BEST VALUE MODEL FOR PUBLIC PRIVATE PARTNERSHIP INFRASTRUCTURE PROJECTS IN MALAYSIA

MUHAMMAD MUSTAPHA GAMBO

A thesis submitted in fulfillment of the requirement for the award of the Doctor of Philosophy in Real Estate and Facilities Management

Faculty of Technology Management and Business
Universiti Tun Hussein Onn Malaysia

JULY 2015
DEDICATION

To my late father, Alhaji Gambo Dauda Paiko, may ALLAH (S.W.A) make AL JANNAH to be your final abode.
ACKNOWLEDGEMENT

All praise be to ALLAH, the most exalted and the most high, and to whom we all depend for sustenance and cherishment. My heartfelt thanks and gratitude extend to all the people who have contributed in any capacity either intellectually or emotionally throughout the three and half years of my doctoral studies.

First and foremost, I would like to express my deepest gratitude to my supervisor Associate Professor Dr Christy Pathrose Gomez for his valuable supervision during the entire period of my research study in Universiti Tun Hussein Onn Malaysia.

I would also like to thank the management of Universiti Tun Hussein Onn Malaysia for offering me the Graduate Research Project Grant Incentive Scheme (Vote No. 0819) and the International Students Scholarship for the duration of this program. Furthermore, I would also like to thank the entire academic and non-academic staff of the Faculty of Technology Management and Business also the Graduate School for their support.

Most importantly, I would like to express my immense gratitude to my mother, Hajiya Zainab Salihu for all the love, moral support and prayers.

I would also like to express my heartfelt gratitude to my brothers and sisters, for all their constant support and prayers, also to my brothers and sisters in law, and lastly to all my uncles, aunties, nieces and nephews.

My special thanks to my friends who were jointly pursuing their postgraduate studies in Malaysia, Ahmad Hussaini Jagaba, Muhammad Yahaya Musa, Ashwin Narendra Raut, Mansur Dodo, Abdulazeez Umar Raji, Ibrahim Salihu Anka, Abdulnasir & Nuhu Isah and all those whose names have not been stated here, i wish to thank them for their support. And also to my friends in Nigeria; Adamu Sambo, Bazallah Muhammad, Usman Sulaiman and many others, thank you.
ABSTRACT

The rapid human population growth rate coupled with the need for improved infrastructure project delivery has necessitated the participation of private sector for the procurement of such projects. Public Private Partnerships (PPP) is one such private sector driven procurement approach which has evolved to serve the growing demand for infrastructure development in Malaysia. However, the Value for Money (VfM) evaluative aspect of the PPP procurement form has faced criticism. Much of the criticism is directed to the PPP practice being riddled with issues identified as being related to the ineffective structuring of the private sector led project-specific Special Purpose Vehicle (SPV) to deliver VfM. Exploratory preliminary research findings indicate that there is a lack of overall long-term strategic focus by the SPV for delivering VfM objectives in PPP projects. Questionnaire survey data was obtained from a purposive sample of 48 public and private PPP practitioners in Peninsular Malaysia to determine the needed skills (core skills) and critical success factors (CSFs) required by the SPV to achieve their VfM objectives for PPP projects, and hence the successful delivery of PPP projects. The aim of the research is to develop a conceptual tool for delivering Best Value (BV) on PPP infrastructure projects. The notion of ‘skill sets’ is used as a means to scope the capability necessary with respect to agreed planning targets on specific projects. A Best Value PPP conceptual framework is developed as a heuristic tool for managers which proposes the embedding of the VfM aligned PPP SPV organizational skills into the operational structure of the SPV and then effecting the SPV organizational strategic measures according to the four perspectives of the Balanced Scorecard performance measurement strategy with respect to the CSFs. Drawing on the understanding that VfM objectives are critical denominators for effective PPP project delivery, this research will influence the development of appropriate guidelines for the effective structuring of the SPV’s to enable the delivery of enhanced VfM objectives in the form of BV for PPP concession projects.
ABSTRAK

Kepesatan peningkatan bilangan penduduk serta keperluan kemajuan dalam persediaan infrastruktur telah memerlukan penglibatan pihak swasta dalam proses perolehan projek-projek tersebut. Perkongsian Awam Swasta atau Public Private Partnership (PPP) adalah salah satu kaedah perolehan berdasarkan penglibatan pihak swasta yang telah berkembang bagi tujuan memenuhi keperluan peningkatan penyediaan infrastruktur di Malaysia. Walaubagaimanapun penilaian berdasarkan konsep Nilai Untuk Wang atau Value for Money (VfM) berkaitan dengan kaedah perolehan PPP telah banyak menerima kritikan. Kebanyakan kritikan ini ditumpu pada pengamalan PPP yang telah dikenalpasti dengan isu yang melibatkan kurang berkesannya struktur Syarikat Tujuan Khas atau Special Purpose Vehicle (SPV) yang ditubuhkan oleh pihak swasta bagi tujuan menunaikan tanggungjawab memenuhi kriteria VfM. Dapatan kajian penerokaan awalan menunjukkan bahawa kurangnya fokus jangka panjang yang strategik oleh SPV dalam mencapai objektif-obektif VfM bagi projek PPP di Malaysia. Data hasil kaji selidik yang melibatkan ‘sampel bertujuan’ (purposive sample) yang terdiri daripada pengamal PPP swasta dan awam telah dikumpul bagi tujuan mengenalpasti kemahiran yang diperlukan serta faktor-faktor kejayaan kritikal yang harus diperolehi oleh SPV bagi tujuan mencapai objektif-obektif VfM serta memastikan kejayaan projek infrastruktur berjenis PPP. Satu rangkakerja konseptual Nilai Terbaik atau Best Value (BV) yang terdiri daripada Elemen-elemen Kemahiran Syarikat SPV untuk mencapai objektif-obektif VfM dalam struktur operasinya SPV serta penubuhan langkah-langkah strategik SPV mengikut perspektif pelaksanaan strategik Balanced Scorecard (BSC) telah dihasilkan. Tujuan kajian ini adalah untuk membangunkan model konsepsual bagi menyampaikan Best Value (BV) projek-projek infrastruktur PPP. Set Kemahiran digunakan untuk tujuan mengenalpasti keupayaan yang diperlukan berkenaan dengan sasaran perancangan yang telah di persetujui seiring dengan projek-
projek tertentu. Berdasarkan kefahaman bahawa objektif VfM adalah asas yang kritikal bagi tujuan menyempurnakan projek PPP, kajian ini dijangka akan mempengaruhi pembentukan garis panduan yang sesuai bagi tujuan membentukkan struktur organisasi SPV supaya dapat mencapai objektif VfM dengan lebih berkesan yang dapat dihasilkan dalam bentuk BV bagi projek konsesi PPP.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TITLE</td>
<td>i</td>
</tr>
<tr>
<td>DECLARATION</td>
<td>ii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>iv</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>vi</td>
</tr>
<tr>
<td>CONTENTS</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xiv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xvi</td>
</tr>
<tr>
<td>LIST OF SYMBOLS AND ABBREVIATIONS</td>
<td>xvii</td>
</tr>
<tr>
<td>LIST OF APPENDICES</td>
<td>xviii</td>
</tr>
</tbody>
</table>

