Public-Private PARTNERSHIPS

Relevance in the Federal Context

SAMRIDDHI
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Ashesh Shrestha
Prience Shrestha
Yatindra K.C

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Yatindra K.C

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Tel. : (+977)-1-446-4616, 448-4016 Fax : (+977)-1-448-5391
E-mail: info@samriddhi.org
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About the Authors

Ashesh Shrestha
Ashesh Shrestha is a Senior Research Officer at Samriddhi Foundation, where his focus areas are micro-enterprises, industrial law, public education, federalism and public finance. He also writes newspaper articles and blogs based on the findings of his studies. He moderates the 'Liberty Discussion Series', a monthly discussion program organized by Samriddhi, where young individual sit at an informal setting and deliberate over contemporary political-economic issues.

He holds a Master's Degree in Economics from Tribhuvan University, Nepal. He is also a Fulbright Master's program grantee for the year 2020-21.

Prience Shrestha
Prience Shrestha reserves interest in the area of free-market policies, industrial law, and federalism. He has previously researched regarding policy facilitation for microenterprises on behalf of Samriddhi Foundation and has written multiple newspaper articles promoting free-market mechanism, limited government, and decentralization. He also keeps interest in areas of Macroeconomics, International Finance, International Relations regarding which he has conducted studies and blogs regularly. He is currently conducting a research on regional economic governance after the inception of federalism in Nepal.

Mr. Shrestha holds a Master's Degree in Project Management from Curtin University, Australia.

Yatindra KC
Yatindra KC is a researcher at Samriddhi Foundation. His background in law gives him a sophisticated grasp of the many legal aspects associated with the political and economic development of the nation. He is currently engaged in writing policy briefs and working on research papers related to role of sub-national governments in areas of infrastructure development post federalism. He also writes articles and blogs about contemporary issues and findings of his research.

Mr. KC holds a dual Bachelor's degree in Law and Management from Kathmandu University.

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Ashesh Shrestha
Prience Shrestha
Yatindra K.C.

List of acronyms

ADB:	Asian Development Bank
BOOT:	Built Own Operate Transfer
CBS:	Central Bureau of Statistics
DoED:	Department of Electricity Development
DoI:	Department of Industry
DoR:	Department of Roads
FCCL:	Fiscal Commitments and Contingent Liabilities
FDI:	Foreign Direct Investment
FPFAA:	Financial Procedure and Fiscal Accountability Act, 2019
GDP:	Gross Domestic Product
GoN:	Government of Nepal
IBN:	Investment Board of Nepal
IBRD:	International Bank of Reconstruction and Development
IDB:	Inter-American Development Bank
IPP:	Independent Power Producers
IsDB:	Islamic Development Bank
KUKL:	Kathmandu Upatyaka Khanepani Limited
MDG:	Millennium Development Goals
MoF:	Ministry of Finance
MoU:	Memorandum of Understanding
MTEF:	Mid-Term Expenditure Framework

MWDP:	Melamchi Water Development Board
MWSDB:	Melamchi Water Supply Development Board
NEA:	Nepal Electricity Authority
NPC:	National Planning Commission
OECD:	Organization for Economic-Cooperation and Development
PPA:	Public Procurement act, 2007
PDA:	Power Development Agreement
PPPIA:	Public Private Partnership and Investment act, 2019
PPP:	Public Private Partnership
SASEC:	South Asia Sub-regional Economic Co-operation
SDG:	Sustainable Development Goal
SEJON:	The Society of Economic-Journalists Nepal
SRN:	Strategic Road network
UNCITRAL:	United Nations Commission on International Trade Law
UNECE:	United Nations Economic Commission for Europe
UNESCAP:	United Nations Economic and Social Commission for Asia and the Pacific
WBG:	World Bank Group

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Executive Summary

The recently adopted Fifteenth Periodic Plan sets out some crucial and much needed landmarks to be achieved. Chief among them, are graduation from a Least Developed nation and attainment of Sustainable Development Goals by 2030. In realizing the stated goals, a large amount of investment is needed across several sectors. Estimates of such investment range from seven percent of the GDP to ten percent of the GDP, annually, depending upon whether Nepal wants to follow normal GDP growth rate (5 percent) or highly optimistic GDP growth rate (10 percent).

As such, the Fifteenth Periodic plan also addresses the crucial role of the private sector in achieving said goals. Of particular importance is the realization of role of private sector in development and building of infrastructure. More importantly recent years has seen some form of shift from traditional model of financing and building of infrastructure to alternative models of financing and development of infrastructure i.e. Public Private Partnerships (PPP) and Blended Finance.

Realising the role of infrastructure in enhancing supply side capabilities, the paper has tried to summarize the financing/investment gap existent in three crucial sectors - Road Infrastructure, Energy and Water and Sanitation – of Nepal. The analysis concerns itself with the infrastructure gap at both national and sub-national level.

The study has identified and more essentially added to the already existent literature present, that there exists a large infrastructure gap and financing gap, which must be filled in order to attain aforesaid goals. In line with the same, the paper has also analyzed the ways put forward to bridge these gaps. The paper focuses mainly on PPP as a method to bring the private sector onboard in order to bridge the financing gap.

A layperson might assume that PPP as a model of infrastructure development might help countries that face budgetary constraints or

have very limited fiscal space. A review of literature however shows otherwise. PPP must not be seen as a method of releasing budgetary constraints or limited fiscal space, since the intertemporal effect on the government's budget remains the same and there is no net gain to the government in discounted value. The paper, through review of existing literature, also presents a model for optimal contract based on demand forecast.

Additionally, the paper found the argument, "PPP does not release budgetary constraints" to be false in case of sub-national governments like, Nepalese Sub-national government, who are limited in their ability to turn to public debt as a method of financing. Nonetheless, PPP is found to improve efficiency gains by leveraging the abilities of private sector. As such, PPP as a model of procurement and development of infrastructure must be seen as a way to enhancing efficiency rather than bridging the financing gap, at least at the federal level.

Moving forward, the paper discusses on the need for a proper PPP framework in order to successfully implement PPP projects. The paper summarizes as coherently and as briefly, to the best of the authors ability, the several aspects of PPP framework. In doing so the paper has reviewed Public Private Partnership, Investment Act (PPPIA) and repealed PPP policies.

The analyses conducted in this study are on the basis of experience of countries with successful PPP projects. While only two sub-national governments have enacted standalone PPP legislation, the analysis of the current PPPIA and related PPP policy will be of some help to the remaining five states. Moreover a critical analysis of the PPPIA, the institutional mechanisms and the issues pertinent to fiscal commitments and contingent liabilities has been provided.

The paper also consists of recommendations, which have implications on demand forecast, the role of PPP unit, the need for a proper framework to study fiscal commitments and contingent liabilities, the transparency of related institutions and some shortcomings of the prelevant standalone legislation.

1. Introduction

Development of physical infrastructure is one of the necessary conditions for achieving high rate of economic growth and prosperity. Infrastructures like road and electricity play a crucial role in enhancing production and marketing of goods, which helps boost economic growth by attracting investments and increasing employment opportunities. However, Nepal faces the problem concerning lack of sufficient physical infrastructure to attain desired rate of growth. The severe resource constraint faced by government has been deemed the main reason behind insufficient development of infrastructure. Also, it would not be erroneous to place government incompetence and inefficiency in second spot as the reason behind lack of proper infrastructure development in Nepal. On this backdrop, this paper attempts to see if private sector funds can be mobilized for infrastructure development in Nepal.

The paper is divided into 3 major chapters. The first chapter assesses the current situation of infrastructure at national and sub-national levels and identifies financing gap in the areas of road, water and sanitation and energy infrastructure, and briefly touches upon the possibility of private sector participation in financing infrastructure development. The second chapter focuses in theory of Public-Private Partnership (PPP) in development of physical infrastructures. The theory specifically analyzes if bringing private sector aboard for financing infrastructure development has any effect on government budget or not. This section also makes analysis of the optimal PPP contract between the concessionaire and the government which ensures highest possible gains and efficiency while drawing implications for Nepal.

The third chapter of the paper scrutinizes existing PPP policies and laws at national and sub-national levels. Then, it identifies gaps and shortcomings in current policies and legislations. This chapter also presents case studies of various countries which have successfully implemented PPP projects and draws lessons from them. On the basis of analysis of theory and practice in Nepal and in various other countries, the paper makes recommendations for successful implementation of PPP for infrastructure development in Nepal.

1.1 Assessing Financing Need in Vital Infrastructure sectors

It is estimated that Nepal requires climate-adjusted spending[1] from USD 31.61 billion to USD 48.34 billion to achieve normal to highly optimistic Gross Domestic Product (GDP) growth rate of 5 percent to 10 percent. This amount of spending is measured at 8.66 percent to 9.85 percent of the GDP (Bhandari, Joshi, & Shrestha, 2019). The estimation is held alongside another estimation by (Bhattacharya, 2010) that recognizes 1 percent of GDP to be spent in infrastructure in order to achieve 1 percent of GDP growth. This estimation meets the investment requirement of 7 percent of GDP in Infrastructure development (excluding maintenance expenditure that is further estimated at 5.5 percent of GDP) by Yepes (2008) for low-income countries like Nepal.

Moving forward, certain Infrastructure facilities play a crucial role in supporting the economic growth of the country by enhancing supply-side capabilities of entities engaging in production, and improving the living standard of the people. On that context, the following sections recognizes transport, energy, and water & sanitation as key infrastructures for Nepal under current circumstances as they play significant role in optimizing efficiency and productivity of both labor and capital engaged in national output[2]. It then assesses the infrastructure gap and financing needs in order to meet the Sustainable Development Goals (SDGs) and GDP targets.

1.1.1 Assessing Financing Need in Transport Infrastructure

Current Status of Transport Infrastructure in Nepal

As of 2018, the average national road density in Nepal is 47.88 km/100 sq. km and the density of paved roads or all-weather roads is 15.78 km/100 sq. km (Department of Roads, 2018).

1 Climate adjusted spending refer to spending made while accounting for climate-change adjustment

2 The supply-side study of economics recognizes capital (k) and labor (l) are two important factors of production that form the production function of an economy. As such, the labor factor composes of Human capital of skilled and semi-skilled Human Resources

Though the road density of Nepal stands visibly higher than that of neighboring mountainous country - Bhutan with road density of 20 km/100 sq. km. and Pakistan with road density of 32 km/ 100 sq. km. - only 50 percent of the network is motorable (Bhandari, Joshi, & Shrestha, 2019). This means that most of the existing road system requires significant rehabilitation in order to revive them to motorable status.

Also, the lack of operationality of the existing road system in Nepal is recognized by the statistics that portray 51 percent of the fair-weather roads that fall into the category of Local Road Network (LRN) to require substantial rehabilitation in order to make them operational. This criticality of the situation is further amplified by another data figure that recognizes fair-weather roads to compose 68 percent of the LRN, which represents 82 percent of the Nepal Road's system (Department of Roads, 2018).

