



A Review of Challenges to Attract Public Private Partnership (PPP) Investments to Power Generation Infrastructure In Sri Lanka (SL)

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ABSTRACT

Ceylon Electricity Board (CEB) is a State Owned Enterprise (SOE) operating in power industry of Sri Lanka being a monopolistic. Long Term Generation Expansion Plan (LTGEP) that prepared by CEB and approved by Public Utility Commission and the Cabinet of Ministers. As per LTGEP capital investments for Generation Infrastructure from 2018 to 2037 had been projected around USD 14,568 million. As per Electricity Act 2009, CEB was vested with responsibility to implement LTGEP to satisfy power requirement of the country. The Government policy decision of sourcing of funds by CEB its own has been implemented from year 2015 and CEB is operating for last several years with negative cash flow mainly due to subsidized tariff structure. The funding agencies have imposed stringent financial covenants into loan agreements. CEB has been challenged to adhere with those financial covenants due to existing mal financial position of CEB. Electricity Act 2009 states any person to generate capacity above and over of 25 MW, shall Government hold 51% of ownership. Sri Lanka by law any investment in power generation above and over 25 MW shall be a Public Private Partnership (PPP). Non implementation of above projects on time will lead to power shortage in the country and accelerates cost of unit of electricity immensely to pay by the public. In this circumstance PPP model has proven that mostly applicable for development of public infrastructure in developed and developing countries. CEB being a monopolistic player in the power industry, is required to pursue PPP for development of power generation infrastructure to assist growth momentum of the country. The challenges pertaining to institution could be addressed within the organization such as effective leadership for trust building and coordination, modification of bureaucratic structure of organization with changing environment to attract private investment. The main challenges have been identified such as state credibility and inconsistent policies. The challenge of social support could be harnessed by CEB with Ceylon Electricity Board Engineers Union (CEBEU) which has become integral arm in collaboration for policy formulation in power sector of Sri Lanka. With the reviewed literature could conclude that state credibility, inconsistent policies and lack of public support had hindered the private investor confidence in power sector in SL.

Keywords: *Public Private Partnership (PPP), Power Generation Infrastructure, Government of Sri Lanka (GOSL)*

1. BACKGROUND OF THE STUDY

This study is involved to review the challenges face by the power sector of Sri Lanka to bring private investments to the industry. Government of Sri Lanka (GOSL) in 1992 introduced guidelines applicable to PPP as part of procurement guide lines and in power sector PPP was recognized in the new Electricity Act No 20 of 2009. After decades then, power sector still in struggle to meet country's power demand requirement due to lack of investment in the sector to make reality the projects included in the Long Term Generation Expansion Plan. The Electricity Act No 20 of 2009, section 9(1) states that "Any person to generate capacity above and over of 25 MW, shall Government hold 51% of ownership". In most countries the power is supplied by the government through a State Owned Entity as generation, Transmission and distribution of power (Kim & Oh, 2017) and it has hindered the fiscal consolidation of the governments (Jamali, 2004). The investigation is to find out the challenges for private investment in the sector. CEB is incurring continuous losses from the year 2012 except year 2013 and 2015 (CEB, 2012 to 2017; Statistical Digest, 2018). The study is carried out through extensive reviews of academic journal articles, industry publications, books on related subject, web and news articles on industry, mostly the Public Private Partnerships (PPP) which is the way forward investment model for the power sector and developing countries. (Chan, Robert, & Albert, 2017). In Sri Lanka by law any investment in power generation above and over 25 MW shall be a Public Private Partnership.

1.1. Context of the study

The power sector of Sri Lanka is mainly represented by Ceylon Electricity Board. The Ceylon Electricity Board (CEB) was established under the parliament Act number 16 of 1969, is a state owned enterprise having a monopoly in power generation, transmission and distribution in Sri Lanka. By the parliament Act No 20 of 2009, it was recognized that private investments in activities related to power generation and distribution but kept the monopoly with CEB for power transmission. As per CEB annual report 2017, the number of private independent power producers (IPP) 258 and they have contributed 27.1% to national power requirement of the year end of 2018 (Statistical Digest, 2018). Also another power distribution player is operated in the industry which is a subsidiary of CEB. And accounts for 11.6 % of total distribution operation of the country (Statistical Digest, 2018). The IPP operators all above mentioned were small scale investments in Non-Conventional Renewable Energy (NCRE).

