

SOUTH AND SOUTH-WEST ASIA SUBREGIONAL STUDY

Infrastructure Financing Strategies for Sustainable Development



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The shaded areas of the map indicate ESCAP members and associate members.

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Acronyms

AAAA	Addis Ababa Action Agenda
ADB	Asian Development Bank
BOT	Built Operate & Transfer
BDT	Bangladesh Taka
BIFFL	Bangladesh Infrastructure Finance Fund Limited
CCFU	Climate Change Finance Unit
CIA	Central Intelligence Agency
FDI	foreign direct investment
GCF	Global Climate Finance
GDP	gross domestic product
GW	gigawatt
IDF	Infrastructure Development Fund
IDCOL	Infrastructure Development Company Limited
IIED	International Institute for Environment Development
IIFCL	Indi Infrastructure Finance Company Limited
INVITS	Infrastructure Investment Trust
IMF	International Monetary Fund
LDC	least development country
LCRD	Low-carbon resilient development
MDG	Millennium Development Goals
MoF	Ministry of Finance
NRB	Nepal Rastra Bank
NGO	non-government organization
NPC	National Planning Commission
PPP	public-private partnership
PEIF	Private Equity Investment Fund
RBI	Reserve Bank of India
SAR	South Asia Region
SDG	Sustainable Development Goals
TYP	Three Years Plan
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollars

1. Background

The South and South West Asia region continued its upturn from the global economic turmoil. In 2015, the average economic growth rate was 5.6 percent. The steady progress in the sub-region growth, mainly attributed to growth of India, is projected to marginally increase up to 5.9 percent in 2016 and 6.1 percent in 2017. (UNESCAP, 2016). The removal of sanctions on the Islamic Republic of Iran and Nepal's rebuilding from devastating earthquake, supported by Pakistan's new economic avenue such as the China-Pakistan Economic Corridor can contribute to accelerate the growth momentum, but the challenges are to make the region's growth more inclusive, and central to sustainable development as "growth prospects are held back across the sub-region by energy and infrastructure constraints" (UNESCAP, 2016). Achieving the economic development, and sustaining economic growth at a high rate crucially depends on access to good infrastructure. **The Addis Ababa Action Agenda (AAAA)** of the recently concluded Third International Conference on Financing for Development (Addis Ababa, 13-16 July 2015) recognizes infrastructure development as one of the critical factors for economic development, reducing poverty and inequality, and ensuring environmental sustainability, and puts forward it as a core element for attaining Sustainable development goals (United Nations , 2016).

The availability of sustainable and accessible infrastructure is crucial for South and South West Asia region as most part of the sub-region suffers from burgeoning population, urbanization, and infrastructure deficit. Urbanization is growing around 2.5 percent on an average since last decade¹ in the sub-region, where in India alone 10 million people move to towns and cities each year. The drag in infrastructure development is evident from the fact that in "The Global Competitiveness Report"² no South and South West Asian country has made it to the top 50 in infrastructure ranking. Apart from India, which climbed up from 85th to 68th rank, there has been no significant improvement in sub-region countries in the last four years (World Economic Forum , 2016).

Most part of the sub-region still doesn't have full and regular access to basic infrastructures, such as access to water, sanitation (SDG-6) and access to electricity (SDG-7). In the sub-region, except in Turkey, and the isolated islands in Maldives which have their own decentralized generation resulting in 100 percent electrification, the majority of the population remains detached from the safe and adequate water supply, electricity, roads and infrastructure services. For example, in Nepal, even though an estimated 91.6 percent of the total population has access to drinking water, it is not safe (Suwal, 2015)³. The majority of the population spends substantial time fetching water, and relies on mountain streams. The disparity is more pronounced in the availability of road infrastructure, measured by road density, where South and South West Asia average is 831 km per 1000 km², and Afghanistan, Iran, and Nepal stands at 35 km per km², 141km per km² and 139 km per km² respectively (UNESCAP-Statistical Database , 2016). The access to electricity is also not impressive either for some countries, where, Afghanistan and Bangladesh suffer from lowest access to