## CHAPTER 1  INTRODUCTION

1.1 Background of the study 1
1.1.1 The role of the SPV organization in the delivery of PPP infrastructure project 6
1.2 Problem statement 9
1.3 Research questions 11
1.4 Aim of the research 12
1.5 Objectives of the research 12
1.6 Scope of the research 13
1.7 Significance of the research 13
1.8 Limitations of the research 14
1.9 Organization of the thesis 14
## CHAPTER 2 LITERATURE REVIEW

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1</td>
<td>Infrastructure projects as it relates to social and economic development</td>
<td>16</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Categorization and characterization of infrastructural facilities</td>
<td>17</td>
</tr>
<tr>
<td>2.1.3</td>
<td>The role of infrastructure to national development</td>
<td>18</td>
</tr>
<tr>
<td>2.1.4</td>
<td>Need for private sector participation in the provision of infrastructure facilities</td>
<td>19</td>
</tr>
<tr>
<td>2.2</td>
<td>The business philosophy behind public and private sector collaboration in infrastructure delivery</td>
<td>21</td>
</tr>
<tr>
<td>2.2.1</td>
<td>Public-private partnership as a means of collaboration for infrastructure delivery</td>
<td>21</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Distinction between public – private – partnerships, privatization and private finance initiative</td>
<td>23</td>
</tr>
<tr>
<td>2.2.3</td>
<td>Forms of PPP for delivering infrastructure projects</td>
<td>26</td>
</tr>
<tr>
<td>2.3</td>
<td>Key project participants in PPP project delivery</td>
<td>31</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Advantages and disadvantages of the PPP form of infrastructure delivery with respect to the stakeholders</td>
<td>32</td>
</tr>
<tr>
<td>2.4</td>
<td>Contractual relationships in PPP</td>
<td>35</td>
</tr>
<tr>
<td>2.4.1</td>
<td>Agreements in the PPP contract</td>
<td>36</td>
</tr>
<tr>
<td>2.5</td>
<td>Tendering procedures in the PPP form of infrastructure delivery</td>
<td>40</td>
</tr>
<tr>
<td>2.5.1</td>
<td>Procedures for PPP tendering</td>
<td>40</td>
</tr>
<tr>
<td>2.5.2</td>
<td>Criteria for private partner selection in PPP tendering</td>
<td>43</td>
</tr>
<tr>
<td>2.5.3</td>
<td>Best value source selection in PPP</td>
<td>45</td>
</tr>
<tr>
<td>2.5.4</td>
<td>Public sector comparator</td>
<td>47</td>
</tr>
<tr>
<td>2.6</td>
<td>Risk management in the PPP form of infrastructure delivery</td>
<td>47</td>
</tr>
<tr>
<td>2.6.1</td>
<td>PPP risks in developing countries</td>
<td>48</td>
</tr>
</tbody>
</table>
2.6.2 Risk allocation in PPP projects 49
2.7 Value for money approach for PPP infrastructure projects 52
2.7.1 VfM drivers in PPP 54
2.7.2 Value management in project delivery 55
2.7.3 Best value approach in PPP infrastructure projects 56
2.8 Skills sets for SPV organizations in PPP infrastructure project delivery 58
2.9 Success factors for PPP infrastructure projects 61
2.9.1 Critical success factors for Public–Private Partnerships identified in previous studies 62
2.10 Performance measurement techniques 65
2.10.1 Balanced scorecard performance measurement methodology 66
2.10.2 The four perspectives of the Balanced scorecard 69
2.11 Malaysian economy and the focus on private sector participation in infrastructure delivery 71
2.11.1 Infrastructure development in Malaysia 72
2.11.2 PPP form of infrastructure delivery in Malaysia 73

CHAPTER 3 RESEARCH METHODOLOGY 77
3.1 Introduction 77
3.2 Research approaches 77
3.3 Research framework 79
3.3.1 Secondary research data 81
3.3.2 Pilot study 81
3.3.2.1 Pilot study research strategy 82
3.3.2.2 Selecting the pilot study respondents 83
3.4 Primary research questionnaire survey 85
3.4.1 Collection of research data through the questionnaire survey 85
3.4.2 Questionnaire survey sampling 87
3.5 Research aim and objectives and approaches adopted to achieve them 89

CHAPTER 4 RESULTS AND DISCUSSIONS 92
4.1 Introduction 92
4.2 Pilot study questionnaire survey 97
4.2.1 Analysis and result of pilot study questionnaire survey 94
4.2.2 Pilot study semi structured interviews 95
4.2.3 Pilot study conclusions 98
4.3 Phase 2: Primary research analysis and discussion 100
4.3.1 Phase 2: Primary objective one analysis and discussion 100
4.4 Phase 2: Primary objectives 2 and 3 questionnaire survey findings analysis and discussion 106
4.4.1 Phase 2: Primary objective two: Determining the SPV organization skills required for PPP project delivery 108
4.4.2 PPP SPV organization skills survey data analysis and results 110
4.4.2.1 Factor analysis for skill sets for the SPV organization in PPP infrastructure projects 115
4.5 Phase 2: Primary objective three 120
4.5.1 PPP CSF’s for SPV organizations questionnaire survey data analysis and results 122
CHAPTER 5  PPP BEST VALUE FRAMEWORK
DEVELOPMENT AND ITS VALIDATION  133

5.1  Introduction  133
5.2  BV conceptual framework for PPP infrastructure projects  134
5.3  PPP BV framework validation  140
5.3.1  Design of the conceptual PPP BV framework validation questionnaire  141
5.3.2  Framework validation respondents characteristics  141
5.3.3  Results of the PPP BV framework validation survey  143