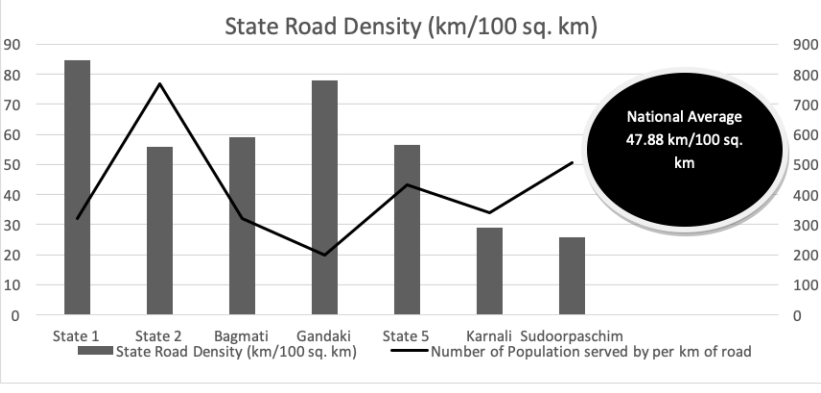
Infrastructure Gap in Transport Sector against the SDG Target for 2030

In order to achieve the SDG target on transport infrastructure, Nepal needs to ensure average national road density at approximately 150 km/100 sq. km and paved road density at approximately 25 km/100 sq. km. by the end of 2030 (National Planning Commission, 2016). This means that Nepal needs to triple its national road density figures in the next 10 years. The SDG projects construction of additional 120,000 km of road by 2030 in order to match transport requirement for Nepal's socio-economic need. Likewise, the SDG also projects that around 25,000 km of roads need to be upgraded to all-weather standards (National Planning Commission, 2016). As such, if the roads are to be upgraded to the standard of District Roads Network, the government will have to spend a minimum of USD 4.40 billion per year until 2030 (Bhandari, Joshi, & Shrestha, 2019). Likewise, in order to meet the GDP growth forecast of 5, 7.5, and 10 percent, spending in transport infrastructure is estimated to be at USD 22.76 billion, USD 29.86 billion, and USD 38.09 billion respectively (Bhandari, Joshi, & Shrestha, 2019).

Assessing Transport Infrastructure gap in the Sub-national context: As of 2018, Sudoorpaschim constitutes the least road density (see Fig 1), whereas Karnali and Sudoorpaschim together constitute road density lower than the national average (DoR, 2018). Thus, transport infrastructure development in the western region of the country plays a significant role in addressing the infrastructure gap and meeting the national SDG target in road sector.

State 2, State 5, and Sudoorpaschim are serving the greatest number of people with per km of road compared to the national average (see Fig 1). State 2 serves twice as many people with every kilometer of road than the national average (Bhandari, Joshi, & Shrestha, 2019).

Fig 1: State Road Density in Federal Context

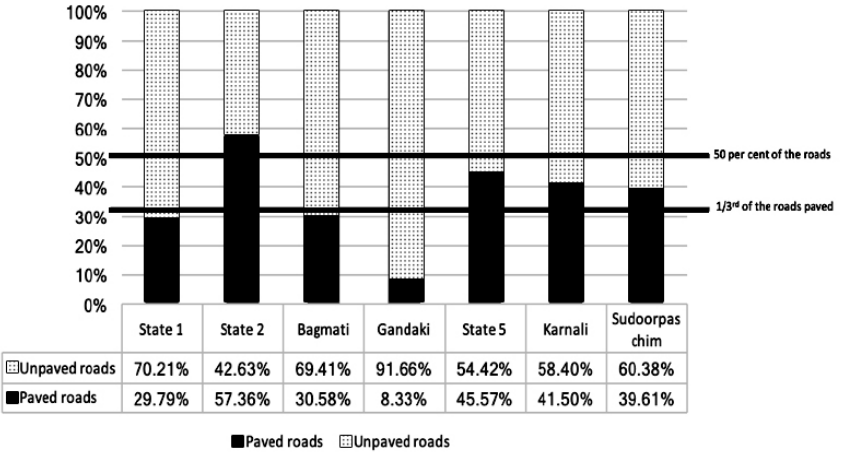


Source: Department of Roads (2018)

In terms of proportion of paved or all-weather roads per total motorable roads, Bagmati and Gandaki rank the lowest. In fact, less than one-third of the total roads in these states are paved (see Fig 2).

The observations of State road infrastructure statistics provide an important overview that recognizes the unique need for States to prioritize nature of road infrastructure development that may differ from each other. As such, State 2, Karnali and Sudoorpaschim should prioritize construction of new roads, whereas Bagmati and Gandaki need to prioritize upgrading their existing roads.

Fig 2: Proportion of paved roads in all States



	State 1	State 2	Bagmati	Gandaki	State 5	Karnali	Sudoorpaschim
Unpaved roads	70.21%	42.63%	69.41%	91.66%	54.42%	58.40%	60.38%
Paved roads	29.79%	57.36%	30.58%	8.33%	45.57%	41.50%	39.61%

Source: Bhandari, Joshi, & Shrestha (2019)

Plans to eliminate gap in areas of transport infrastructure

In order to meet the aforementioned targets, strategic plan for Strategic Road Network (SRN) has devised certain road programs at national level, of which the expenditure is envisaged to be at USD 6.2 billion in five years (Department of Roads, 2018). The strategic plan for SRN involves:

1. Upgrading East-West Highway and other solicited highways to four-lane standard
2. Opening and upgrading Mid-Hill highway
3. Upgrading Terai Postal road and associated North-South link (corridor) roads
4. Widening roads to district headquarter
5. Track opening of North-South link (corridor) roads towards the Northern border

On a similar context, State 1, Bagmati, Gandaki, and State 5 have pledged for enhancing State transport infrastructure with the goal of improving accessibility, mobility and network connectivity of State roads with village centers, economic centers, industrial regions

and national highways in their respective first periodic plans and/or Mid-term Expenditure Framework (MTEF). More importantly, execution of such action plans along with programs at national level are likely to address supply-side constraints in order to optimize the effort of factors of productions in contributing towards national output.

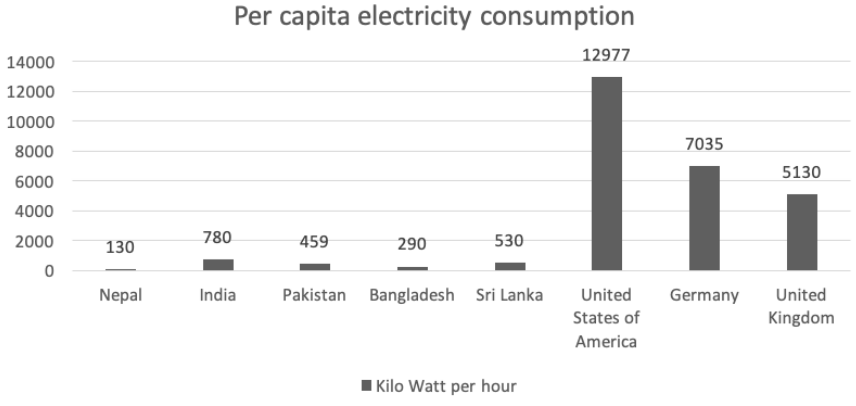
1.1.2 Assessing Financing Need in Energy Infrastructure

Current Status of Energy Infrastructure

Electricity as a source of energy in Nepal retains the highest potential to catalyze economic growth and improve standard of living of the general population. Meanwhile, limited access to electricity has resulted in low-level of economic and social development in the country. This statement goes along with the fact that merely four percent of the total energy source consumed in the country comes from electricity, whereas 68 percent of the households of Nepal still rely in firewood as a primary source of heating (Ministry of Finance , 2017). Furthermore, it is estimated that out of 5.4 million households in Nepal, 3.06 million households, which accounts to 51.67 percent, are connected to the national power grid, whereas 1 million households are electrified from off-the-grid system in Nepal. Thus, only 76.3 percent of the households in Nepal have access to electricity (Bhandari, Joshi, & Shrestha, 2019).

As of 2016, the electricity supply in Nepal is only 4631.5 GW/h that translates to 130 KW/h per-capita consumption. The figure stands dwarfed when compared to South Asian counterparts as provided in Table 1. Meanwhile, SDG target for electricity per-capita consumption stands at 1500 KW/h by 2030 (ADB, 2016).

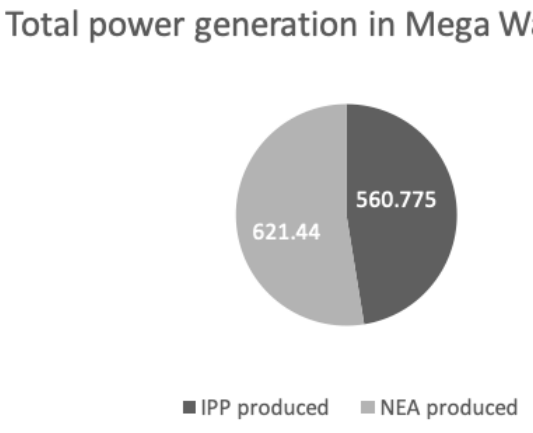
Fig 3: Per capita electricity consumption in South Asian and Highly Developed Countries



Source: ADB (2016)

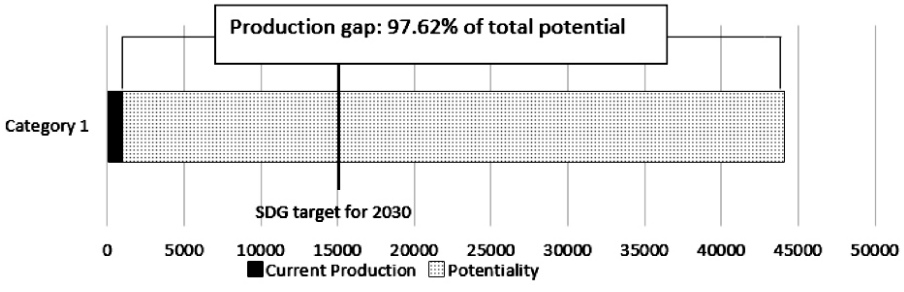
Though Nepal retains significant potential in generating electricity through hydropower as an alternative source of energy, the country has not been able to exploit this substantial power generation potentiality. As of 2019, the power producers in Nepal have only managed to generate 1182.215 MW of electricity against its economical estimate of hydropower generating potentiality of 43,000 Mega Watt (MW) (NEA, 2019). The generation is contributed by 83 Independent Power Producers (IPPs) who contribute 560.775 MW of electricity and 57 Government-owned plants of different mode and capacity that produce 621.44 MW of electricity. Besides, Nepal Electricity Authority (NEA) also owns two thermal plants that adds 53.4 MW of electricity to the estimate (NEA, 2019).

Fig 4: Total power production by IPPs and NEA



Source: NEA 2019

Fig 5: Production gap of current energy production against total feasible potentiality



Source: NEA 2019

Generation is only one aspect of electricity access. Transmission infrastructure that involves transmission lines and substations are other crucial infrastructures that constitute the overall energy infrastructure. As such, the current circuit length of transmission lines of different Kilo Volts (KVs) stands at 3989.46 KM. Meanwhile, additional 3,023 KM of transmission line is under-construction (NEA, 2019).

Infrastructure gap in energy sector against the SDG target for 2030
SDG targets 99 percent of the population to have access to electricity by 2030. This estimation translates to 15000 MW of electricity production by 2030. The target is also based on estimation that Nepal needs 62,240 gigawatt per hour (GW/h) of electricity to fulfill the needs of modernizing the society by 2030, whereas the country needs at least 19,000 – 38,000 GW/h of electricity to meet the basic needs like cooking and heating during the same period (National Planning Commission, 2016).

Meanwhile, in areas of electricity transmission and distribution, it is estimated that USD 651.25 million and USD 676.85 million worth of projects will be required for transmission line and substation projects respectively to meet the SDG target of electricity access at all households (99 percent) which is expected to reach 7 million by 2030 (Bhandari, Joshi, & Shrestha, 2019). It is further estimated that 1.52 percent to 1.79 percent of GDP needs to be spent on energy infrastructure in order to meet the GDP growth target of 5 to 10 percent (Bhandari, Joshi, & Shrestha, 2019).

Electricity generation potentiality in the Federal context:
Gandaki is the largest supplier of on-the-grid electricity, whereas State 1 maintains the highest potential to generate hydroelectricity. State 2 does not maintain any potential for generating hydroelectricity (Bhandari, Joshi, & Shrestha, 2019), although significant proportion of the region remains feasible for cross-border electricity transmission and trade with India (Hurlbut, 2019).