The power sector of GOSL is a monopolistic industry, GOSL through line Ministry of Power and Energy make the policy formulation for the industry and the industry is regulated by Public Utility Commission of Sri Lanka (PUCSL). The transmission of electricity is monopoly with CEB and the electricity consumers are being served by CEB through generation, transmission and distribution of electricity.

1.2. Investment Requirement

As per the Long Term Generation Expansion Plan (LTGEP) 2018-2037 approved by Public Utility Commission of Sri Lanka (PUCSL), the required capital investments in Generation Projects from 2018 to 2037 is around USD 14,568 million under different sources of generations, wind, solar, thermal, coal and Liquid Natural Gas (LNG). Further in LTGEP, it was stated that the requirement of power plants were determined on the basis of annual electricity demand growth of 4% to 6%. In LTGEP, it is explained that to meet the demand requirement of electricity in the country, the investments included in the LTGEP is a must. Uninterrupted power supply to the country is the prime responsibility of policy makers which in turn resulted to drive the whole economy through all industries (Chaurey, Krithika, Palit, Rakesh, Benjamin & Sovacool 2012). The Government policy decision of sourcing of funds by CEB its own has been implemented from year 2015 and it is mentioned in the budget estimates 2015 under Ministry of power and Energy. From that year onwards, it is noted that in government budget estimates no budgetary allocation was given to CEB. Now it is the CEB responsibility to find funds for investments included in the LTGEP. Accordingly CEB has depended on International Finance Agencies like Asian Development Bank (ADB), Industrial & Commercial Bank China (ICBC), and locally Hatton National Bank (HNB) to obtain loans directly to CEB for development of 100MW Mannar Wind Power Farm, Green Power Efficiency Improvement Project and Broadland Hydro Power Plant respectively. (CEB, 2017)

2. PURPOSE OF THE STUDY

2.1. The Research Problem and purpose

The main purpose of this study is to empirically review antecedents of challenges to attract private investments in implementation of Public Private Partnerships (PPP) for power generation infrastructures in Sri Lanka. The implementation of LTGEP is a responsibility of the CEB as per Electricity Act No 20 of 2009. The findings from this study could be used by the policy makers of power sector of Sri Lanka when focus on Public Private Investment ventures to develop power generation infrastructures in the sector.

2.2. Literature Gap

The existing literature on PPP focused on challenges faced by the PPP concept in practice and certain cases challenges faced by the respective country or the region in implementation of the concept PPP. Hence the results of this study is served to filling the literature gap in challenges of PPP in power sector of SL.

2.3. Significance and Practical Gap

As per LTGEP 2018-2037 on base case plan the required investment for implementation of projects included in the LTGEP for the period in present value term USD 14,568 million. (CEB, 2018-2037), It is the responsibility of the CEB to find the above funds to implement the plan in collaboration with the GOSL. Non implementation of above projects on time have been lead to power shortage in the country and accelerates cost of unit of electricity immensely to pay by the public. During March and April in 2019, CEB exercised load shedding for three hours per day due to shortage of power. (Daily News, 2019), (www.colombopage.com, 2019) As per industry analyst Dr.Tilak Siyambalapitiya ,blackouts and non-implementation of planned power plants had been reflected in consumer electricity bill significantly. (economynext.com, 2019)

3. METHODOLOGY

The paper has been used a deductive approach. All review and explanations are substantiate through results of extensive reviews of academic journal articles and industry publications, reports from international funding agencies , newspaper and books reviewed by the author on the subject matter. A review was carried out to for applicability of those challenges to power sector of Sri Lanka in developing power generation infrastructure.

In this article, study is focused on PPP as a policy tool, and as a financial and organizational arrangement to develop public infrastructure of power sector in Sri Lanka .The underpinning theories as a policy tool are Theory of Market Efficiency and Value for Money (VFM), as a financial arrangement theories behind are Value For Money (VFM), transaction cost economics and governance theory(Mouraviev & Kakabadse, 2016).

In theory of market efficiency, prices of the products at any time “fully reflect “all available information. A market in which prices always "fully reflect" available information is called "efficient” (Fama & Eugene, 1970). Accordingly pricing is very competitive, public infrastructure projects implemented through IPP in Russia, has shown evidence that it has led to increase efficiency of government expenditure (Vaslavskaya, Yan, & Irina, 2019).