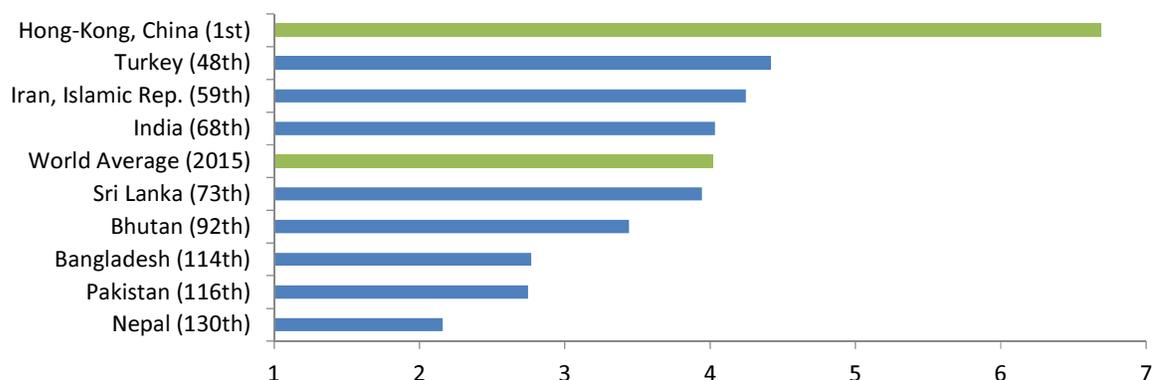
¹ <http://www.unescap.org/stat/data/statdb/DataExplorer.aspx> (South and South West Asia).

² In the Global competitiveness report (2016-2017) the competitive indicators are grouped into 12 pillars: Institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. In line with the theory of stages of development, the GCI report states that pillars affect different economies in different stages of development in different ways. The GCI report enlists most of the countries in South and South West Asia except Turkey in the stage one (factor-driven economies), and highlights that maintaining competitiveness hinges primarily on a well-developed infrastructure (2nd pillar) for countries in the initial stage. The second pillar, infrastructure, consist of transport infrastructure, and electricity and telephony infrastructure.

³ <https://thewaterproject.org/water-crisis/water-in-crisis-nepal>.

electricity in the region, standing at 43 and 60 percent respectively (UNESCAP-Statistical Database , 2016).

Figure 1. Infrastructure Index in selected countries in South and South West Asia



Source: Global Competitiveness Report (2016-2017) accessed from CEIC Database – The number in parenthesis is the global ranking of each country in terms of infrastructure.

Nevertheless, government in the region, in order to ensure 100 percent access to basic infrastructure services like electricity, have introduced varied approaches ranging from standalone government initiatives to integrating public private models of electrification. Governments have also approached partnership with civil society organization and rural NGO, for example, Palli Bidyut Samities in Bangladesh, and community user groups in India and Sri Lanka. The government of Bangladesh envisaged power in Perspective Plan (2010-2021) which has a vision to deliver “Power for All” by 2021. Similarly, Afghanistan, aspires to provide access to electricity to 83 percent of the population by 2032, as mentioned in Power Sector Master Plan, but requires over \$10 billion investment (Mercados Energy Markets India Pvt Ltd, 2013).

Table 1. Access to electricity, and Improved water source

Country	Access to electricity	Access to an Improved water source
Afghanistan	43	55.3
Bhutan	75	100
Pakistan	93	91.4
India	78.7	94.1
Iran	100	96.2
Maldives	100	98.6
Nepal	76	91.6
Turkey	100	100
Sri Lanka	88.6	95.6
Bangladesh	59.6	87

Source: World Development Indicators.

However, the growing urbanization, the population and climate change could stretch the demand and cost of infrastructure services and imperil growth aspirations of the countries like Nepal, Bangladesh, Sri Lanka, Pakistan and India. It is also discussed that if benefits are to be sized in real terms, gaining access is not enough; the quality and sustainability of services need to improve with substantial and efficient investment (Andres, et al., 2014).