CHAPTER 6  CONCLUSIONS AND RECOMMENDATIONS  146

6.1  Introduction  146
6.2  Review of the research objectives  146
6.3  Research findings  148
6.3.1  Preliminary objective  148
6.3.2  Undertaking a comparison between different forms of PPP with regards to their effectiveness (appropriateness) in terms of achieving VfM objectives for PPP projects in Malaysia  149
6.3.3  Determining the skills required by the SPV organization for effective PPP projects delivery  150
6.3.4  Determining the CSF’s to enable the SPV organizations to achieve their VfM objectives in PPP delivery in Malaysia aligned to the BSC methodology  152
6.3.5 Developing a conceptual framework to enable the effective structuring of SPV organizations for the delivery of BV objectives for PPP projects

6.4 Value, significance and implications of the research

6.5 Limitations of the research and recommendations for future studies

REFERENCES

APPENDICES
LIST OF TABLES

2.1 Categorization of infrastructure facilities and their related associated features 17
2.2 Distinction between PPP, privatization, corporatization and PFI 25
2.3 Summary of the features for the various PPP types 30
2.4 Roles of different stakeholders in the PPP process 31
2.5 Interests of Stakeholders in the PPP Process 32
2.6 Advantages of the PPP form of Infrastructure delivery with respect to the stakeholders 33
2.7 Disadvantages of the PPP form of infrastructure delivery with respect to the stakeholders 34
2.8 Criteria for bid evaluations 44
2.9 Risk matrix for PPP infrastructure projects 51
2.10 SPV organization skills for PPP infrastructure project delivery 60
2.11 Summary of CSF’s for PPP infrastructure projects according to the BSC perspectives 64
2.12 Economic transformation of Malaysia 75
2.13 Details of some existing PPP projects in Malaysia 76
3.1 Pilot study respondents profile 84
3.2 Questionnaire survey respondents profile 87
4.1 Ten PPP SPV organization skills ranking 94
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2</td>
<td>VfM objectives for all forms of PPP projects</td>
<td>103</td>
</tr>
<tr>
<td>4.3</td>
<td>PPP rationality domain in terms of VfM</td>
<td>105</td>
</tr>
<tr>
<td>4.4</td>
<td>Perception of survey respondents concerning the relative importance of the SPV organization skills for PPP infrastructure projects delivery</td>
<td>111</td>
</tr>
<tr>
<td>4.5</td>
<td>Perception of public and private sector respondents concerning the relative importance of the SPV organization skills for PPP infrastructure projects delivery</td>
<td>114</td>
</tr>
<tr>
<td>4.6</td>
<td>Factor loading of SPV organizational skills for the delivery of PPP infrastructure projects</td>
<td>116</td>
</tr>
<tr>
<td>4.7</td>
<td>Perception of survey respondents concerning the relative importance of SPV organization CSF’s to deliver VfM in PPP projects based on the BSC methodology</td>
<td>124</td>
</tr>
<tr>
<td>4.8</td>
<td>Perception of public and private sector respondents concerning the relative importance of the SPV organization CSF’s to deliver VfM in PPP projects based on the BSC methodology</td>
<td>129</td>
</tr>
<tr>
<td>5.1</td>
<td>Strategic objectives and measures for the SPV organization in delivering BV objectives in PPP projects adopting the BSC performance measurement methodology</td>
<td>137</td>
</tr>
<tr>
<td>5.2</td>
<td>Details of survey respondents for the SPV BV conceptual framework for PPP infrastructure projects</td>
<td>140</td>
</tr>
<tr>
<td>5.3</td>
<td>SPV BV conceptual framework for PPP project validation survey results</td>
<td>143</td>
</tr>
<tr>
<td>5.4</td>
<td>SPV BV conceptual framework for PPP project validation survey results</td>
<td>144</td>
</tr>
<tr>
<td>6.1</td>
<td>Tools adopted to achieve research objective</td>
<td>148</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

1.1 Annual investment of infrastructure projects with private participation in developing countries between 1990 and 2006  
1.2 SPV structure in PPP  
2.1 The relationship between infrastructure to economic growth and improving welfare of the citizenry  
2.2 Infrastructure provision under the public sector in the early 1990s - the annual costs of mis-pricing and inefficiency  
2.3 PPP contractual relationship  
2.4 The PPP tendering stages up to financial close  
2.5 Economy and efficiency considerations as part of value for money  
2.6 The relationship between success factors, project performance and project success  
2.7 The four perspectives of the Balanced scorecard  
2.8 PPP chronology in Malaysia  
3.1 Research design  
3.2 Research process flow chart  
3.3 Pilot study framework  
4.1 Methodological flow to achieve the effective adoption of PPP options to deliver project specific VfM objectives using the PPP rationality domain in terms of VfM categorization  
4.2 Flow chart describing the analysis of objectives 2 and 3  
5.1 SPV BV conceptual framework for PPP project delivery
LIST OF SYMBOLS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPP</td>
<td>Public private partnership</td>
</tr>
<tr>
<td>SPV</td>
<td>Special purpose vehicle</td>
</tr>
<tr>
<td>VfM</td>
<td>Value for money</td>
</tr>
<tr>
<td>BV</td>
<td>Best Value</td>
</tr>
<tr>
<td>W</td>
<td>Summation of the weighing to each skill</td>
</tr>
<tr>
<td>A</td>
<td>Highest ranking</td>
</tr>
<tr>
<td>N</td>
<td>Total number of respondents for that skill</td>
</tr>
</tbody>
</table>
# LIST OF APPENDICES

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>List of Publications</td>
<td>178</td>
</tr>
<tr>
<td>2</td>
<td>SPSS results</td>
<td>180</td>
</tr>
<tr>
<td>3</td>
<td>Data collection instruments</td>
<td>198</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

1.1 Background of the study

Effective infrastructure is being considered as an important aspect of every nation’s economy towards realizing its full potential of becoming a developed nation. According to Sanghi et al., (2007), effective infrastructure plays a major role in determining the success of the key sectors of every economy, and also the provision of effective infrastructure in housing, water, energy and transport which are critical in achieving improved standard of living and also helps towards poverty reduction.

The growing participation of the developing nations in the free market system and also their active participation in the world economy has necessitated the need for improved infrastructural facilities to enable a sustained economic development. However, it is a known fact that these nations cannot effectively cope with the huge capital investments needed for the provision of these infrastructures (Pongsiri, 2002; Jamali, 2004).
Governments primarily face an ever increasing need to find sufficient financing to develop and maintain infrastructure required to support growing populations. Traditionally, this has been the reason for the private sector participation in resolving the infrastructure challenges facing the public sector (Cheung & Kajewski, 2010; Akintoye et al., 2005); which was originally initiated under the banner of privatization and subsequently Public Private Partnerships (PPP).