The value for money concept could be easily understand as not paying more for a good or service than it quality or availability justify , In relation to public spending it implies a concern with economy (cost minimization), efficiency (output maximization) and effectiveness (full attainment of the intended results) (Glendinning, 1988).

The mode of organizing the transaction to minimize the cost of it, it is the organizational structure that minimizes cost of transaction by achieving economic efficiency (Williamson, 1979), As explained by

Mayntz, it is the steering actions by the political authorities as they deliberately attempt to shape socio – economic structures and processes. Now often used as mode of governing that distinct from the hierarchical control model, a more corporative mode where state and non-state sector actors participate in mixed public private networks (Mayntz, 2003) PPP as a policy tool.

4. LITERATURE REVIEW

4.1. Public Private Partnership (PPP)

Single definition for PPP cannot be found that would agree by most of practitioners and academics, hence few definitions are available (Bovaird, 2004 ;Grimsey and Lewis, 2002; Klijn and Teisman, 2003).Grimsey and Lewis 2002 , it is emphasised that PPP is an agreement where the public sector enters into a long term contractual arrangement with private sector for construction or manage public infrastructure or the provision of services using public infrastructure to the community on behalf of the public sector entity.

Klijn and Teisman, 2003 , with reference to unique feature of PPP they argued that PPP should be an institutionalized arrangement between public and private sector actors in which they share a responsibility for a product ,risk ,benefit and costs. Although this definition captures essential partnership' features, it lacks explanation of what exactly a PPP will provide and how (Kakabadse, Nikolai , & Nada , 2012). Bovaird defines the PPP as a commitment above and beyond the contracts (Bovaird, 2004).

Linder 1999 argued that at least six distinctive uses of term PPP and it is expressed , what is PPP and intended purpose of it. The six form of PPP is briefed PPP as a mangement reform instead of privatization move to increase efficiency, PPP use an innovative tool to change the government functions, PPP as problem conversion .This is not a tool for change of managerial practices but rather as a universal fix for most problems attending public service delivery to perform Government's task for less money, PPP as a moral regeneration served as a vehicle to bring the government to closer to the market , PPP as Risk shifting in response to fiscal stringency on the part of government partnering with the private sector to leverage public capital for public infrastructure ,PPP as restructuring of public service since the administrative procedures intended to place in public entities have restricted their ability to respond to turbulent environment and PPP have created to serve the purpose and PPP a power sharing model instead of divestiture of public power vertically to private sector, in PPP Government share the power of public with private sector on horizontally in regulatory matters where control has been centered in the Government.

As per the above piece of literature, could certainly agree with there is no single definition for PPP and it depends mostly with the intended purpose of creation of the PPP.

4.2. The Challenges of Implementing PPP

Since CEB is operating in the sector over five decades having monopoly by statute with bureaucracy being a state owned enterprise the implementation of PPP would be a challenge. As explained by Linder 1999, the implementation of PPP to develop public infrastructure and to maintain public services would lead to change the way of Government functions to offer to the public largely by tapping into the discipline of market, and to exercise this task, Government or State Owned Enterprises must collaborate with profit seeking firms and the managers of SOE are expected to become more likely their counterpart. Further he stated that the government managers have grown flabby without competitive pressures and to be mired in the inefficiencies of red tape and bureaucratic organization by citing the work of Apenet 1994; Gratiyas & Boyd 1995; Rodal & Wright, 1997. Furthermore as explained by Linder 1999, due to less able to cope up with demand public sector employees are expected “say no” since they are heavily unionised. Hence the PPP is sound enough to address this matter to meet the demand of public. Since the workers in CEB is heavily unionised and more than twenty two unions are in operation (CEBEU, 2019) and Ceylon Electricity Board Engineers Union (CEBEU) predominantly having the negotiation power being their members holding almost all managerial positions in the organization, implementation of PPP on monopoly functions of power sector would be a really a challenge. Organization for Economic Cooperation and Development (OECD) is argued that private sector is better positioned than public sector in terms of efficiency in delivering service and produce goods (OECD, 2010). Hence the pragmatic stance considers the use of PPPs as a way to utilize private sector expertise and funds for addressing complex public problems.