Ongoing progress to eliminate gap in areas of energy infrastructure
To achieve stipulated targets in areas of energy generation, 257 hydropower plants are in different stages of construction or development, and are estimated to produce 5483.279 MW of electricity as of 2019 (NEA, 2019). Likewise, Department of Electricity Development (DoED) has already granted survey license to projects with accumulative capacity of 16,378.515 MW and construction license to projects with total capacity of 7,956.661 MW (DoED, 2020). Additionally, 10 power projects have been planned

and proposed with total capacity of 2285.2 MW (NEA, 2019). Furthermore, Investment Board Nepal (IBN) has signed Power Development Agreement (PDA) for the development of Upper Karnali Hydropower and Arun Hydropower with capacity of 900 MW, each in addition to 3 other hydropower for Foreign Direct Investment (FDI) (IBN, 2019).

Table 1: Plans and proposals to expand energy generation capacity

	IPP Owned	**Government Owned**	**Total Figure**
Currently Operating	83 (560.775 MW)	57* (621.44 MW)	140 (1182.215 MW)
Under Construction and Development	N/A	N/A	257 (5483.279 MW)
Survey License Granted	146 (15203.515 MW)	5 (1175 MW)	151 (16,378.515 MW)
Construction License Granted	220 (7749.661 MW)	6 (207 MW)	226 (7,956.661 MW)
Planned and Proposed	N/A	N/A	10 (2285.2 MW)
PDA Signed	5 (1800MW+)		5 (1800MW+)

**The data figure includes two NEA owned thermal plants that produce* 53.4 *MW of electricity*

In the format of a(b) provided, 'a' represents the number of project and 'b' represents the total MW of the projects

Source: IBN (2019), NEA (2019) and DoED (2020)

Likewise, in the area of electricity transmission and distribution, DoED has issued 133 survey licenses for transmission line projects that is projected to stretch approximately 3,130 KM and also same number of generation licenses between NEA and IPP for the

construction of transmission lines (DoED, 2020). In the meantime, 32 high-voltage grid substations are in the process of construction with combined capacity of 4112 mega-volt-ampere (MVA) (DoED, 2020). In addition, a USD 540 million South Asia Sub-regional Economic Cooperation (SASEC) Power System Expansion Project, under the financial assistance of ADB, is developing transmission line projects in the major transmission corridors (ADB, 2017). Similarly, Millennium Challenge Account Nepal (MCA-Nepal), under the US Government Grant Assistance, has also planned to execute the Mid-Hill 400 Kilo Volt (KV) transmission line network.

Apart from hydropower, there are also other potential alternative sources of electricity that have been minimally exploited. As such, there remains potential to generate 1830 MW of electricity from solar energy, 2100 MW of electricity from connected photo-voltaic system, and 3000 MW of electricity from wind energy (AEPC, 2008).

State 1, Bagmati, Gandaki, and State 5 have pledged for enhancing State electricity infrastructure with the goal of improving accessibility of electricity, and expanding the use of electricity as the primary source of energy also in areas of transportation mobility in their respective first periodic plans and/or Mid-term Expenditure Framework (MTEF).

1.1.3 Assessing Financing Need in Water and Sanitation Infrastructure:

Current Status of Water and Sanitation Infrastructure

It is believed that Nepal has progressed substantially in areas of access to Water and Sanitation Infrastructure. As such, the country cherishes the attainment of basic water supply and sanitation coverage that is now very close to the SDG target for 2030. As such, while the current reported coverage is 95 percent of basic water supply and 98 percent for sanitation coverage, the SDG target for 2030 concerning the very indicator stands at 99 percent for Nepal (NPC, 2019). However, the observation regarding access to quality water and sanitation infrastructure reveal a different story altogether.

In Nepal, only 58 percent of the urban population and 41 percent of the rural population have access to piped water system (MDG progress report, 2013). The figure stands in stark contrast with SDG target that demands 90 percent of the population to be connected to piped water system in 2030. Meanwhile, the fact that only 27 percent of total water supply has been safely managed by complying with National Water Quality Standard, shows that there is a lot of room for improvement (NPC, 2019).

Substantial effort in improving the quality of water supply is necessary in order to meet the SDG target that demands 90 percent of the population to have access to safe drinking water by 2030.

Likewise, only half of the households (50.9 percent) have been connected to sewerage network or septic tank (CBS, 2017). This figure also is a far cry from the concerned SDG target that demands 90 percent of the population to be connect to proper sewerage network of Fecal Sludge Management (FSM) network. Meanwhile, it is estimated that 2.63 percent of the GDP in water supply and 2.75 to 2.87 percent of the GDP in sanitation infrastructure is required to be spent in order to achieve GDP target of 5 to 10 percent (Bhandari, Joshi, & Shrestha, 2019).

Infrastructure Gap in Areas of Water and Sanitation Infrastructure in Urban Setting

Lack of adequate water supply and sanitation infrastructure is also highly responsible for unsatisfactory living standard in the urban regions of Nepal that gravely affects the productivity of the human resource. In exemplifying Kathmandu Valley as the urban hotspot of the country, the chronic shortage is safe drinking water and wastewater disposal mechanism is ubiquitously visible is the city. To tackle the deficit of safe drinking water supply, Melamchi Water Supply Development Board (MWSDB) had initiated a national flagship drinking water supply project named Melamchi Drinking Water Project (MDWP) in association with multiple international donor agencies to supply 170 Million Liters per Day (MLD) of fresh water to Kathmandu Valley from the Melamchi

river in Sindhupalchowk district. The restructured version of the project is estimated to cost USD 317.3 million and was expected to be completed in 2013 (MWSDB, 2020). Though the project is now significantly overdue, this drinking water supply project is believed to sufficiently enable access of safe drinking water in Kathmandu Valley once completed.

Likewise, in order revive the poor wastewater and sewerage system and construct new wastewater treatment plants, Ministry of Water Resource has initiated Kathmandu Valley Wastewater Management Project (KVWMP) that attempts to rehabilitate existing network & expand new networks, lay new interceptors along the major rivers, refurbish existing treatment plants & construct new treatment plants. The cost of the project is estimated at USD 817 million and attempts 70% coverage of the Kathmandu Valley population (KUKL, 2017). On the same context, State 1, Bagmati, Gandaki, and State 5 have pledged to enhance access of water and sanitation infrastructure across the states as detailed in their respective first periodic plans and/or Mid-term Expenditure Framework (MTEF).

1.2 Consolidated observation

The aforementioned observations depict a significant gap in financing of transport, energy and water and sanitation, when compared in terms of the pledged targets. Required investment and effort in different nature of infrastructures are also different. For instance, transport sector is recognized to require 10 times more investment compared to investment in other sectors. Regardless, it cannot be truer that eliminating gap in infrastructure and infrastructure spending, needs to be observed from newer perspective other than assuming dominant role of Government and international donor agencies. To this extent the following sections will deal with PPP as an alternative means to develop infrastructure.

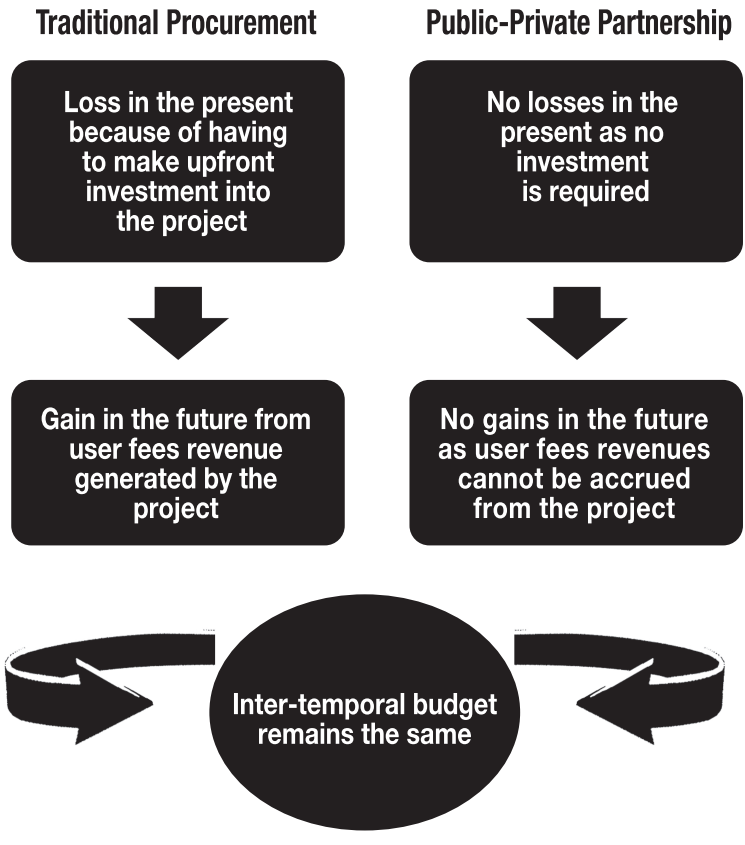
2. Public Private Partnership: Theory and Application

2.1 Theory

Engel, Fischer, & Galetovic (2013) who have extensively researched on this subject matter from an economic perspective have tried to answer two relevant questions: a) What is the impact of PPP on government budget? b) What is the structure of optimal risk sharing between a government and a private firm or concessionaire or recipient of the PPP contract when there is substantial demand risk or uncertainty? The paper is primarily based on the aforementioned paper.

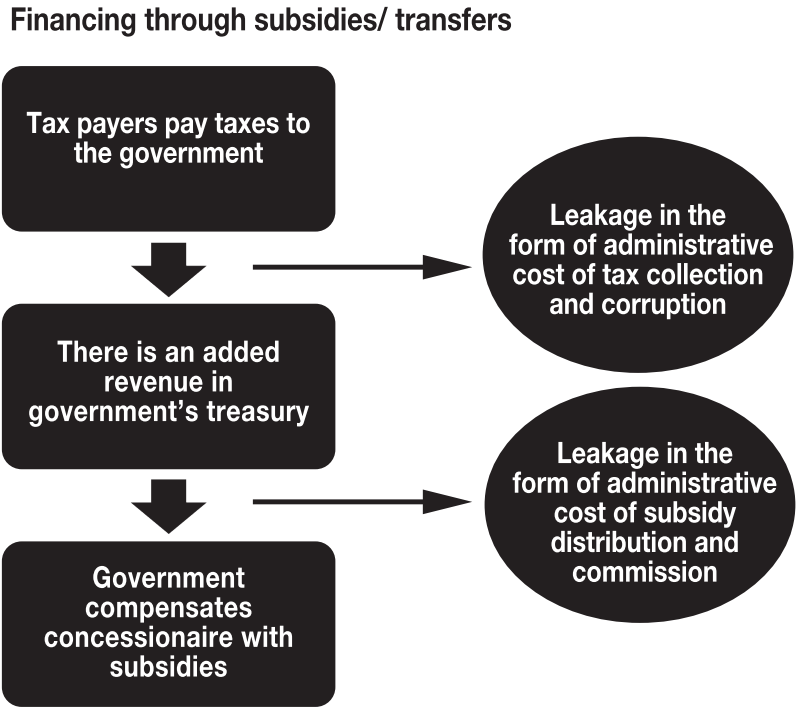
PPPs have been justified on the grounds that they relieve strained budgets and release public funds. When government can bring in investment from the private sector for infrastructure development, a major chunk of its budget is released which can then be used to finance other public services. Meanwhile, it also relieves burden to the taxpayers as the dependency on taxpayers for building infrastructure is significantly reduced. However, Engel, Fischer & Galetovic (2013) exclaim such exposition is not accurate and there is no budgetary effect of PPP model of financing infrastructure. Even though the government does save a part of its revenue initially owing to the upfront investment made by private sector, such savings are attenuated as the government has to forgo the future revenue generated from user fees which then are cashed out by the private investor of the project. So, there is no net gain to the government in discounted value and inter-temporal government budgets remain the same.