As nations continue to witness a shortfall in the funds available for the provision of public infrastructure, PPP is being considered as an effective means of mitigating the problem of insufficient capital provided for the execution of infrastructure projects. The private capital that is being injected into the provision of such projects can go a long way in reducing the major risks that are being associated with the delays in progress payments by public clients. Thus, this will improve the effectiveness of the fiscal responsibilities of the government departments (Pongsiri, 2002; Akintoye et al., 2005; Huang et al., 2005), which is considered to be one of the key challenges faced by wholly public financed projects.

PPP can be described as a form of procuring public infrastructure which has evolved to solve infrastructural deficits. It is a system which is primarily aimed at achieving the best output possible by pulling together and mobilizing of funds, technologies, managerial skills, operational efficiencies and facilitating innovations that exists in the private sector (Njikamp et al., 2002; Zhang, 2005). Basically, this is achieved by the transfer of the risks and responsibilities that are being associated with the provision of such infrastructure to the private sector. As noted by Pongsiri (2002), PPP provides a means of collaboration between the public and private sector in order to pursue common goals of providing infrastructural facilities, while taking advantage of the resources, strengths, competencies and capabilities that do exists in the public and private sectors.

According to Walker et al., (1995) the several advantages that PPP offers as a means of procuring public infrastructure includes:
a) The achievement and maintenance of a balance risk return structure as a result of the private sector participation in the provision of such public infrastructure, thereby utilizing the private sector capability of providing effective services.

b) The private sector is known in possessing better mobility than the public sector, as it is known to offer cost savings in projects in such aspects as planning, design, construction and eventually, operation. Furthermore, it offers additional advantages of mitigating and relieving all the bureaucracies and administrative burden that is associated with the public provision of infrastructural facilities and services.

c) Additionally, the private sector participation of providing infrastructure relieves the government of the huge financial burden that is associated with large scale infrastructure projects, as the government is known to be lacking in providing such huge resources that are required in the provision of such projects.

However, despite these advantages of the PPP, the infrastructure delivery approach is also known to have its disadvantages. Which these includes high tendering costs, payments of high operating costs by the public sector for rentals and leases, and also the costs savings achieved by the private sector are being retained as profits rather than passed on to the public sector (New Zealand Treasury, 2006; Gunawasa, 2012). Of late, PPP form of procurement for delivering services has progressed into various sectors of industry. Hence, other advantages that the PPP offers include enabling the government to focus on the provision of such social services as pension, health and education.

Traditionally, PPP projects were viewed as a feasible option for countries wanting to provide infrastructure facilities whilst being financially strapped, as in the case of many developing countries. The use of PPP as a means of providing infrastructure dates back to as far back as the 17th century, where the private sector was involved in the executioning of infrastructure projects like road tolling in the form of turnpikes in America and the United Kingdom (UK), and also public water systems in France. But then, it was only during the 1990’s that the system became prominent where the Private Finance Initiative (PFI) became a well-known method of delivering public
infrastructure and services especially in the UK (Grimsey & Lewis, 2007; Cheung & Kajewski, 2010). PPP was first launched in the form of PFI in 1992 by the UK government with the main aim of getting infrastructural projects off the public balance sheet, cutting public spendings and also mitigating the constraints associated with the borrowing limits of the public sector (Li et al., 2005). Since then, the system became a globally adopted approach for delivering public infrastructure projects. PPP infrastructure projects accounts for approximately 15 per cent of expenditure in infrastructure in the UK and 8 per cent in Australia (Ernst & Young, 2005). The system has also played a significant role in the provision of infrastructural projects and services in developing nations, where the level of annual investments in infrastructure projects by PPP in such countries has continued to grow consistently right from 1990 as shown in Figure 1.1.

![Figure 1.1: Annual investment of infrastructure projects with private participation in developing countries between 1990 and 2006 (World Bank, 2007).](image)

As described in the figure above, there had been a steady rise in private sector investment in infrastructure from 1990 to 1997. Whereas from the year 1998 up to 2002, there was a fall in investments as a result of the 1997 Asian financial crises (FRBSF,
Malaysia is considered a newly industrialized market economy with an annual growth rate of about 5-7%, this makes it the 3rd largest economy in South East Asia and the 28th in the world (World Bank, 2012). In 2010, Malaysia launched the New Economic Model (NEM) which aims for the nation to achieve a high income and fully developed status by the year 2020. Consequently, with this status that the nation seeks to achieve massive investment is required in order to have world class infrastructural facilities which befits that of a fully developed nation. However, it is apparent that the government on its own cannot provide such investment as there is increased shortage of funds that are required to finance the provision of such infrastructure (Ismail & Rashid, 2014). Moreover, the main idea behind the NEM is to propel economic growth that is primarily driven by the private sector, so as to ensure the utilization of the efficiency, expertise and technical know how that is associated with the private sector (World Bank, 2012; EPU, 2010). This then warrants a mechanism such as PPP to serve as the vehicle towards achieving the much needed private sector participation in the delivery of the necessary infrastructural facilities.

In Malaysia, PPP has enabled the implementation of large-scale infrastructure projects, such as highways, bridges and energy projects. This appears to be mainly due to the ability of the private sector to raise massive funds and also by enhancing the role of the public entity in terms of effectively managing regulatory and policy issues. On the whole, the concept of PPP has contributed greatly to the infrastructure development in Malaysia within the last 29 years (Ismail et al., 2009). This is besides the fact that there have been a few problematic instances related to PPP mode of infrastructure delivery. Examples of which are the Indah Water Consortium that was set up to handle the national sewerage system and also the Selangor Mass Housing project which was initiated in order to achieve the zero squatter policy (Abdul-Aziz & Kassim, 2011; El-Gohary et al., 2006).

In general, due to the known benefits that the PPP offers towards the provision of infrastructural facilities and services, the PPP procurement system in Malaysia is becoming increasingly popular in both the procurement of new infrastructural projects and also the management and operations of existing ones. PPP as a project delivery approach is characterized by having different forms, and these distinction in terms of the
PPP variations mainly refers to its representation as it relates to the major components that describes the PPP as means of achieving the client’s objective of having a built infrastructure project. According to UNESCAP (2009), PPP forms can be mainly described in terms of ownership of the project’s capital assets, responsibility for investment, assumption and apportionment of risks, and lastly the duration of the contract, i.e the concessioning period. Moreover, the PPP arrangement involves a host government/public sector granting a concession to a private consortium (concessionaire), which is in the form of an independent business entity known as a Special Purpose/Project Vehicle (SPV).