A study reveals that to meet the increasing infrastructure demand Bangladesh, India, Nepal, Sri Lanka, Pakistan and Afghanistan in total “needs to invest between USD 1.7 trillion and USD 2.5 trillion (in current prices)” (Andres, et al., 2014), whereas, according to Turkey infrastructure finance program launched in 2014 the country needs to invest USD 700 billion by 2023 (Emek, 2015). Additionally, UNESCAP estimated that in transport sector alone the cost of investment projects exceeded USD 100 billion per year for South and South West Asia (UNESCAP, 2013). This is mainly attributed to large demand for investment in the transport sector in terms of infrastructure and services, as well as for maintenance.

Table 2. Infrastructure investment requirements 2011–2020 (in 2010 US\$ billions)

Country	Estimated infrastructure investment requirements 2011–2020 USD Billions (Lower-Higher)	Investment requirements 2011–2020, % of GDP, per year	Investment Per capita (USD)- Approximately
Bangladesh	74-100	7.4-10.2	638
Bhutan	0.9	-	1291
India	1133-1726	6.6-10	1378
Nepal	13-18	8.2-11.8	647
Sri Lanka	21-36	4.2-7.2	1757
Pakistan	116-165	6.6-9.9	906
Total	1357 – 2045	-	-

Source: (Andres, et al., 2014), *Bhutan’s estimate is from* (Bhattacharya, 2010).

The infrastructure investment is imperative not only to improve the quality of life but also to avoid any binding constraint ensued from the infrastructure deficit affecting the economic growth. The required investment is huge, and challenging, given the macroeconomic situation in the sub-region and the size of funding requirement. Moreover, with recent change of global economic situation, the trends of long term official foreign financing from bilateral and multilateral sources have been declining in recent years. In this context, while each country has been practicing policies, programme and interventions to increase the infrastructure investment and close the infrastructure gap, this report aims at bringing out the commonalities and differences among these countries, and highlights the best practices and feasible policy options/interventions emerging from the South and South West Asia region.

2. Methodology

This research is based on periodic plans, National reports, SDG reports, and updated data from Central Banks and Ministry of Finance of the respective countries in South and South West Asia. Data from the international organization, publications, multi-year development plans, and reports from ministries were also referred in order to contextualize a complete picture.

Further, financial Acts and Policies, relevant reports and studies from the research institution, development partners including ADB, World Bank, and UN agencies are reviewed wherever relevant.

The report studies South and South West Asia, which refers collectively to Afghanistan, Bangladesh, Bhutan, India, the Islamic Republic of Iran, Maldives, Nepal, Pakistan, Sri Lanka and Turkey.

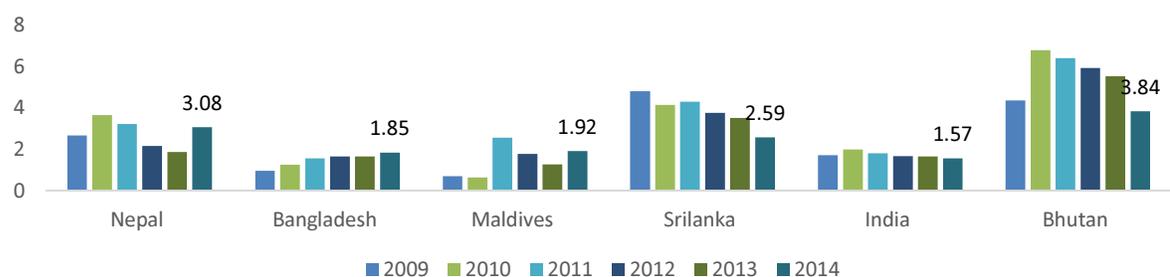
3. Availability/ sources of funds for infrastructure development

Infrastructure services are mostly driven by fiscal spending by governments and government agencies in South and South West Asia. Despite varying degrees of progress in mobilizing domestic public resources, available financial resources are limited as government has to prioritize in many other sectors apart from physical infrastructure. This section examines the available public and private sources that could provide support to the efforts of the infrastructure development in the region. It will reflect on trends and practices of domestic resource mobilization in these countries to meet growing and emerging requirements for infrastructure services, and also reflect on how public and private institutions are working to finance the infrastructure needs.