Figure 6: Budgetary effect of traditional procurement versus that of Public- Private Partnership



However, PPPs are warranted on efficiency grounds. Practically, the firm or concessionaire can be compensated either through direct transfer, subsidy or user fees or a combination of both. The user fees are the most efficient and cost saving medium of putting money into the hands of the concessionaire because private sector pays lower overheads and has better incentive to control corruption; whereas, if compensated through subsidy, the funds do not directly get transferred from users to the concessionaire. In between, there is government who acts as medium who collects taxes from the users and disburses it to the concessionaire. Hence, there exist higher chances of corruption. Additionally, when concessionaire is remunerated with toll revenue, there is a cost incurred to the society when paying subsidies.

Figure 7: Leakages in financing via subsidies/ transfers



Now, the government has to decide how much revenue the concessionaire should receive from user fees and cash transfers from the government. If the term of concession is determined to be finite, the government receives a part of the revenue generated by the project. To elaborate, let 'U' be the present value of the revenue to be received by the concessionaire from user fees as per the contract and 'V' be present value of private willingness to pay for the project's service which gives the present value of the total revenue that can be generated from the project. If V > U, the concessionaire can obtain U within a specified amount of time and the concession period lasts until that point of time. After concession period ends, the user fees revenue generated by the project goes into government's coffer. This substitutes the tax revenue which the government otherwise would have to collect. A rupee in government's revenue costs more than one rupee to the society as taxation incurs

administrative cost. This way, the government not only eases the burden on tax payers but administrative cost of collecting taxes is also saved.

If the present value of revenue to be received by the concessionaire is determined in such a way that it equals to the present value of private willingness to pay for the project's service over its lifetime, i.e. U = V, then the term of concession lasts indefinitely and no subsidies are paid. In this case, the government will recoup the revenue loss incurred, through taxation. As mentioned above, there is an additional cost of tax administration to the society.

Again, if the present value of revenue to be received by the concessionaire is less than the present value of private willingness to pay for the project's service over its lifetime i.e. U > V, the contract will last indefinitely and the firm is also remunerated with subsidy. As the government has to give up user fees entirely, it will tax the citizens to cover up the losses incurred. In this case, there are additional costs experienced not only due to frictions arising while collection of taxes but also inefficiencies associated with subsidy transfers.

Out of the three alternatives the most efficient and in that sense the optimal contract would be the one where the present value of private willingness to pay for the project's service over its lifetime outnumbers the present value of revenue to be received by the concessionaire. That way the government does not have to levy additional taxes and hence does not have to bear cost of tax administration. Moreover, as no transfers are made, there is no added cost accompanying subsidy transfers.

Nonetheless, this is only possible when two conditions are fulfilled. First, we should be able to forecast present value of private willingness to pay for the project's service or demand for the infrastructure project accurately. Second, we should also be able to make investment in such a way that it can be varied according to demand for project's service, which means investment should be divisible as according to the willing to pay. Mostly, demand for services from infrastructure projects remain uncertain and investment surely cannot be varied as per people's willingness to pay;

therefore, the optimal option out of the three mentioned above cannot always be picked by the government.

Also, if demand for project's service cannot be determined with certainty and if the concessionaire is fully dependent upon user fees, the risk has to be fully born by him/herself. In this case, PPP is tantamount to privatization and privatization is warranted instead on PPP. Against the backdrop that there exists significant demand uncertainty and subsidy finance is less efficient than user fees finance, we have to devise a PPP contract in such a way that there is optimal allocation of demand risk.

As above, we also assume V to be the private willingness to pay or demand for the project's service/s, which is uncertain. Further we assume there are a numerous possible present values of revenue which the infrastructure can generate over its lifetime and is bounded by a minimum and a maximum denoted by Vmin and Vmax respectively. Investment I is exogenously determined and is independent of willingmess to pay for the project's service. The concessionaire will reach its equilibrium when it obtains amount equal to the present value of investment from the project over its lifetime.

When $V_{min} \geq I$, the optimal contract ensures that the concessionaire is compensated solely through user fees. The user fees are not completely exhausted and therefore, we can infer that willingness to pay for this project's service is high. This particular project is then classified as high demand project.

Let us consider the next case, when user fees are insufficient to pay for the project which means $V_{max} < I$. This happens when the state of demand is low. Here, the optimal contract is ensured when the subsidies are paid after user fees are exhausted. The government should provide subsidies only after user fees have been exhausted to avoid paying rent to the concessionaire. This particular project is classified as low demand project.

Thus, in low demand project, deficit revenue (negative difference between user fees revenue and investment) is fulfilled by subsidy transfer

to the concessionaire; whereas, in high demand state, surplus revenue (positive difference user fees revenue and investment) is collected by the government.

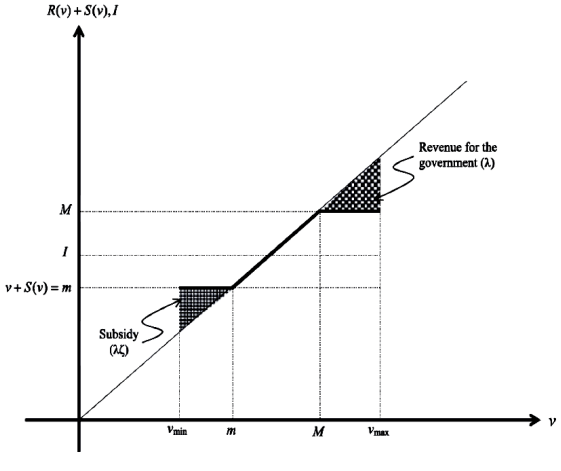
Table 2: Taxonomy of demand states and taxonomy of projects.

Demand states	Projects
High	Vmin > I
Intermediate	Vmin < I < Vmax
Low	Vmax < I

Source: Engel, Fischer & Galetovic (2013)

In between, there is intermediate demand project wherein Vmin < I < Vmax. Here, the contract needs to be modified and the optimal contract is characterized by two thresholds, a minimum revenue guarantee m and a maximum revenue cap M with Vmin < m < I < M <Vmax such that projects with m ≤ V ≤M are intermediate demand projects, projects with V < m are low demand projects and projects with V > M are high demand project.

Figure 8: Optimal contract, intermediate demand project.



Source: Engel, Fischer & Galetovic (2013)

The contract is drawn in such a way that revenue receipt of all the low demand projects are equalized at minimum revenue guarantee. Likewise, revenue receipt of all high demand projects are equalized at revenue cap. As we can see in the figure, in the low demand project, the concessionaire is not even able to gain a minimum guaranteed revenue from user fees and hence the concessionaire has to be compensated to fill the gap between user fees revenue and minimum guaranteed income through subsidy. On the other hand, as the concessionaire can acquire revenue above the maximum revenue cap from user fees, the period of concession lasts until the concessionaire is able to obtain maximum revenue cap. After the concession period ends, revenue generated from user fees are then retained by the government.

With regards to intermediate demand project (m-M), the concession lasts until the end of the project's lifetime and no subsidies are paid out.

2.2 Application of the Theory: Case of Nepal with Reference to the State Governments

2.2.1 With Reference to Budget Neutrality

PPP, although is generally believed to relieve strained budget and release public funds, theoretical justification has suggested otherwise. The inter-temporal effect on the budget remains the same. However, this justification might not exactly be applicable in case the State Governments in Nepal initiate development of infrastructure through PPP. The State Governments in Nepal have very limited revenue base. The only source of tax revenue on which they have complete right is agro-income tax. Revenue from all the other sources of tax revenue upon which they have rights over have to be shared with federal and/or state governments. Fiscal transfers from federal government form a large chunk of their revenue.

State Governments have been given the responsibility to develop State level infrastructure but are bounded by severe resource

constraint. They can definitely resort to borrowing, however, with limited revenue source and tax base, their servicing capacity is questionable. They might incur large debt weakening the fiscal health of the country. Like mentioned above, opting for PPP model would definitely leave them without stream of user fee had they built infrastructure via conventional procurement method. They would need to invest money in the beginning but at the same time receiving money from user fees generated by the project. That would surely be the case if the state governments had sufficient revenue base at present time or at least in the foreseeable future. Having sufficient revenue sources in the present eases infrastructure financing from one's own budget, whereas possibility of raising high revenue in the future provides flexibility to finance infrastructure though borrowing. When revenue is raised in the future, it can then be used to repay the debt incurred for financing infrastructure development. Since neither is the case for state governments at the moment, the ideal way to finance state infrastructure is PPP. If we go by the theoretical model that there is no budgetary effect of PPP, state governments would not be able to undertake any infrastructure development project because of lack of revenue generation and borrowing capacity.

2.2.2 With Reference to Optimality

In PPP, the firm/concessionaire can be compensated either through direct transfer/subsidy or user fees or a combination of both. We have analyzed in the previous section why compensation though user fee is the most efficient approach. The best case scenario would be when the concessionaire receives gains from his/her investment through user fees before the project's lifetime. However, this is only possible if we are able to forecast present value of private willingness to pay for the project's service or demand for the infrastructure project accurately and also be able to make investment in such a way that it can vary positively with demand for project's service, which means investment should be divisible according to the willingness to pay.

In several cases, it may be possible to forecast demand. It is specifically feasible in the case of good of private nature. For example demand for electricity can be forecasted to an extent. Moreover, it may also be possible to determine size of investment in hydropower projects according to the demand. Therefore, the optimal contract can ensure that the concessionaire is remunerated completely from user fee.

But, both of these conditions cannot be satisfied in case of infrastructure providing pure public goods like road. It is extremely difficult to accurately forecast demand for roads or willingness to pay for plying vehicles in the road. Equally difficult is to divide investment as according to demand. In this case, the optimal contract differs as according to user fees generated by the project in comparison to the investment made. The government can itself propose the minimum guaranteed income and maximum revenue cap while calling for bid or can also ask for the minimum guaranteed income and maximum revenue cap as a part of the bid.

If the revenue generated from user fees is less than the minimum guaranteed income, then subsidy is paid out to cover the deficit between realized revenue and the minimum guaranteed income, while contract lasts indefinitely. In the similar manner, if realized user fees revenue is greater than maximum revenue cap, the contract period is definite and no subsidies are paid out. After the contract period ends, government takes over the project and the user fees then collected are appropriated by the government. Whereas, in case revenue accrued through user fees exceeds minimum revenue guarantee but falls behind maximum revenue cap, the government should not pay out subsidies and protract the contract indefinitely.

3. Public Private Partnership: Frameworks for better results

The previous sections dealt with the current investment gaps in Nepal and the alternative models that should be considered, as is time and again suggested by experts. Moreover, we have tried to summarize briefly and as coherently as possible the economic theories surrounding PPPs as a model of procurement, its distinctiveness or rather its similarity with regards to traditional models of procurement and some key things to consider. The following section tries to delve into the necessity surrounding the need for a framework to guide PPPs and the current scenario in Nepal. In doing so we have tried to compare Nepalese practices with international practices and provided an analysis as to the current scenario, naturally what follows are recommendations based on our analysis.

There are ample experiences from around the world which suggests that PPPs can be implemented without any legal or institutional framework. However, most countries with successful PPP programs have relied on a sound and well defined PPP framework. The rationale surrounding the establishment of a PPP framework is that it communicates the will of the government to foster PPPs and also their commitment towards it. Essentially it also stresses on the existence of governance of PPP programs i.e. it signifies transparent procedures, accountable public institutions

Building a Case for PPP Framework through International Experience.

South Africa and Chile are countries with substantial PPP experience. Both countries have successfully implemented a large number of PPP projects both at the national and municipal level. Well defined framework in case of both these countries has helped identify and implement projects through the PPP model.