1.1.1 The role of the SPV organization in the delivery of PPP infrastructure project

The creation of the SPV which is considered a separate commercial venture is a key feature for the implementation of the PPP for delivering infrastructure projects. The SPV is a new standalone firm that owns and manages the infrastructure assets until the investment costs are recuperated. The SPV is managed by a sponsor or an equity investor responsible for bidding, developing, and managing the PPP infrastructure project throughout the concessioning period (ADB, 2008). Hence, the SPV is fundamentally a legal entity that undertakes a project and negotiates contract agreements with other parties including the government.

In a more specific sense, a SPV is an independent commercial entity established under the relevant statutory act of a country where the PPP infrastructure project is to be domiciled. The SPV is set up through an agreement (which is also known as memorandum of association) between the shareholders or sponsors that are saddled with the responsibility of providing the needed funds and the eventual execution and managing the PPP infrastructure project throughout the concessioning period. The shareholders agreement sets out the basis on which the SPV company is established, giving such details as its name, ownership and organizational structure, management control and corporate matters, authorized share capital and the extent of the liabilities of its members. The authorized share capital is the maximum amount of equity capital,
measured at par value, by which the SPV company is allowed to raise by issuing shares to existing or potential shareholders (or investors). Furthermore, other details that are spelt out in the agreement are issues related to how the shareholders of the SPV can be granted special privileges on matters such as elections to the company’s board, the right to purchase new shares issued by the company and the right to share in distribution of the company’s income (UNESCAP, 2009).

According to UKAS (2009), the roles of the SPV in the delivery of PPP infrastructure projects include the following:

a) Raising the funds to develop and maintain the assets;
b) Making payments to the subcontractors, financiers and other creditors;
c) Delivering the agreed services to the public sector according to the levels, quality and timeliness of the service provision throughout the contract period;
d) Ensuring the assets are well maintained and available for use throughout the concession period;
e) Ensuring that revertible assets/facilities are transferred in the specified condition (good working order) to the public sector at the end of the concession period.

![Figure 1.2: SPV structure in PPP](image)

Source: Indian PPP guide (2007)
Figure 1.2 represents the PPP structure as it relates to the interlinking relationships between the private sector led SPV organization and the various stakeholders involved in the PPP project delivery.

In the PPP mode of delivering infrastructure facilities, the SPV in most cases has the responsibility to finance, design, build, and subsequently operate and maintain the infrastructure project for a set period of time known as the concession period. The sources of financing that are available to fund the infrastructure project through PPP includes obtaining loan facilities from financial institutions such as commercial banks, multilateral development banks (MDB’s), and also funds from export credit agencies (ECA’s).

Additionally, the SPV can raise the needed funds for the PPP infrastructure project by offering shares to the public which in turn enables them to have an equity stake in the SPV unit. In the PPP form of infrastructure delivery, the SPV enters into further subcontract agreements with the contractors and operators/facilities managers who have the responsibility of executing the construction of the needed infrastructure project and that of operating and managing the project upon completion respectively. Moreover, the services of experts/strategic consultants are also engaged who are expected to perform some of the following roles among others: responsibilities of reviewing the existing framework and propose reforms, acting as facilitators for cooperation among stakeholders and also providing unbiased evaluation of options for PPP (World Bank, 2006; Booth & Skilling, 2007).

Payments to the SPV to fund debt service normally commence after the completion of the construction when the services have been made available to the public for use, and the debt servicing is facilitated through the services of an escrow agent, which is an entity that holds and transfers payments pursuant to the instructions of the parties involved. During the operating period, the SPV receives income (in form of the tariffs paid by the users) based on the usage of the facility, then at the end of the concessioning period, the fully operational project is transferred back to the host government, usually at nominal or no cost (ADBI, 2009; Price Water House Coopers, 2010). The fundamental principle of securing projects using the PPP mode of delivery is
to maximize the benefits for the public wherein the PPP mode of delivery is found to have a greater value compared to the traditional public sector mode of delivery.

1.2 Problem statement

In the PPP form of delivering infrastructure projects, value for money (VfM) is considered a pivotal requirement when adopting the innovative partnership collaboration to deliver the needed infrastructure (HM Treasury, 1997; Bell, 2002; Shaoul, 2002; Ismail & Pendlebury, 2006).

Value for money is “the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user’s requirement” (HM, Treasury 2006, p.7). The term whole-of-life is used to refer to the lifecycle of the good or service. And moreover, VfM is about striking the best balance between the “three E’s” with respect to the delivery of a project, these being economy, efficiency and effectiveness.

According to UKAS (2009), in the delivery of PPP projects, the public sector expects the PPP project to adhere to the following principles with respect to achieving the VfM objectives, these include:

a) There should be optimum risk transfer between the public and private sector in relation to the parties considered in best position to handle such risks;
b) The contract should be long term and to include whole life cycle costing;
c) Project output specifications are efficient and effective;
d) Competition leading to fair value projects, and
e) Payments based on performance, and private sector management expertise.

However, with regards to the practice of the PPP for delivering infrastructure projects in Malaysia, the following issues have been identified:
a) Despite the various advantages that PPP form of infrastructure delivery offers, the level of adoption of the system in Malaysia is significantly low compared to other forms of private sector involvement in the delivery of infrastructure facilities, and also the implementation of the system is not well structured as the procedures needed to facilitate the effective adoption of the PPP approach are not fully available (Salleh & Siong, 2008; Khaderi & AbdulAziz, 2010).

b) The implementation and policy of VfM has been the subject of critiques, as the VfM objectives with regards to the achievement of the end user’s expectations in the Malaysian practice of PPP for infrastructure projects are not being achieved (Takim et al., 2009; Ismail et al., 2011). It is noted by Burger & Hawkesworth (2011) that in practice, the VfM objective is very often blurred, and the choice between using a PPP and traditional infrastructure procurement may be skewed by factors other than the VfM objectives, which are not in tandem with the underlying time, cost and quality objectives of the infrastructure projects. Moreover, as the concept includes both qualitative and quantitative aspects and typically involves an element of judgment on the part of government; a precise measure for VfM concept does not exist but is merely regarded as what a government judges to be an optimal combination of quantity, quality, features and price (i.e. cost), over the whole of the project’s lifetime.

c) Furthermore, Akintoye et al., (2003) speculated that political, economic and social developments can change the definition of VfM in a particular jurisdiction. However, with these underlying issues identified with respect to achieving VfM in PPP project delivery, the only question being asked by the end users when government procures public infrastructure through the PPP approach is that “has VfM been achieved?” (Watermeyer, 2013).