Due to fiscal constraint, as a policy of government fiscal consolidation Kang, Mulaphong, Hwang, Chang, 2019, CEB has been off loaded from the budget of the Government (Ministry of Finance, GOSL, 2015) and meantime CEB has failed to retain cash flow to invest in projects due to accelerated generation costs. On the other hand due to fiscal constraints, governments are under political pressure to reduce public spending and address budget deficits (Savas, 2000). Annual Report 2017, CEB stated that “CEB being in operation for last several years with negative cash flow mainly due to subsidized tariff structure and non-implementation of cost reflective tariff. To meet this situation CEB has adopted various strategies with the assistance of the line Ministry and Government Treasury. Most of the instances, CEB has borrowed short and long term funds from various financial institutions mainly from government banks. However conventional borrowing pattern within the limited scope will increase the borrowing cost which in turn add extra burden to the CEB as whole (Annual Report, 2017, pp 84). By analyzing financial performance of CEB for last five years it is evident that financial position has been depleted in terms of short term and long term liquidity (Annual Report 2017, pp 86). If this financial position persist, CEB would have not been in good to attract direct borrowings from the funding agencies as per the loan covenants stipulated in the loan agreements such as positive cash flows above

and over debt service requirement of the borrower (ADB, 2016). As per the loan agreements entered into CEB with ADB for direct borrowings to projects, 100MW Mannar Wind Power Generation projects, Green Power Development and Energy Efficiency project, under the financial covenants in schedule 5 of the loan agreement stipulated “Free cash flows of the borrower at least 0.9, 1.0 and 1.2 times respectively from financial year commencing 1st Jan 2018, 2019 and 2020, the debt service requirements of the borrower for the same period on all debt (ADB, 2017).

Under these circumstances CEB has been pressured to pursue PPP for development of power sector public infrastructure. The main motive of GOSL to create PPP was primarily to raise capital rather than as a real commitment and coherent private participation policy as per European Commission (European Commission, 2006). However it is noted that only a single PPP could be seen in the sector it's operated thermal generating plant with a capacity of 300MW on Built Operate and Transfer basis (BOT) (Annual report, CEB, 2017; Sunday observer, 2018). Even though ADB believes that PPP has potential to fill the infrastructure gap, where appropriately implemented PPP yields superior results, Project delivery through PPP rose fourfold in Asia in 25 years, more than half of PPPs are in energy (ADB, 2017).

As explained in The Emerald Handbook of Public-Private Partnerships in Developing and Emerging Economies, the PPP to be a successful it has to be designed for policy coordination in multi governance system to attract project investment. (Kim & Oh, 2017). This is applicable to Sri Lanka since having central government, local government, provincial councils and require sound coordination among several public authorities like CEB, Line Ministry, Board of Investment, Department of Inland Revenue, Ministry of Finance, Department of Customs, Central Environmental Authority and Attorney General etc.

A study on management controls on power projects formed as PPP in Sri Lanka, has revealed that public partner has used predominantly bureaucratic controls depending on nature of risk and also study highlights the problematic nature of forming PPP in developing countries (Appuhami and Perera, 2016).

In a research study it is examined that PPP to be a successful five broad categories of factors directly affecting. The factors are political, legislative, economic, financial and management requisites. It is concluded that importance of having open and effective management practices, creation of independent agencies, support from government, private operators and citizens and most importantly the effective leadership to tie all these factors together for building trust and allocating appropriate benefits among partners (Kang, Mulaphong, Hwang and Chang 2019). CEB to pursue the PPP, it is very important to groom and nurture an effective leadership for building trust and coordination among partners.

Lack of state credibility is a major challenge for development of PPP for power sector. For an example Trincomalee Power Company Ltd was established, CEB with NTPC Limited, India to build and operate 500MW coal power plant at Trincomalee and change of government in 2015, Cabinet approval has been granted to develop 50 MW solar power project at proposed Sampur coal power project site and a 500MW LNG power project in West Coast of Sri Lanka. (CEB, 2017). In 1991, a PPP for 300MW coal fired power plant at Trincomalee was formed and later new government came into power in 1994, it was cancelled (Appuhami, Perera & Perera 2011)

Further Political instability negatively affects PPP policy adoption by increasing risk to the power sector considerably. The cost of financing increased in Sri Lanka as private investors often charged risk premiums for their investment in public infrastructure projects. (Appuhami et al., 2011) The combine power generation project on PPP in collaboration with Japanese Government and ADB have failed due to political instability (Gnanadass, 2008). Lack of social and public support will jeopardize implementation of PPP, 900 MW of coal fired power plant in Kalpitiya was initiated by GOSL, had been suspended more than two decades due to protest by public (Appuhami et al., 2011). As emphasized by Kang et al., (2019) legislative arrangement to attract PPP is very crucial factor and in case of Sri Lanka for policy formulation public private procurements, National Procurement Commission was established and procurement guide lines were issued in 2018.