The use of PPPs in Chile was enabled in 1991 by Decree 164, which set out much of the framework still in use today. This framework was updated in 2010 by the Concessions Law. There are detailed procedures in place which include approval

and integrity. Equally PPP frameworks also help in ensuring that the project selected offers value for money (ADB, EBRD, IDB, IsDB, and WBG., 2016). Recent years has seen countries increasingly realize the need for a proper PPP framework consisting of policies, procedures, institutions, and rules that together define how PPPs will be identified, assessed, selected, prioritized, budgeted for, procured, monitored, and accounted for; and who will be responsible for these tasks (International Bank for Reconstruction and development, 2017).

It is also worth noting that the nature of infrastructure is such that it demands that such services be provided by the government. Consequently PPP arrangements that allow for a private party to make provision for any infrastructure services will require some form of permission from the government. PPP frameworks especially, PPP legislation more often than not will serve as the basis upon which private parties make arrangements for infrastructure services. Equally important is the unique nature

of technical assessment report by the National Planning authority, approval of tender and award by the Ministry of Finance and adequate dispute settlement mechanism.

South Africa also has a robust PPP framework at the national level that governs both the national and provincial PPP arrangements. The legislation governing national and provincial PPPs is the Treasury Regulation 16, issued under the Public Finance Management Act of 1999. Regulation 16 sets out the PPP process, requirements and approvals, and institutional responsibilities. Municipal PPPs are governed by the Municipal Finance Management Act and the Municipal Systems Act. There are also municipal PPP regulations that roughly mirror the requirements of Treasury Regulation 16.

Both countries through their PPP framework demonstrate a transparent and competitive selection of bidders while also insuring that all future contingent liabilities are accounted for through specialized PPP units within the confines of Ministry of Finance.

Source: PPP Knowledge Lab

of PPP arrangements i.e. it combines resources from both the public sector and private sector and from among the private sector as well. Frameworks governing PPP's to this extent serve as an assurance that each party involved honor their obligations and commitment in good faith.

While a general consensus on the necessity of PPP frameworks can be arrived at, the same however is not true with regards to what constitutes a PPP framework. There is no single model PPP framework. Although UNCITRAL Model provisions on Privately Financed Infrastructure Projects 2000, and UNCITRAL Model PPP Legislation, 2019 to a certain degree provide uniform model for PPP legislation to be adopted by countries, PPP framework extends beyond PPP legislation and include policies, procedures, public finance management approach, institutional responsibilities and other related arrangements. Besides, PPP frameworks often evolve overtime in response to specific challenges faced by any given government in implementing PPP programs.

To this regard, a major challenge faced by governments in designing a conducive PPP framework is the myriad of approaches put forth by many countries. Countries

Good Governance in PPPs

International Governmental Institutions such as World Bank, UNESCAP, and UNECE have repeatedly stressed on the importance of good governance for Infrastructure development. They commonly refer to the following key principles:

Efficiency - Proper use of resources in a manner that provides value for money

Accountability — Responsibility of political actors towards stakeholders for their action

Transparency — Clarity of rules and openness of procedures

Decency — Development and implementation of rules without harming people

Fairness — Proper and equal application of rules

Participation — Involving all relevant stakeholders

A sound PPP framework is primarily established to ensure these principles are followed in the implementation of PPP projects.

Source: UNECE, UNESCAP, World Bank

try to adopt a PPP framework by simply adopting a fully functioning framework of a country that has been very successful. By replicating the PPP framework of successful countries in wholesale, governments often seek to take advantage of the so called best practices in the realm of PPP frameworks. But, as Delmon (2015) put it, "these "best practice" PPP programs have developed over many years, through numerous challenges and frustrations and for a specific legal, political and financial context. When adopting the processes and procedures of one of these countries wholesale into a jurisdiction with little experience in PPP, the tendency is to expect the PPP program to be equally successful in a short timeframe, as if a robust PPP framework will immediately result in robust PPP projects. Clearly, this is not accurate".

Moreover, the development of a conducive PPP framework is regarded as a dynamic iterative process that comes through years of experience in implementing PPP projects (Delmon, 2015). Similarly, although wholesale adoption of PPP frameworks is considered as being ineffective, governments can more or less learn about the general principles surrounding the frameworks and create their own set of policies and procedures.

A sound PPP framework will seek to showcase the political will to support PPPs and establish the legal and regulatory regime appropriate to encourage PPPs. In addition to this, it also seeks to ensure that project selection is based on detailed analysis of the numerous factors ranging from technical specification to the model of PPP arrangement. Likewise PPP frameworks must enable parties to the arrangements to allocate risks based on the capacity of each party to internalize risks (refer to section concerning economic theories). To this extent frameworks regarding PPPs comprise of Policies and Legal arrangements relating to PPP, Institutional Mechanisms and Public Financial management approach. The sections that follow will look at these specific elements in Nepal both at the federal level and the sub-national level.

3.1 Policies and Legal Arrangement

Almost entirely, the first step is the articulation of the rationale behind PPPs. This allows all the relevant government departments to understand why and when PPPs should be used. Moreover, it helps in understanding the purpose of entering into a contractual relationship with a private party in relation to infrastructure development. Governments may enact separate PPP policies to work as guiding principles for such arrangements or opt for setting them out in primary legislation. Whatever method is used, the importance of setting out guiding principles as standards against which PPPs will be implemented and those responsible for implementing PPPs will be held accountable is undeniable (International Bank for Reconstruction and development, 2017).

Nepal, over the years, has seen mixed success in PPP projects. While almost all PPP projects related to the energy sector and urban development have seen successful implementation, very little accomplishment is seen elsewhere. As far as policies in Nepal go, the participation of Private sector in infrastructure development was first envisioned as far back as 1992 through the eighth periodic plan. In order to make the role of the private sector more efficient in construction of roads and bridges the plan sought out to change the existing rules and regulations so as to facilitate the implementation of BOOT model of construction (National Planning Commision, 1992).

On a similar note, Hydropower development policy 1992 also envisioned the participation of private sector in the generation and transmission of electricity. Joint investment by the government and other parties, alternative models of procurement and construction were among some of the arrangements that showed the intention of GoN to pursue PPP as a model of infrastructure development, the term PPP however was never expressly used. Along the same lines, Electricity Act, 1992, was the first legislation to have any provision regarding private sector participation vis-à-vis PPP however remote and loose it may be. Section 9 and 10 gave legal basis to contracts between the government and private sector/ foreign investors with regards to purchase of electricity, guarantee for

necessary capital to be invested, other technical and financial matters and transfer of assets by foreign investor to the GoN after the expiry of license period signifying a loose BOOT model.

For much of the period that followed, PPPs in Nepal were concentrated on the energy sector[3]. Subsequent ninth and tenth plan adopted the policy of promoting private sector participation in construction and maintenance of road infrastructure. In order to achieve this goal National transport policy 2001/2002 and Public Infrastructure Build Operate and Transport Policy, 2001 were drafted. Equally important during this period was the enactment of an act relating to Private sector investment in construction and operation of infrastructure which first came in the form of ordinance in 2003 and was later ratified in 2006. Although the act made provisions regarding the mode of private participation and PPP model of infrastructure development, it was not able to attract investments from the private sector and instances of projects under the act had been non-existent (Sapkota & Pande, 2012).

In a bid to ascertain the shortcomings of the legislation and the lack thereof of PPP projects, a white paper was issued by the Government of Nepal with help from UNDP. Several problems related with the legislation including inadequate definition of PPP, problems with modes of Procurement, lack of proper institutional mechanism, conflicts with other sectoral laws were identified.

It is evident that PPPs in Nepal and any related policy and legal framework thereof have evolved as experience with PPPs grew over time. In fact, PPP policy 2015 is a result of past experiences and failures in procuring infrastructure through this model. The committee formed for issuing the White Paper realized some essential gaps in the then prevailing PPP policies and laws which later formed the basis for the more revised PPP policy 2015. One noteworthy aspect of the White paper committee was the strong realisation for the need for a properly laid out policy that identified why PPPs are to be pursued.

3 This would be evident as the chapter on economic theories is suggestive of the ease in carrying out projects of private nature through the use of PPP

The subsequently formed PPP policy of 2015 addresses all the issues raised forth in the White paper. The policy states the objective of use of PPP is to make assets of public utility less costly, reliable and effective, which is precisely the reason why PPPs should be used. With that being said it should also be noted that the policy indirectly hints at releasing the budgetary constraint faced by the Government in relation to infrastructure development as an objective of PPP. Furthermore, the 15th five year plan also states that PPP can be used as a method to release budgetary constraints (National Planning Commision, 2019). As noted in the previous section PPPs should never be considered as a method to release budgetary constraints at least at the Federal level. To this extent PPP policy in Nepal must also clearly state that the use of PPP is to attain efficiency gains that come with the involvement of the private sector.

Highlights of the PPP policy

Viability Gap Funding	In case where the revenue generated from the project is not sufficient to make the projects viable, Ministry of finance will provide the shortfall to maximize the efficiency gains.
Feasibility requirement	All project implementation agencies must carry out detailed project feasibility study before entering into any PPP arrangement. The BOOT law in effect had no such provision.
Land Acquisition	Government of Nepal has taken the responsibility to acquire land for implementation of projects. Proper compensation will be paid out and depending on the nature of the project such compensation may be reimbursed either by the private party wholly or partially. Additionally, no project agreement will be signed unless 80 percent of the land is acquired.
Unsolicited proposal	A procedure for submission and approval of unsolicited proposal which was previously absent has also been incorporated.
Sharing of risks	Principles of risk sharing among the private entity and public entity have been pointed out. Primarily the party best able to internalize the risk shall assume the risk.
Bid evaluation	Parameters for evaluation of bid have been adequately pointed out.
Contingent Liabilities	Assessment of contingent liabilities has been recognized as primary function to be carried out before entering into a PPP arrangement.

Source: PPP Policy, 2015

3.2 PPP Policies at Sub-national Level

Important infrastructures and public assets are generally under a federal structure, the sole and shared responsibility of sub-national governments (OECD, 2018). As such the importance of sub-national governments in infrastructure development is immense. OECD data suggests that of the total PPP projects implemented in the year 2014, a substantial number was implemented at the sub-national level. Australia, Canada, India are glaring examples of increasing sub-national PPPs. Moreover, Sub-national PPPs have found great success in recent years largely due to the application of local knowledge within the sub-national context.

As noted earlier PPP policies only serve as guidelines or basic principles to be observed by procuring infrastructure through the PPP model. To this extent, sub-national governments can look towards National PPP policy. In fact, countries that have enjoyed great success in sub-national PPPs lack any sub national policy. Their National Policy serves as guiding principle to both the federal government and the state government.

With that being said our current PPP policy does not strictly demand adherence from the Sub-national government to the PPP policy 2015. While it mentions that all public entities whether national or local must adhere to the policy no mention of sub national government is found. However, since the policy uses the term public entities and as per the definition of Public Entities provided by the Public Procurement act 2007 even state level public entities are attracted to adhere to the policy.

3.3 Legal Arrangements

Almost four years after the policy was enacted necessary legal arrangements as envisioned in the policy in the form Public Private Partnership and Investment act 2019 were made. Although not all countries with successful PPP programs have specific legislation dealing with PPPs, nearly all countries have one way other amended existing legal arrangements in order to allow public entities to enter into long term legal arrangements with the private sector (World Bank, 2006). OECD's report on fostering investment in infrastructure (OECD, 2015),explains that the intention behind enacting standalone PPP Legislation might be to adapt the existing legal framework if it is not clear or comprehensive, or if the general framework constrains the government's ability to structure and manage PPPs well. Undeniably, the lack of proper legal arrangement with regards to PPP in Nepal has hindered its development. Moreover, inadequacies in the legal arrangement that predated the current law meant that regulatory and implementing agencies failed to conduct thorough analysis of the projects which led to projects being selected for the wrong reasons, and poor implementation thereof. As Delemon (2015) put it "The legal (and regulatory) framework creates the foundation for the institutional, regulatory, commercial and financial environment for PPP with clarity, consistency, transparency and certainty. It is particularly critical for the

Public Private Partnership and Investment Act, 2019

Enacted before the Investment summit, PPIA, 2019 was a symbol of the beginning of a new era in Nepal. Along with the FITTA, 2019, PPPIA was part of a series of reform that was made to attract private financing in infrastructure development in order to attain SDGs. Building on the PPP policy, PPIA was made originally by Deloite consulting India taking into account the various concerns of the stakeholders.