This research takes into account the work of Yuan et al., (2009), Zhang (2006) and Takim et al., (2011), in situating the context of performance measurement in relation to the SPV organizations. Thereby, this research argues for a more strategic
approach towards leading indicators of Best Value (BV) rather than solely concentrating on lagging operational indicators of VfM. Hence, the attempt here is to situate the PPP research debate into the broader Business and Management field, and as such draw attention to the work of Kaplan & Norton (1996) on the Balanced Scorecard (BSC); with the key strategic aim of achieving BV rather than settling for VfM. The BSC is seen as being more than adequate to be adapted for the purpose of establishing a comprehensive systemic framework that can align the SPV’s necessary operational measures (the VfM) with a coherent set of leading performance measures aimed at achieving BV.

The BV perspective is described as a notion which refers to the optimum outcome of a business process (Akintoye et al., 2003; Zhang, 2006). While Value for money is defined as “the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user’s requirement” (HM, 2006). It is argued in this research that in the PPP form of infrastructure delivery, there needs to be a clear alignment between the BV and VfM, wherein the VfM is considered to be enabling the achievement of the BV objective in general.

This research centers on the fact that the current research on PPPs seems to be mainly concerned with examining PPPs at a broad social or organizational level, whilst lacking in the management of inter-organizational relationships and process control (Yuan et al., 2009). Thereby, the focus of this research is on the micro-management and stage-specific analysis of PPP project delivery. Utilizing the concept of the BSC methodology, this research attempts to review the current contextual rules that seem lacking; leading to a weak PPP project organization, thereby ultimately deterring the ability of the SPV organization towards achieving their VfM objectives in the delivery of the PPP projects.

1.3 Research questions

This research is undertaken as an attempt to address the above identified problems with the current practice of PPP infrastructure project delivery in Malaysia. It
was found necessary to develop a conceptual framework to provide a hands-on practical approach to achieving the strategic objectives of alignment and structuring of measures to enable the SPV organizations to deliver enhanced VfM objectives in the form of BV for PPP projects. In order to develop the framework, the following basic questions of “WHAT” and “HOW” must be addressed in order to achieve the objectives of setting up a systematic and practical framework to enable the delivery of enhanced VfM objectives for PPP projects:

a) What is the role of VfM in delivering infrastructure projects through the PPP approach?

b) How can the VfM be delivered by the private sector in a systematic and practical manner towards achieving the overall objective of the PPP in infrastructure project delivery?

1.4 Aim of the research

The research is focused on carrying out an in-depth appraisal of the SPV’s structural formation for PPP infrastructure project implementation in Malaysia based on the current practice through the adoption of the BSC performance management methodology in order to develop a PPP conceptual framework that will enable the delivery of enhanced VfM objectives in the form of BV for PPP projects.

1.5 The objectives of the research

a) To compare between the different forms of PPP (options) with regards to their effectiveness (appropriateness) in terms of achieving VfM objectives for PPP projects in Malaysia.

b) To determine the skills required by the SPV organization for effective PPP projects delivery.

c) To determine the CSF’s that would enable the SPV organizations achieve their VfM objectives for PPP projects delivery in Malaysia aligned to the BSC methodology.
d) To develop a conceptual framework to enable the effective structuring of SPV organizations for the delivery of BV objectives for PPP projects.

1.6 Scope of the research

The scope of the study is focused on PPP infrastructure projects in Malaysia, and the target respondents include regulators, SPV organizations, financiers and consultants that are involved in the delivery and management of PPP infrastructure projects in Malaysia. Furthermore this research is focused on hard infrastructure projects that are procured under the PPP mode of project delivery.

1.7 Significance and implications of the research

Certainly, SPV’s play a vital role in the achievement of VfM objectives in PPP projects (Ismail et al., 2011); thereby, the structuring of the SPV organization is considered an important criteria towards achieving of these VfM objectives that the PPP form of project delivery tends to offer. Potential PPP projects are likely to fail if the PPP developers that do drive the implementation of the PPP projects are not effectively structured as to enable to deliver the VfM objectives for the PPP projects, for instance the Malaysian Indah Water Consortium sewerage project which failed due to the SPV’s lack of appropriate stakeholder management techniques and also the Philippines Novotas 1 power project which was not able to achieve its objectives as a result of the SPV organization’s deficient VfM assessment techniques (El-Gohary et al., 2006; Chowdhury et al., 2009). This research examines the structuring of the SPV organizations for PPP projects in Malaysia with respect to achieving their VfM objectives by delivering enhanced VfM objectives in the form of BV. In this research, using the BSC approach, the operational indicators are being matched with project-specific VfM outcomes and aligned with the concepts of BV; linking cause to effect, for the successful delivery of PPP projects.

In addition, through the formulation of the conceptual framework for the structuring of the SPV’s to deliver the BV objectives for PPP projects, this research will
enable key PPP project stakeholders to identify how to go about the effective practice of the PPP delivery system. This approach to a structured delivery of PPP infrastructure projects would surely go a long way in solving the existing infrastructure deficits and consequently the realization of the full economic potentials of utilizing the PPP route for delivering successful infrastructure projects in Malaysia. Moreover, the study will serve as a platform whereby the Malaysian PPP implementation will serve as a benchmark to other PPP projects in other developing countries, which this will also in turn result to the improved implementation of PPP systems in Malaysia. Thus serving as a catalyst towards enabling the Malaysian economy to achieve its full potential with regards to the provision of best value infrastructural facilities, which is a major step towards the nation’s quest to achieving a fully developed nation status by the year 2020.

1.8 Limitations of the research

The limitation of this study is related to obtaining low response rate through the quantitative research approach adopted. This is mainly contributed by the fact that there is a paucity of relevant stakeholders with sufficient experience in PPP projects delivery in Malaysia. However, in order to improve on this, a triangulation method is suggested through the qualitative research approach be also undertaken to make up for the smaller number of respondents.

1.9 Organization of the thesis

Chapter one gives an outline of the background of the study, the problem statement, the aim and objectives of the study, the scope of the study and lastly significance and implications of the study.

Chapter two is the literature review which gives an overview of PPP as a project delivery approach. The literature review is primarily aimed at providing the underlying basis for objectively understanding the basic features that describes the PPP and
consequently serving as a basis to develop the survey instrument necessary to achieve the objectives of the research.