3.1 Public infrastructure expenditure

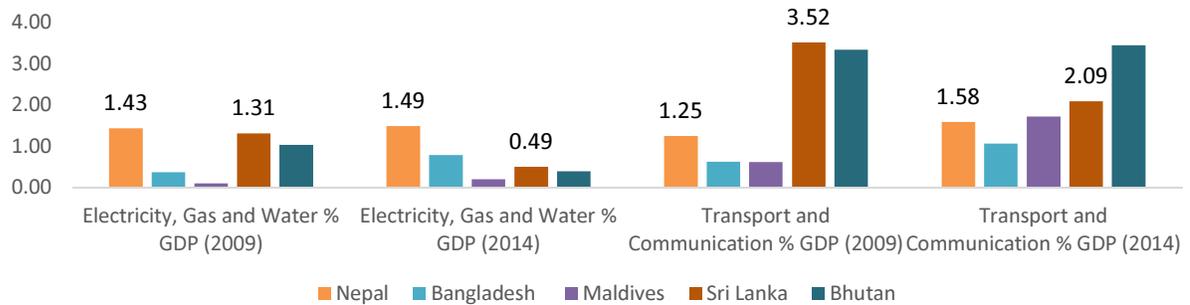
The countries in South and South West Asia have been prioritizing their budget in the development of the infrastructure and its related institutions. In terms of capital expenditure to GDP, Bhutan spent the highest, which stands at 3.84 percent in 2014, followed by the capital expenditure of Nepal and Sri Lanka which are 3.08 percent and 2.59 percent of GDP respectively. The analysis shows that expenditure in transportation and communication has been the main driver of infrastructure public spending in selected countries (Bangladesh, Bhutan, Sri Lanka, and Maldives) in South Asia. Bhutan spent close to 3.5 percent of GDP, which is 90 percent of its capital expenditure in Economic Affairs, and Sri Lanka spent 2.09 percent in transport and communication, in 2014. In 2014, Bangladesh allocated substantial budget to the Transportation sector (which includes the Bridges Division), as “Padma Bridget project” gained the primary focus of the government. “In 2014, the transportation sector accounted for almost one-fourth of the entire Annual Development Plan (ADP), which is regarded as highest allocation for a single sector in Bangladesh’s fiscal sector” (Mansur, 2015). Whereas Maldives capital expenditure scaled up as the government mobilized the funds into harbor expansion and energy projects. The public investment has remained more dominant in energy sector compared to transport and communication, in Turkey, the contiguous neighbor in South West Asia (The World Bank , 2014).

Figure 2. Capital Expenditure in Power, Connectivity and Water (% of GDP)



Source: (Asian Development Bank , 2016), For Nepal * (Ministry of Finance , 2016), Author’s calculation. Data of Afghanistan, Turkey, Islamic Republic of Iran and Pakistan classified as government expenditure for economic activities were not available.