The act to a larger degree has adhered to the commitments made in the PPP policy 2015 and serves as standalone legislation with the purpose of creating clarity of rules and ensuring responsibilities of different departments are clearly laid out.

institutional framework, describing the interactions, relationships and coordination that underpin that framework".

Standalone legislation for PPP arrangements is not uncommon. Many governments over the world have enacted such legislation. While it is true that a standalone legislation often proves crucial in signifying the will and political support in favour of PPP, a direct co-relationship between the success of PPP programs and the existence of standalone PPP legislation must not be drawn, many governments have successful PPP projects but no standalone legislation while many with standalone PPP legislation but very few PPP programs (Lembo, Fioravanti, Astesiano, Lohbauer, Barata, & Rosset, 2019).

With that being said, Nepal's case for enacting standalone PPP legislation at this moment seems to be to ease procurement of infrastructure through the PPP model. Moreover, the enactment of legislation around the time of the Investment summit 2019 is suggestive of the fact that objective behind enacting standalone legislation is to precisely signify her openness to alternative modes of infrastructure development and the political will for the same. In any case the enactment of the Public Private Partnership and Investment act (PPPIA) also seems driven by the commitments made in the PPP policy and the shortcomings of the Private Financing in Build and operation of Infrastructure Act (BOOT Act).

The Exemplary Case of Chile: A country with no dedicated PPP legislation but successful PPP programs

Chile does not have a dedicated PPP legislation, PPP arrangements are mostly dealt by concession law which sets out the institutional framework for PPPs, tender rules, concessionaire's rights and obligations, inspection and oversight requirements, and procedures for resolving conflicts. The concession law addresses all principles that are relevant to procurement of PPP and Chile's success in successful implementation of PPP does not just come from a well structured law but also from implementation of lessons learned from past experiences. On the other hand, countries like El-Salvador have standalone PPP legislation but very little success with procurement via PPP.

PPPIA clarifies the jurisdiction of national and sub-national entities in relation to approval of projects to be procured through PPP. For national level projects, Investment Board acts as the approval agency. On the sub-national font, the entity prescribed by the sub-national legislation will be responsible for approval, however for projects worth more than 6 billion the approval agency is Investment board of Nepal regardless of its nature.

The implementation of projects is to be done by the respective level of government or ministry depending on the jurisdiction and the schedules of the constitution except for projects worth more than six billion other than energy projects and energy projects with a capacity of more than 200 MW, which is to be implemented by Investment board, energy projects with a capacity of 200 MW will be implemented by the relevant Federal Ministry.

In selecting projects to be implemented through PPP model, the implementing agency is responsible of creating a list of possible projects which will be further approved by the board or the relevant body depending on its jurisdiction. After approval of the list, the implementation agency is responsible for a two step bidding process which includes an expression of interest and a call for proposal. Evaluation of bids is to be done on the basis of royalty to be paid, user fee to be collected and the technical proposal by a separate evaluation committee. After careful evaluation the selected bidder and the government entity enters into a memorandum of understanding whereupon the bidder is given approval to prepare the necessary project details. The bidder then within the time period mentioned in the Memorandum of Understanding (MoU) presents the project detail after which an agreement between the private party and the bidder is reached following negotiations from the negotiation committee.

In continuation to the PPP policy, PPPIA also makes provision for handling unsolicited proposal, something which was missing from the BOOT act. Unsolicited proposals are also carefully evaluated by the evaluation committee. In addition to this a provision with regards to direct negotiation without availing the two step procurement procedure is also present.

3.4 Examining the Shortcomings of the PPPIA

The role of public entities in selecting and screening projects to be implemented through the PPP model and the criteria for such screening put forth in the PPP policy were clear and descriptive in nature; the act however fails to continue with the approach put forward in the policy. It becomes essential that during the initial phases the contracting authority/ public entity desirous of entering into a PPP arrangement, conduct proper study of the feasibility of procuring such infrastructure through the PPP model. PPPIA gives power to the public entity/contracting authority to prepare a list of projects that can be implemented through PPP arrangements. In doing so the act does not strictly require public entities to conduct a pre-feasibility assessment of the project[4].

The rationale for carrying out a pre-feasibility study is to understand the reason for procuring infrastructure project through PPPs. Furthermore, it also helps during the negotiation with the private party in that the public entity will know the specifics of the project (United Nations Commission for International Trade Law, 2019). While conducting a pre-feasibility assessment, the public entity should properly assess whether there are other alternative methods of building the infrastructure, whether the selected mode maximizes social benefit, whether there are fiscal implications of the projects and whether it offers value for money[5] (United Nations Commission for International Trade Law, 2019). More essentially, requiring line ministries or relevant public entities to conduct a pre-feasibility assessment in relation to fiscal risks can lead to lower off-balance sheet spending as is often done in case of PPP projects (Engel, Fischer, & Galetovic, 2011).

4 Some assurance however is provided by the National Project Bank guidelines 2020, which provides for a detailed guide on mandatory pre-feasibility assessment by public entities. See latter sections

5 Although the PPPIA does not provide for consideration of other models of procurement, Public Procurement Act and Public Procurement Rules require public entities to consider all available mechanism for procurement and to select the best one. However the implementation of PPA and PPR has been weak

Although the call for a proper pre-feasibility assessment might be set out in the guidelines and standard operating procedures that are being formulated by the Investment Board of Nepal, setting them out in the primary legislation instead of the secondary legislation might be able to ensure greater compliance (Delmon, 2015).

More essentially the criteria for selection of bids as set out in the PPPIA simply won't be sufficient enough to ensure that the project is being awarded to the correct bidder. Although the act states that further criteria will be stated through regulations, concerns regarding opportunistic behavior in relation to easy amendments to the secondary legislation are paramount[6].

The two step selection procedure as mandated in the PPPIA act is merely a continuation of the prevailing Nepalese practice on public procurement. It is indeed time to look for alternative methods of selection; chief among them has been a request for proposal with dialogue[7]. It would also be in the interest of the public entity to follow such a method in situations where it is not feasible for the public entity to detail out the description of the projects owing to lack of technical knowledge on part of the public entity. Methods based on this type of dialogue have proved to be beneficial to the contracting authority in the procurement of relatively complex items and services where the opportunity cost of not engaging in dialogue with suppliers or contractors is high, while the economic gains of engaging in the process are evident (United Nations Commission for International Trade Law, 2019).

PPP arrangements are in general terms contractual agreements, as such contractual agreements are often subject to renegotiation, this especially holds true in relation to a PPP contract that is renegotiated in great frequency over the years of its enforcement (Engel, Fischer, & Galetovic,

6 Case in point being the numerous amendments made to the Public Procurement Rules in recent years and alleged benefits accorded unfairly

7 Although Unsolicited Proposal and direct negotiation has been provided for by the act, UNCITRAL Model PPP Legislation suggests an additional method i.e. Request for proposal with a dialogue. It is generally used in case where it is not feasible for the Public entity to provide for a detailed description of the subject matter of procurement

2020). In light of such a phenomenon it is strange that no provision with regards to contractual renegotiation is present in the legislation.

Likewise, conditions when the private party can terminate the contract are not present in the act while condition when the agreement may be terminated by the public entity is present. It begs the question as to whether only unilateral termination is allowed in case of PPP projects in Nepal. Providing unilateral termination rights to the public entity through standalone legislation might send the wrong message to the private entity even though both parties may be allowed to terminate the contract in line with the prevailing Laws of contract.

Furthermore, interestingly, the act deals with Public Private Partnership and Private investment separately and specifies rules of procurement for each scenario. It however fails to define private investment in which case complications might arise in the future.

Owing to the nature of PPP contracts, disputes arise between its numerous parties, these include disputes between the contracting authority and the private party (Concessionaire), disputes between the private party (concessionaire) and her investors, lenders, disputes between the end users and the concessionaire. It is due to this nature that the mechanism for settlement of disputes is often seen as key to a PPP legal framework. Although the mechanism for settlement of dispute is provided by the PPPIA act, such mechanism is only limited to disputes between the contracting authority and the private party. Public entities entering into PPP arrangements are largely concerned with the private party/concessionaire and therefore are more concerned with their disputes with the concessionaire. However, the mechanism of settlement of dispute between the private party and investors/lenders is equally important to the success of the PPP arrangement. Indeed, such dispute settlement mechanisms will be dealt with by sectoral laws and the contract between the parties, however making provisions for them in the PPP legislation serves as signifying a conducive environment for all parties involved in the PPP arrangements regardless of their dealings with the public entity.

3.5 PPP Legislation in the Sub-national Font

As previous discussions have made it clear, a lack of clear political will can hamper efforts to divulge into PPP projects. This holds equally true for sub-national governments for whom the need for PPP legislation is the same as the national government. The reasons in favour of legislative framework for sub-national governments are the same as the ones for national governments i.e. proper legislation can improve government capacity for standardised, favorable, and transparent treatment of PPPs, as well as appropriate treatment of unsolicited proposals. In doing so, it can make private participation more appealing to private partners and to potential creditors (Richardson, 2010).

Differing Practices in Relation to Sub-national PPP Legislation

In Australia and India, the Federal government has no PPP legislation. Both countries have successful PPP projects at both national and Sub-national Level. In line with the constitutional provisions, infrastructure projects within the jurisdiction of Sub-national governments are handled by sub-national governments. To that extent a flexible national PPP policy is present in both countries and state legislation on PPP are formulated without straying from the policy but providing for rules suitable within the sub-national context. In Brazil however, a national legislation applicable to all forms of government is present.

However the mere existence of legal arrangements in favour of PPP is not sufficient for sub-national governments. Of utmost importance for sub-national PPP is coherence and consistency in PPP legal framework across all levels of governments. Coherence and consistency in legislation across jurisdiction serves to buoy the confidence of the private sector by signifying higher levels of political commitment and priority (Harper & Daughters, 2007). Countries with successful Sub-national PPP projects either lack any legislative instrument at the central level and delegate all legislative power to the sub-national units or establish rules and regulations applicable to all levels of governments.

In Nepal's case, the latter approach seems to have been followed. The PPPI act contains rules and regulations applicable to all levels of government. Although sub-national governments can formulate their own legislation, they cannot make any legislation in contravention of the federal legislation.

Till date only Bagmati state and State 1 has formulated standalone legislation for Public Private Partnership, the legislation entitled Public Private Partnership and Cooperation act (State of Bagmati) and Public Private cooperative Partnership and Investment Authority act (State 1) is based on the federal legislation with adjustments made in relation to institutions responsible for overlooking PPP arrangements in the sub national context.

Interestingly, the legislation of State of Bagmati has been able to cover some flaws of the federal legislation. For instance, it specifically points out criteria based on which the committee responsible for approval of projects will assess the project. Moreover, the formation of committee is made in order to address the cross sectoral approach that a PPP assessment requires. Furthermore, unlike in the Federal context where the inclusion of all projects in the project bank and approval from NPC as a prerequisite for budget is provided in Financial Procedure and Fiscal Accountability act 2019, the state legislation of Bagmati has incorporated many other applicable provisions of related legislation in the PPP legislation itself thereby making it easier for the private sector to fully understand the PPP process.