Chapter three discusses the research methodology adopted in order to achieve the aim and objectives of the study. The chapter discusses the fundamental theories and the research procedures adopted for the study, which includes the primary and secondary data collection and how the data collected was analyzed in order to achieve the set out research objectives.

Chapter four discusses the results obtained and the findings arising from the analysis conducted.

Chapter five discusses the PPP BV conceptual framework developed in the study, and also the procedure adopted in validating the framework, and finally;

Chapter six initially reviews the objectives achieved in the study. Additionally, the value, practical implications and significance of the research are described. Lastly, conclusions to the research are provided and the limitations of the research and recommendations for further studies are discussed.
CHAPTER 2

LITERATURE REVIEW

2.1.1 Infrastructure projects as it relates to social and economic development

The *American Heritage Dictionary*, defines the term ‘infrastructure’ as the basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons. But then in the broad scale, infrastructure can be referred to all basic inputs and requirements needed for the proper functioning of the economy (UN HABITAT, 2011).

As Grimsey & Lewis (2002) and UN HABITAT (2011) put it, infrastructure is easier to recognize than define, and it is mostly described in respect of its characteristics, which usually refers to its longevity, scale, inflexibility and high investment costs. Infrastructure is further described as a term which connotes credibility, confidence, low-cost production, and market competitiveness because of its far reaching effects towards achieving overall economic development, enhancement of trade and poverty reduction (Geethanjali, 2007). Effective investments in infrastructure is known to offer key input to ensuring economic activities, growth and moreover offering basic services to industry and households (Threadgold, 1996).
2.1.2 Categorization and characterization of infrastructural facilities

Infrastructure can be categorized into hard infrastructure and soft infrastructure. Hard infrastructure refers to the physical structures or facilities that supports or enables the working of the society and economy, these include infrastructure in transport (e.g., ports, roads, railways); energy (e.g., electricity generation electrical grids, gas and oil pipelines); telecommunications (e.g., telephone and internet); and basic utilities (e.g., drinking water supply, hospitals and health clinics, schools, irrigation, etc).

Table 2.1: Categorization of infrastructure facilities and their related associated features

<table>
<thead>
<tr>
<th>Service</th>
<th>Associated Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>Road, bridges, tunnels, rail tracks, harbors, etc</td>
</tr>
<tr>
<td>Water supply</td>
<td>Dams, reservoirs, pipes, treatment plants, etc</td>
</tr>
<tr>
<td>Waste water disposal</td>
<td>Waste water treatment plants</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Dams, canals</td>
</tr>
<tr>
<td>Garbage disposal</td>
<td>Engineered Landfills</td>
</tr>
<tr>
<td>District Heating</td>
<td>Plant, network</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Telephone exchanges</td>
</tr>
<tr>
<td>Power/Energy</td>
<td>Power plants, transmission and distribution lines.</td>
</tr>
</tbody>
</table>

Source: ADB (2008)

Table 2.1 shows the categorization of various infrastructure services and their associated features. While the soft infrastructure refers to those non-tangibles supporting the development and operation of hard infrastructure, such as policy, regulatory, and institutional frameworks; governance mechanisms; systems and procedures; social networks; and transparency and accountability of financing and procurement systems (Bhattacharyay, 2009). This research is centered on the hard infrastructure projects that are procured under the PPP and the reason for this is borne out of the underlying role that it plays as it pertains to ensuring nations achieving their social and economic development objectives.
2.1.3 The role of infrastructure to national development

The relationship between infrastructure and the economy is evidently critical to promoting inclusive growth and sustainable development and moreover, the linkage between the economy and infrastructure is multi-faceted and multi-dimensional in the context that economic growth provides both the need and the reason for, and the needed resources to fund the provision of the various types of infrastructure (Nepad, 2011).

The importance of the provision of effective infrastructure for ensuring development in both the developed and developing economies cannot be over emphasized. As in the case of the developed nations, effective infrastructure has generally been found to be a major determinant of growth and productivity. Whilst in that of developing economies, its relevance is much more emphasized and glaring as infrastructure is considered to play an important role in promoting growth and productivity and reducing disparities between rich and poor regions (Briceno-Garmendia & Estache, 2004).

Figure 2.1: The relationship between infrastructure to economic growth and improving welfare of the citizenry.

Figure 2.1 describes the interlinking relationships between infrastructure to ultimately ensure growth and also improve the welfare of the citizenry. In the economic context, infrastructure ensures economic growth by benefitting the business enterprises through enlarging the markets for their products and lowering their costs of production, while in the social aspect, the provision of infrastructure benefits the households through improving their welfare and condition of living.

2.1.4 Need for private sector participation in the provision of infrastructure facilities and services

Prior to the surge of private sector’s involvement in the provision of infrastructure facilities in the 1990’s, governments have presumed that the technology and economics of infrastructure provision precluded any substantial role for the private sector. This reason can be related to the natural monopolies in terms of the earlier known consideration that it is only the public sector that controls all forms of investments in infrastructure, economies of scale, externalities and other social factors that are involved in the production and distribution of these needed infrastructure services, which these then made infrastructure services provision to be considered more suitable for public provision than for private (Yaacob & Naidu, 1997).

However as Yepes (2005) identified, with annual global investment needs in infrastructure facilities which stands at US$ 848 billion, which accounts to approximately 2% of the global G.D.P, it is a glaring fact that the world faced a huge infrastructure deficit. Thereby, in the increasingly competitive and challenging global environment, governments around the world are seeking out new ways to finance projects to meet the ever growing infrastructure needs of their populace.

Additionally, in the late 1970’s to early 1980’s there was wide spread complaints of public sector monopoly notably by the state owned enterprises in developing countries that tended to be plagued by inefficiency and failure to expand services to meet rapidly growing demand. However, consumers were becoming more concerned
and aware of the need for improved value for money for the services offered by the public sector as there is global improvement of democratic and more transparent governance and the resultant strengthening of the civil societies (Harris, 2003). Consequently, this has necessitated for the private sector participation towards solving the infrastructure challenges that are facing the public sector (Pongsiri, 2002; Cheung & Kajewski, 2010).