In 2005, as per the research conducted in United Kingdom (UK) in construction industry on successful implementation of PPP, the survey results showed the stated three major critical factors as ranked in high, i) a strong and good private consortium ii) appropriate risk allocation iii) available financial market. (Bing, Akintoye, Edwards, & Hardcastle, 2005) PPP as arrangement of finance for public infrastructure in the power sector the above three factors mostly applicable for successful implementation of PPP.

As per the National Energy Policy and strategies of Sri Lanka, has been gazette under number 2135/61 on 2019/08/09 also pursued the “policy to proactively transform the energy industry from a subsidy-burdened, survival-focused state to an innovation driven catalyzer of the national economy, preparing the country for the global energy transition”. Hence CEB has to drive the investment in LTGEP as a catalyst of the national economy.

4.3. Conducive Factors for Investment in Sri Lanka

In this part of the paper briefly examine the conducive factors for private investors specifically foreign investors to consider in embark on PPP in power sector of Sri Lanka. As depicted in below table of ease of doing business, Sri Lanka ranked in 99th place out of 190 countries and in South Asia region 4th out of eight countries, when compare with India the region leader, Sri Lanka (SL) is far behind the

index .When compare to other countries in the region SL is being maintained investor conducive ranking .

Ease of Doing Business Rank – South Asia region

Economy	Global Rank
India	63
Bhutan	89
Nepal	94
Sri Lanka	99
Pakistan	108
Maldives	147
Bangladesh	168
Afghanistan	173

Source: Ease of Doing Business Index 2019

Further it is noted that to make the investment environment conducive GOSL has implemented ,relaxing of exchange controls with new Foreign Exchange Act No 12 of 2017 ,Consolidation of laws related taxes applicable to Foreign Direct Investments (FDI) routed through Board of Investment (BOI) with Inland Revenue Act No 24 of 2017,Investment Protection through ,Article 157 of the island's constitution and any treaty or agreement between the GOSL and a foreign government for the promotion and protection of foreign investments has the force of law and no executive or administrative action can be taken against such an agreement, bilateral Investment Protection Agreements (IPA) with 28 countries ,Bilateral Double Tax Avoidance Agreements (DTAA) signed with 38 countries. (Ministry of Finance, 2019) Furthermore adopting an appropriate pricing policy for electricity with the National energy Policy and Strategies of SL as per gazette number 2135/61 on 2019/08/09 ,Regulatory Framework for electricity industry with PUCSL ,Legislative framework for public private procurement with National Procurement Agency (NPA) and facilitation for foreign investments through BOI . During 1995-2005, SL had achieved to attract private investments of US\$ 2.1billion to public infrastructure like Transport, Energy and Telecom sectors (The World Bank, 2019). It is proven that the potential of SL to attract private investments for public infrastructure development.

5. CONCLUSION

The implementation of power generation infrastructure in LTGEP is the responsibility vested with CEB and execution of projects by sourcing funds through innovatively rather depend on conventional sources of funds is matter to pursue as National Energy Policy required it's from the CEB. In this circumstance PPP model has proven that mostly applicable for development of public infrastructure in developed and developing countries. CEB being a monopoly in the power industry without choice shall embark on this endeavor to assist growth momentum of the country. The challenges pertaining to institution as

discussed above could be addressed within the organization such as effective leadership for trust building and coordination, modification of bureaucratic structure of organization with changing environment to attract private investment, In case of other challenges such as state credibility and social support could be harnessed by CEB with CEBEU which has become integral arm in collaboration for policy formulation. By analyzing above piece of literature work, certainly could conclude that state credibility, inconsistent policies and lack of public support mostly hindered the investor confidence in power sector in SL and that has become a hurdle for bringing PPP to power sector.

In this paper, discussed and reviewed the challenges of PPP as a policy tool and financing arrangement to CEB. Future research may be attempted to examine and validate gravity of each challenges to CEB and power sector of SL.

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