While, the Bagmati state's legislation also talks about the establishment of Special Purpose Vehicle as an instrument to implement the PPP project, setting out the composition of Board of directors and the company itself is a flaw that is present in the legislation. Such composition should be revisited on a case by case depending on the PPP project and PPP contract. There is still room for improvement in the legislation of State of Bagmati, issues related to renegotiation of contracts, termination of contracts and request for proposal with dialogue need to be revisited.

In case of the legislation pertaining to State 1, much has been left to be covered by the secondary legislation. While it may give some flexibility with regards to changing of rules pertaining to PPP arrangements, nonetheless, it also gives rise to space for opportunistic behavior. More importantly, an exhaustive list of infrastructure to be procured by PPP and model has been provided by the act. Much of the new models for ways for implementing PPP projects as is provided in the federal legislation have been left out. Moreover, the act also draws heavily on the federal legislation more so than the state of Bagmati and thus has the same pitfalls as the federal legislation.

Although many of the sub-national governments are yet to formulate PPP specific legislation, there is room for rectifying many of the errors present in the federal legislation within the confines of the constitutional hierarchy of laws. In addition to this sub national governments can also make use of the recently passed UNCITRAL Model law on Public Private Partnership 2019 and the subsequent legislative guidelines which detail out the specifics of a proper PPP legislation.

UNCITRAL Model Legislation on Public Private Partnership, 2019

The United Nations Commission on International Trade Law has recently passed the Model legislative Provisions on Public Private Partnerships and the Model Legislative guide. The recently passed legislation expands on the previously passed texts: Model Legislative provisions and Model Legislative Guides on Privately Financed Infrastructure Projects, 2000. The model legislation brings together best practices and deals with matters that are important to address in legislations concerning PPPs. Although it does not deal with other important sectoral laws, the Model Legislative Guide on PPPs when read along with the Model Legislation can provide states with ample information to build a proper legislative framework.

Other related legislation

Sectoral legislations also need to be carefully considered when discussing legal arrangements relating to PPP arrangements. Legislations relating to taxation, land acquisition, companies regulation, dispute resolution, become essential parts of PPP legal arrangements. In the past many

experts have stressed on the need to identify the shortcomings of these related laws. While there has been ample progress in modifying related legislature, more needs to be done. For instance, while the recently passed Foreign Investment and Technology Transfer act has been hailed as more investment friendly than its predecessor, it does fail to promote investment (Dahal, 2020)).

Similarly inconsistency in related legislation will often create hurdles for the private sector in seeking to develop a project. A point in case is the conflicting provision of Electricity act 1992 and the PPPI act, while Electricity act states that the approval agency for projects will be the Ministry of electricity, water and Irrigation, the PPPI act states that Investment Board of Nepal will be the approving authority.

An area of contention is the multiple approval mechanism present in numerous related legislations. Almost six months after the PPPIA was passed, Financial Procedure and Fiscal Accountability Act 2019 was enacted. It requires approval of Ministry of Finance in case any public entity is to undertake a project or enter into an agreement with multi year commitment. In addition to this all projects must be first incorporated into the National Project Bank after conducting a proper feasibility analysis. The authority for selection of projects of National Project bank rests with the National Planning commission. Consequently PPP projects must also adhere to these rules. A clear lack of harmonization of laws has thus resulted in multiple agencies exercising similar functions i.e. Investment Board of Nepal (Approval of List of Projects), Ministry of Finance (Approval of project), and National Planning Commission (Approval of Feasibility assessment). If changes in relation to procedure are to be made through related legislation, the purpose of having standalone legislation becomes moot.

On the sub-national context, the need for harmonization of laws need not be stressed. Unlike the central government, state governments in Nepal are yet to formulate laws addressing specific sectors. Works are underway to draft and enact legislation and in doing so, focus must be given to laws that promote private sector. Essentially, the state governments have room to study the flaws present in federal legislations

and make amends when they enact their own legislation in relation to industry regulation, companies' regulation, public private partnership and other related legislations that fall under their jurisdiction.

While, in the past laws have been amended at the federal level to ease the process of investment approval, weak implementation has largely hindered the investment climate of Nepal. A case in point is the One Stop Service center which was to function as a single stop for all required approvals. Till date, it hasn't been fully operational and has failed to ease investment approval as was first envisioned.

3.6 Institutional Arrangements: National and Sub-National

Although in a PPP arrangement the private party designs, builds, operates and transfers infrastructure services as contracted by the public entity, governments nonetheless bear the responsibility of ensuring that such services are of the expected quality and quantity in a manner that reflects value for money (ADB, EBRD, IDB, IsDB, and WBG., 2016). This entails building institutions that ensure proper selection of bidders, selection of projects that are financially viable and proper implementation of the projects. To this end the necessity of robust institutions for

Identifying Common practices in Countries with successful PPPP programs

India, South Korea, Philippines, South Africa and UK all have successful PPP programs. Their institutions also show a common theme throughout:

- All countries have a multi-stage approval process for their PPP projects and carefully evaluate the contingent support; economic viability and value for money are the major criteria base on which projects are selected by the MoF.
- Public Finance Support Mechanisms such as PPP grants are available
- PPP units do not select PPP programs; they are dependent upon contracting authorities to identify programs. PPP units serve as guiding bodies to the contracting authorities
- PPP units are publically owned and funded and do not take on the risk of Procuring authorities

coordinating and managing the government's resources in order to attain the best out of PPP arrangements is paramount.

Nepalese law on PPP makes arrangements for institutions, all of which have well defined roles to foster a conducive environment and efficiently implement a PPP project. While the success/failures of these institutions in relation to properly managing and implementing PPP projects cannot be ascertained at this moment because of their very recent existence, a comparison with best practices from around the world can nonetheless be conducted.

At the very core of the decision to engage in a PPP project lies the pre-feasibility assessment. This will as noted earlier include detailed study, comparison with other models of procurements and an assessment as to whether it offers value for money. The responsibility of doing so rests with the public entity engaging in such a project, however no compulsion to this regard is provided by the act. PPPIA simply states that each public entity must prepare a list of projects to be procured through PPP and mention whether a pre-feasibility assessment of such projects has been done or not. Public entities in Nepal lack the capacity to carry out pre-feasibility assessment of infrastructure to be procured through traditional models (Maharjan, 2020). PPP project assessments are much more complex compared to assessment of projects under the traditional model; therefore the lack of capacity poses a serious threat to the institutional mechanism responsible for procurement.

As such, the PPP unit that the act envisages can play a crucial role in conducting pre feasibility analysis in the days to come. The function of the PPP unit as set out in the act is to help ease the process of conducting feasibility assessment and help build a better environment for PPPs, therefore, such institutions can help in

PPP units

In many jurisdictions a centralized entity to assist in PPP proceedings is established. The entity commonly referred to as a PPP unit is often housed in a key ministry more specifically the ministry responsible for the finances of the government. Typically PPP units have the following functions:

building capacity for carrying out such assessment. An interesting fact to note here is the overlapping functions of the institutions present in Nepal as discussed earlier. The recently formulated National Project Bank Guidelines 2020 makes it mandatory for detailed assessment for proposed projects by concerned public entities. The guidelines are also applicable to PPP projects with budgetary implication for the government, it thus creates an overlap of institutional function as, PPP unit is also mandated to asses any pre-feasibility assessment carried out and list out the guideline for doing so, while National Planning commission under its formation order and recently enacted Financial Procedure and Fiscal Accountability Act (FPFAA) and the National Project Bank guideline, 2020 carries out a similar function.

- Working on policies and legislation for a conducive environment
- Carrying out detailed study of a project
- Assessing projects selected by the implementing agency
- Promoting PPP at both national and sub-national level.

PPIA also provides for the establishment of PPP unit with the aforementioned function. The unit is located within the confines of Investment board of Nepal

Furthermore, the PPP unit is located within the confines of the Investment Board of Nepal and functions under the Office of the Investment Board. Much of the appraisal and feasibility analysis to be done by the unit concerns itself with budgetary implications and the analysis as to whether the project offers value for money. The Investment Board as is its mandate primarily focuses on approval and promotion of investment and has very little dealings in the fiscal arena of the country. Therefore, concerns regarding the capacity of PPP unit under the Investment Board of Nepal to carry out feasibility assessment and to assess the fiscal implications of project naturally arise.

Meanwhile, the Ministry of Finance also serves as a key institution in the PPP arrangement. Until recently the practice of approving projects that would require budgetary commitments such as PPPs was not prescribed via legislation, it was simply a matter of practice. With the

enactment of Financial Procedure and Fiscal Accountability act, 2019 any contractual arrangement that results in fiscal liability must be recorded and no public entity can commit to any project which creates fiscal liability for several years without the permission of the Ministry of Finance. Naturally PPP projects that are based on sharing of source of fund or payments based on performance by the government (Hybrid PPP) will require the approval of the Ministry of Finance.

The project implementation agency is usually the concerned ministry under whose jurisdiction the project falls. This practice is followed in order to ensure that the implementation agency has the necessary experience and capacity. The prevailing act specifies that the relevant ministries will be the project implementation agencies save for electricity projects with a capacity of more than 200MW and projects above 6 billion in which case the Investment Board acts as the Project implementation agency even in the sub-national context. As such it becomes necessary to ascertain whether IBN has all the necessary expertise as line ministries to implement large scale projects. Furthermore, the institutional mechanism as such goes against the principles of subsidiarity and devolution of power and completely negates the recent shift to a federal structure of government. In addition it also undermines the power of sub-national line ministries and even central line ministries.

Ex-officio members in the investment board which acts as the approval agency for projects worth more than six billion and approval of list of projects prepared by the contracting authority can lead to a political agenda motivating the selection of projects especially since PPP projects are known for off-balance sheet spending fueled by political spending (Engel, Fischer, & Galetovic, 2020). On the other hand, having ex-officio

UK Reforms to Improve Transparency in relation to Privately Financed Infrastructure Projects

To ensure transparent proceedings the following measures are taken

- Monitor and disclose all commitments arising from off-balance sheet PPP contracts;
- Require the private sector to provide equity return information for publication;

members also serves as a sign of political commitment. Almost all countries where PPPs have been successfully implemented the projects were strongly backed by president or the Prime Minster. Colombia, India, UK, Philippines, Australia, Canada, all have inter-ministerial committees responsible for PPP projects (Delmon, 2015). The composition of Investment Board Nepal is also cross-sectoral and follows in the footsteps of international practice; therefore the extent of political factor motivating the decision of the board will be dependent on how transparent proceedings are and how well the principle of transparency as stressed in PPP policy 2015 is adhered to.

- Introduce a business case approval tracker on the Treasury website; and
- Improve the information provisions within the standard contractual guidance.

Source: Delemon, 2015

On the sub-national font, the state of Bagmati has made provisions for the arrangement under the act calls for a PPP committee which comprises cross sectoral officials, having the responsibility to conduct feasibility analysis based upon detailed criteria which is specified in the act itself.

More essentially, the state of Bagmati has been able to create a mechanism that can bring in more expertise given its composition. In addition to this the Committee can also form sub-committees for technical assessment and bid evaluation. Additionally as is the practice with the national government, the state of Bagmati has also created a project bank and PPP projects must also be incorporated in the project bank. Interestingly however, the state of Bagmati has made arrangements easier for PPP arrangements by requiring the PPP committee to evaluate the proposals, moreover the committee itself contains members from the Provincial Planning Commission and Ministry of Economic Affairs and Planning which makes it easier to evaluate the budgetary effects.

With regards to the institutional mechanism present in State 1, a detailed analysis cannot be provided at the moment, primarily because much is to be covered by the secondary legislation to be enacted in the future. This includes the jurisdiction of Project Implementation agencies, the composition of evaluation committee and the function, the areas of

Private Investment and Cooperative sector Investment, the detailed working procedure of Public Private co-operative Partnership and Investment Authority and work of one stop service center envisioned in the act,.