![Image of Figure 2.2: Infrastructure provision under the public sector in the early 1990s – the annual costs of mis-pricing and inefficiency.](source: World Bank (1994))

It is noted by Harris (2003) that by the early 1990s, it was evident that the annual losses from inefficiencies and unsustainable pricing policies in the public sector’s delivery of infrastructural utilities were estimated to be nearly equal (US$178 billion) to annual investments (US$ 200 billion) in the infrastructure itself (see Figure 2.2). This has not in any way been consumerable with these public utilities ability to meet up with increasing demand and needs of the citizenry. These challenges prompted the governments to introduce measures to improve the performance of the public sector entities through the adoption of more privately inclined policies such as corporatization and the introduction of more formal arrangements such as performance contracts. However, these measures were also not able to achieve the target needed as these public utilities continued to be marred by inefficiencies and failure to meet up with its set
objectives. Hence, full private sector involvement became the only viable alternative that was left to be explored to enable these public infrastructure facilities to deliver at the needed optimal level.

2.2 The business philosophy behind public and private sector collaboration in infrastructure delivery

Public-private collaboration in infrastructure delivery had been a concept which had evolved and adopted from time immemorial. It is basically an arrangement which involves the private sector in their entrepreneurship capacity participating or providing the necessary support needed for the delivery of public infrastructure. The private sector is described as that sector of the economy which is owned and run by private entities, in the form of individuals, groups or business entities with the sole aim of making profit. While the public sector which is also referred to as the government is that entity which has the sole leadership responsibility of its citizenry, and is represented at various levels including the federal, state, regional or local government. The public-private collaboration is a partnering process which gives the public and private entities the opportunity to collaborate in the delivery of a certain project or activity (Adetola et al., 2011).

However, as Jamali (2004) notes, the recent rise of ideals of free market operation of the economy in the developing world has made the public and private sectors to revisit the nature of the relationship that does exists between them. The age long traditional clear cut roles of these sectors are being challenged with an engaging partnership collaboration, towards delivering the needed infrastructure facilities and services.

2.2.1 Public-private partnership as a means of collaboration for infrastructure delivery

The word partnerships means “a contract between two or more competent persons for joining together their money, goods, labor, and skill, or any or all of them, under an
understanding that there shall be a communion of profit between them, and for the purpose of carrying on a legal trade, business, or adventure” (Webster’s dictionary, 2012). According to Adetola et al., (2011), partnership is a process through which individuals, groups, organisations or entities have the opportunity to become actively involved in a project or programme of activity.

The concept of public-private sectors collaboration may be difficult to be given a clear cut definition due to the wide and encompassing meaning of the partnership concept and the interchanging role that the PPP seems to have between the traditional and full privatisation form of infrastructure delivery and services provision. As many authors have defined PPP differently, Boeuf (2003) concluded that the only consensus is that there is no one-size-fits-all definition of PPP.

However, in a general sense, PPP can be described as a private sector driven collaboration with the public sector for procuring public infrastructure which has evolved to solve infrastructural deficits. Akintoye (2006) offers a comprehensive definition of PPP as “a contractual agreement of shared ownership between a public agency and a private company, whereby they pool resources together and share risks and rewards, to create efficiency in the production and provision of public or private goods”. In more simple terms, PPP is referred to as a system which is primarily aimed at achieving the best output possible by pulling together and mobilizing funds, technologies, managerial skills, operational efficiencies and facilitating innovations that exists in the private sector (Bing et al., 2005; Huang et al., 2005).

Pongsiri (2002) in his work, described PPP as a means of collaboration between the public and private sector in order to pursue common goals of providing infrastructural facilities, while taking advantage of the resources, strengths, competencies and capabilities that do exists in the public and private sectors. From a broader perspective PPP is seen as a range of possible relationships among public and private entities in the context of infrastructure delivery and other services, which involves the allocation of the tasks, obligations, and risks among the public and private partners in an optimal way (ADB, 2008). While Quimm (2011) described PPP as a legally binding contract to share responsibilities related to implementation and/or
operation and management of an infrastructure project; whereby this collaboration or partnership is built on the expertise of each partner that meets clearly defined public needs through the appropriate allocation of resources, risks, responsibilities and rewards.

However, with respect to the Malaysian context, PPP was defined under the Ninth Malaysia Plan report (2006), as “the transfer to the private sector the responsibility to finance and manage a package of capital investment and services including the construction, management, maintenance, refurbishment and replacement of the public sector assets which creates a standalone business. The private sector will create the asset and deliver a service to the public sector client. In return, the private sector will receive payment commensurate with the levels, quality and timeliness of the service provision throughout the concession period” (Ninth Malaysia Plan, 2006).

It can be deduced that though PPP has varying definitions with respect to infrastructure delivery, the aim of the partnership is to put in place a collaborative venture between the public and private sector as a joint partnership in terms of skills, mobilizing funds, technologies, operational efficiencies and facilitating innovations towards delivering the required infrastructure facilities for the benefit of the public and society at large.

2.2.2 Distinction between public – private – partnerships, privatization, corporatization and private finance initiative

With the global rise in private sector participation in infrastructure delivery, the terms PPP and privatization have been used loosely as interchangeable terms. This is because of the private sector features that are inherent in these two forms of private sector involvement in the delivery of infrastructure and services. However, there is the need to have a clear understanding of the distinctions that characterizes these two forms of private sector led infrastructure delivery.

Privatization as a form of infrastructure delivery is mainly characterized by the introduction and use of market forces based competition by the government for the delivery of public services or goods by the private sector. The term “privatization” denotes an entire shift of government activities or functions from a public agency to that
of the private sector (CDIAC, 2007). It is an umbrella term used to account for greater private sector participation in the delivery of public services. With the privatization form of infrastructure delivery, the government is completely relieved of any form of ownership and control of responsibilities as there is no binding service contract or fee-for-service agreement between the public and the private sector after the entity or enterprise has been privatized.

Whereas corporatization is described as the process by which a public-sector department is transformed into a distinct legal entity (with the government as owner), whose assets, finances, and functions are segregated from other government operations. Corporatization in infrastructure project delivery aims to capture the advantages of a privately run company, including productivity, streamlined processes, commercial orientation and financial sustainability, while remaining accountable to the public and serving the public interest (World Economic Forum, 2014).

While PPP as a form of private sector involvement in the delivery of infrastructure is described as “a contractual agreement of shared ownership between a public agency and a private company, whereby they pool resources together and share risks and rewards, to create efficiency in the production and provision of public or private goods” (Akintoye, 2006). It can be characterized as a range of possible relationships among public and private entities in the context of infrastructure delivery and other services, which involves the allocation of the tasks, obligations, and risks among the public and private partners in an optimal way.
REFERENCES


OECD (2008). Value for money and international development: Deconstructing myths to promote a more constructive discussion.


privately partnered infrastructure projects. *Journal of Construction Engineering

Construction Engineering and Management*, 130(2), 235-244.

Construction Engineering and Management*, 135(6), 550-558.