground – Metronet	United Kingdom	Project nationalization
21	London Underground - Tubelines	United Kingdom	Project nationalization
22	M1/M15 Toll Road	Hungary	Project nationalization
23	Railtrack	United Kingdom	Project nationalization
24	Siza Rail	Democratic Republic of Congo	Project nationalization
25	Skye bridge	United Kingdom	Project nationalization
26	Tha Ngone bridge project	Lao PDR	Project nationalization
27	Zagreb-Gorican Motorway	Croatia	Project nationalization
28	Channel Tunnel	United Kingdom	VFM not achieved
29	Channel Tunnel Rail Ling (CTRL)	United Kingdom	VFM not achieved
30	Confederation Bridge	Canada	VFM not achieved
31	Highway 407	Canada	VFM not achieved
32	Railfreight Distribution	United Kingdom	VFM not achieved
33	Rolling Stock Leasing Companies (ROSCO)	United Kingdom	VFM not achieved
34	Royal Dockyards (at Davenport and Rosyth)	United Kingdom	VFM not achieved
35	Wijkertunnel Randstad	Netherlands	VFM not achieved

Source: Soomro and Zhang, 2013

Consortium STAR classified work responsibilities in a way that all building and track construction works were to be carried out by Taylor Woodrow Company and all electro-mechanical works and the supply of rolling stock were handed over to Adtranz. Route layout and conceptual design work were carried out by Taylor Woodrow, which blended modern and efficient rail network with local architectural and cultural influences. Thus, the construction of Phase One started in 1993 through 27 km track and was completed in December 1995. The service for 13 stations situated within 12 Km track connecting Ampang and Jalan Sultan Ismail was started in December 1996 while operation for 9.5 km extension connecting Chan Sow Lin station with National Sports Complex and the Games Village at Bukit Jalil was opened for operation in early 1998.

## 6.2 Major Issues and failure factors

The failure of LRT started in 1997 during the operations as Malaysia faced financial crisis where inflation rate increased from 8% to over 40% (as revealed during an interview with UKAS Officer). Kuala Lumpur Stock Exchange (KLSE) also had a loss of more than 50% and remained from above 1,200 to fewer than 600. Value of the ringgit also was reached 50% of its value where dollar reached to approximately 4.57. Besides that; due to this crisis, in 1998 economy in the construction sector was reduced by 23.5%, manufacturing was shrunk 9% and the agriculture sector reduced by 5.9% (Financial crisis, 2012). Similarly, LRT services were turned to inefficient because of experiencing lower passenger rate compared to the anticipated. As a result, in Klang valley approximately 16% of the LRT trips were reduced. Consequently, START-LRT and PUTRA-LRT could not pay back their loans. In order to control the financial situation, START-LRT and PUTRA-LRT requested Corporate Debt Restructuring Committee (CDRC) of Malaysia's central bank, Bank Negara, to assist for streamlining the debts (Bursa Saham, 1999). Initially, CDRC proposed that Government may take over the LRT line from concessioners and lease back to same concessioner which was not accepted at that time. Later after two years, in response of another proposal restructuring of debt was carried out where government set 2 government-owned companies. Among these, one company owned LRT and other was responsible for operating public transportation system. This resulted in reducing the level of non-performance for repaying loans by .7% in six-months. But yet, both the companies failed in repaying the loan and hence government issued a notice of default to START-LRT and PUTRA-LRT with demand of repaying loans within 14 days. After

going through legal process, High court appointed a liquidator to settle the issue and finally in September 2002, the Malaysian Ministry of Finance announced that, on the behalf of the government of Malaysia, Syarikat Prasnana Negara Berhad will take over both PUTRA-LRT and STAR-LRT.

## 7. Conclusion

This paper focused on studying the reasons of failure of LRT Kuala Lumpur through interviewing the companies involved in LRT project. The failure of the project might be because of PPP is a new approach in Malaysian construction industry. With PPP, government has encouraged private sector for participating in enhancing nation development. During the case study, it was identified that Kuala Lumpur LRT project was failed during the operation phase. Key reason of the failure was the financial crisis of 1997 where inflation rate increased from 8% to over 40%. This financial crisis resulted to the less profit rate, and the concessionaires were not able to repay the loan to the banks which they had taken for LRT construction works. Finally, through undergoing a legal process in 2002, Syarikat Prasnana Negara Berhad took over PUTRA-LRT and STAR-LRT on the behalf of the government of Malaysia.

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