To this regard other states that have not yet formulated any legislation and institutional arrangement for future PPP arrangements are presented with a unique opportunity to learn from the shortcomings of the national framework while also looking at good practices for sub-national frameworks. Review of literature in relation to sub-national institutions suggests that PPP units at sub-national levels that cut across several sectors can bring in expertise and assist in smoother implementation of projects. Equally important in the sub-national context is the existence of mechanisms for intergovernmental coordination, especially since many national authorities exercise the role of approval agencies even for sub-national arrangements . Moreover, states can also establish their own investment board to identify potential areas for investments and work as approval agencies by housing cross-sectoral committees, this recommendation follows from the successful practice of Gujrat in implementation of PPP projects and the institutions that are present therein.

The Success of PPP Arrangements in Gujrat

The state of Gujrat boasts a multitude of Infrastructure projects implemented through the PPP model. In fact, Gujrat is among one of the sub-national governments that stands at the forefront of successful PPP implementation. The legislation governing PPPs in Gujrat is the Gujrat Infrastructure Development Act of 1999. The act grants power to the Gujrat Infrastructure Development Board to approve projects to be implemented on a PPP modality after careful evaluation. Commonly referred to as the BOT law, GIDB act provides framework for participation of person in financing, construction, operation and maintenance of infrastructure projects in the State. The Gujrat Infrastructure Development Board as mandated by the act plays a central role in project structuring, approval, long term planning and providing Viability Gap funding. The success of Gujrat in PPP arrangements is the carrying out of two important functions by a single entity. GIDB is responsible for both long term planning and approval of PPP projects therefore, projects that help achieve the long term vision of the government are selected. The nature of the board is also cross sectoral and allows for a proper assessment through specialized committees that can be formed.

Source: Shrestha and KC, 2020

3.7 Public Financial Commitments

PPP projects are long term contracts that typically have fiscal implications. These implications come in the form of either direct liabilities or contingent liabilities (see box below). It thus makes it necessary to assess any commitment made by the government in terms of the liability to be borne in the future. Managing fiscal implications also becomes necessary from the perspective of public expenditure. As Kharas and Mishra (2001), pointed out in the absence of clear rules relating to managing fiscal implications, PPPs can be used to bypass budgetary constraints or borrowing limits and create hidden deficits for governments. Moreover, when proper scrutiny is not paid to fiscal implications, governments may witness exposure to risks that can jeopardize the fiscal sustainability (International Bank for Reconstruction and development, 2017).

Fiscal Commitments in PPPs

Fiscal Commitments in PPP arrangements can be either payments to be made to the private party, a means to share the risk or a combination of two. They are generally categorized into two

Direct liabilities (Payments that are not dependent upon the occurrence of an uncertain future event).	Contingent Liabilities
Viability gap" payments: payments to the private sector when the expected future revenue is not sufficient to make the project economically viable.	Guarantees or risk variable: agreement to compensate the private party for loss in revenue
Availability payments: regular payment made to the private party conditioned on the availability of the service.	Compensation clauses: payments to be made under the agreement for certain specified losses
Shadow tolls, or output-based payments: a payment or subsidy per unit or user of a service—for example, per kilometer driven on a toll road.	Termination payments: payments to be made in case the public entity terminates the PPP contract
	Litigation: potential litigation expenses
	Debt guarantees: repayment of all or part of the debt based on the commitment made.

Source: PPP Reference guide, 2017

Therefore an essential part of the PPP framework is dealing with public financial commitments that arise in a PPP project. Delemon (2015), opined that the general tendency is to assume that no financial support from the government is needed and to only contemplate such support when negotiations with the private party fails, what follows naturally is that the bargaining power of the contracting agency is weakened due to a failure to assume that any fiscal commitment might arise before awarding the contract. The suggestion for Delemon that follows thus is advising governments to consider Government support as a package—funded and contingent—to ensure that maximum leverage and optimal exposure (fiscal risk) is achieved.

The Ministry of Finance has a crucial role to play in all of this. By having the finance ministry assesses the fiscal implications of the projects; governments demonstrate commitment to project development and reduce uncertainty for the private sector as well as limit unseen budgetary effects (International Bank for Reconstruction and development, 2017). There is thus a need to develop strong capacity within the ministry of finance to conduct necessary analysis of the fiscal implications during the pre-assessment phase of the project. This is precisely the reason why PPP units in countries with a history of successful PPP programs are located within the confines of the Finance ministry.

Fiscal Commitments and Contingent Liabilities Framework: Kenya

Kenya was one of the first among the Middle income countries to compulsorily require a PPP project to undergo a Fiscal Commitments and Contingent Liabilities assessment before it could be green lit for implementation. The compulsion is provided in the PPP act of Kenya. A well formed framework is designed which studies the effect of the project in the country balance sheet. A project only moves forward if there is a positive effect or if there are no negative effects. The assessment is carried out by the Public debt management office in collaboration of PPP cell housed in the National Treasury Office of Kenya.

Although the Financial procedure and Fiscal Accountability Act, 2019 states that any long term commitment by a public entity must first be

approved by the finance ministry, it is as close as the act comes in the form of requiring a proper fiscal assessment of contingent liabilities of the project. Moreover, the National planning commission in coordination with the Ministry of Finance does conduct an appraisal of projects for allocation of budgets based on well defined criteria that include the commitments on part of the government. However the National Project Bank Guideline based in which the appraisal is conducted is silent in relation to any contingent liabilities that may arise in the future and assessments to that regard.

Currently a framework of Fiscal commitments and Contingent Liabilities is needed in Nepal (Shukla & Srivastava, 2019). Countries in the past have amended their legislation to incorporate provisions that require mandatory fiscal commitment and contingent liabilities assessment before approving a project. While there are certain safeguards at place in Nepal, a proper and well defined approach is still needed. This includes including a provision in the PPPI act that calls for a Fiscal Commitments and Contingent Liabilities assessment before any proposal for a project submitted to the approving agency is approved.

Given that most Sub-national governments in Nepal are yet to take any action in relation to a proper PPP framework, the analysis made above can prove to be crucial in the days to come. In the case of the state of Bagmati, the PPP committee itself is a cross-sectoral committee and is therefore able to conduct such assessment. While the act does not state anything about conducting a Fiscal Commitment and Contingent Liabilities assessment (FCCL), the inclusion of all projects in the provincial project bank and assessment by the Provincial planning commission and Ministry of Economic Affairs and Planning acts as a form of safeguard albeit an incomplete one and guidelines for FCCL analysis must be made.

4. Conclusion and Recommendations

It is evident that vast amount of investment is needed in order to achieve SDGs by 2030 and also to attain other goals set out in the fifteenth periodic plan. Our observation led us to believe that alternative models of financing must be sought in order to bridge the investment gap. Chief among the methods considered by us and also by government agencies in Nepal is Public Private Partnerships. While PPPs may be thought of as methods to release the budgetary constraint that many governments face, study of the existing literature clearly points otherwise. More essential is the fact that in terms of budgetary effect, there is little difference between the traditional model of procurement and PPP. With that being said, we also find that in case of Sub-national Governments this might not be entirely true especially in case of Nepal. Factors such as the inability of state governments to mobilize public debt without the approval of federal government, limited source of revenue and fiscal transfers forming a massive chunk of revenue for sub-national governments lead us to conclude that sub-national governments may face budgetary constraints which can to a certain extent be eased by the use of PPP.

Moreover, it is also evident from the analysis that frameworks governing PPPs serve as tools to ensure that the use of PPPs is done for the right reasons and that proper institutional mechanisms are in place for proper implementation of projects. We find that PPP frameworks must evolve overtime and that it alone does not guarantee the success of PPP projects, other factors pertaining to macroeconomic stability, political stability, demand projects are also equally important.

Based on our analysis we recommend the following:

- State governments have been given the responsibility to develop state level infrastructure but are bound by severe resource constraint. They can definitely resort to borrowing, however, with limited revenue source and tax base, their servicing capacity is questionable. They might incur large debt weakening the fiscal

health of the country. Therefore, PPP can be a right model for state governments for infrastructure development.

- When demand for project's service can be forecasted and investment can be varied according to the demand, then governments at different level should always remunerate concessionaire from user fees. This way the concessionaire does not have to bear demand risk and the governments do not have to bear additional cost of distributing subsidies.

- In case when demand cannot be forecasted, a minimum revenue guarantee and a maximum revenue cap must be specified. The national and sub-national governments could themselves propose the minimum guaranteed income and maximum revenue cap while calling for bid or can also ask for the minimum guaranteed income and maximum revenue cap as a part of the bid. If the revenue generated from user fees is less than the minimum guaranteed income, then subsidy should be paid out to cover the deficit between realized revenue and the minimum guaranteed income and the contract should last indefinitely i.e. till the time when the project is scrapped.

- In a similar manner, if realized user fees revenue is greater than maximum revenue cap, the contract period should be definite and no subsidies should be paid out. After the contract period ends, governments have to take over the project and the user fees then collected are to be appropriated. Whereas, in case revenue accrued through user fees exceeds minimum revenue guarantee but falls behind maximum revenue cap, governments should not pay out subsidies and protract the contract indefinitely.

- Several issues need to be addressed in the standalone legislation. As explained in the section that examines the PPPIA, issues such as renegotiation, termination, setting out the criteria for approval of investment must be clarified. Similarly, there is ample room to try out other methods of procurement in line with international practices in case of PPP projects. The complex nature of PPP projects often requires an approach different than the one traditionally

followed. Equal importance must also be given to harmonizing existing laws rather than enacting standalone legislation. As noted earlier there are provisions in related legislation that contradict with the PPPIA.

- Sub-national governments while adopting the national legislation can make some important changes that reflect a better and well laid out legislation. Reference can be taken from UNCITRAL model PPP legislation. Likewise, sub-national governments while drafting their own legislation must consider the enactment of other sectoral legislation in order to create a better environment.
- Institutional arrangements must not be duplicated. While Investment Board acts as the approving agency for projects where it acts as the implementing agency (approval of IBN for project list prepared by relevant bodies is required in case IBN is the PIA), such function can be better carried out by National Planning commission. Given that the National Project Bank guideline already requires NPC to approve detailed project report prepared by concerned agencies, it would be redundant to have Investment Board as the approving agency for project list prepared by relevant bodies. Moreover, National Planning Commission (NPC) as the apex body planning can create a form of synergy when it devises long term plans while also assessing the projects to be implemented through PPP model. It can also account for the fiscal implications of the project better than the Investment Board given its role in the formulation of Budget. Therefore, NPC should be given authority to assess all projects to be implemented through the PPP model, while IBN acts as the approval agency for investment to be made by the Private party and approves any concession agreement to be made. Additionally the PPP unit envisioned in the PPPIA can also be housed within the confines of National Planning commission.
- In order to strengthen institutional mechanism and to limit the political influence of ex-officio members in the Investment Board of Nepal, all proceedings must be transparent and fair. This entails the use of electronic medium to publish all relevant documents related to procurement and award of concession while

also giving due regards to the right of confidentiality of either parties. Furthermore, to better manage procurement, standard operating procedures and guidelines along with model concession agreements must be made with due consultation with all relevant ministries especially Ministry of Finance to better account for Fiscal liabilities.

- As has been tirelessly recommended by international lending institutions, the government must frame a Fiscal Commitment and Contingent Liabilities study guideline in order to assess the budgetary implication of all projects before they are approved or before any contract is awarded.

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'Public-Private Partnerships: Relevance in the Federal Context' provides a comprehensive analysis of the required investment in three sectors i.e. Transportation, Energy, and Water and Sanitation in order to achieve an annual growth rate ranging from five percent to ten percent. Furthermore, it assesses the need for Public-Private Partnership (PPP)as an alternative model of infrastructure development in achieving the stated goals. Through a thorough analysis of theories pertaining to PPPs and the current legal practices concerning PPPs in Nepal, the authors provide some key recommendations which have implications for both the federal government and sub-national governments in designing and implementing PPP projects.

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