Figure 3. Capital Expenditure by function- Economic Affairs (% of GDP) - 2014

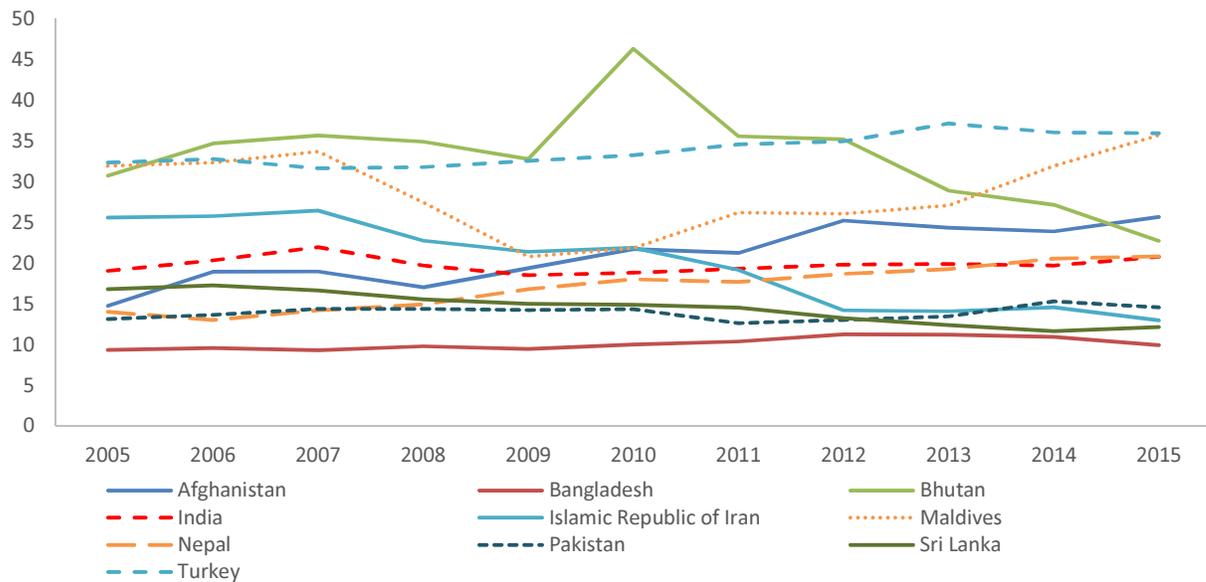


Source: (Asian Development Bank , 2016) and author’s calculation.

3.2 Revenue, fiscal balance, and debt

The total public revenue collection of South and South West Asia averages about 20 percent of GDP. The composition of the total revenue is heavily dominated by tax revenues in all the countries except Bhutan and Maldives which have around 50 percent contribution of non-tax revenues (NTR) (The World Bank, 2012). From 2005 to 2015, the general government revenue to GDP has averaged around 10 percent in Bangladesh; 17 percent in Nepal; 21 percent in Afghanistan; 33 percent in Bhutan; 19.8 percent in India and the Islamic Republic of Iran; 28.6 percent in Maldives; 14 percent in Pakistan; and 14.5 percent in Sri Lanka. Turkey has highest revenue collection in the region of nearly 34 percent- which at one point, was as high as 37 percent, in 2013 (Figure 4). The revenue to GDP of Bangladesh, Sri Lanka, and Pakistan has more or less remained stagnant since a decade. Revenue in Bhutan fueled mostly by the hydropower sector, which is also the key source of public investment, has been increasing. Bhutan’s average revenue of the past ten years was 33 percent of GDP, well above the regional average.

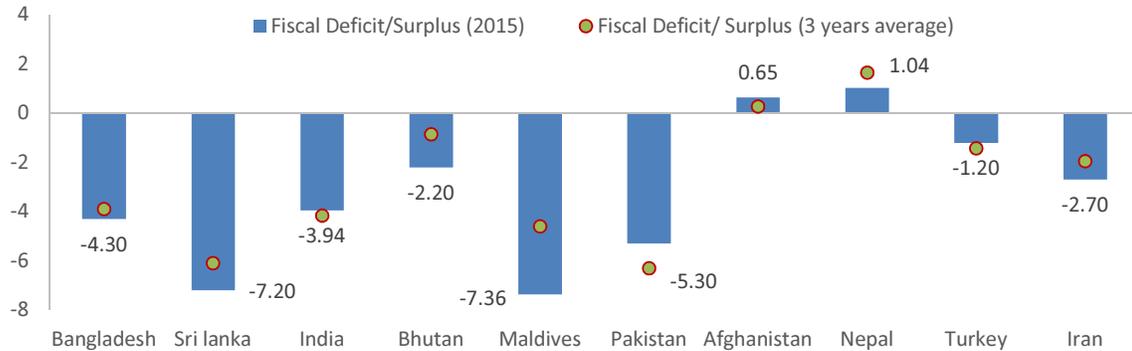
Figure 4. General government revenue (percentage of GDP)



Source: World Economic Survey (2016).

Another feature of the fiscal landscape of the countries in South and South West Asia is high deficit-to-GDP ratio and the resultant high debt-to-GDP ratio. The countries that faced the high fiscal deficit in the region in 2015 were Maldives, followed by Sri Lanka, Pakistan, Bangladesh, and India.

Figure 5. Fiscal deficit in South and South West Asian countries (percentage of GDP)



Sources: Afghanistan: Source World Bank, Afghanistan Economic Update; International Monetary Fund Country Report No. 15/34, November 2015, Bangladesh: Asian Development Bank Outlook database, Bhutan: National Budget Financial Year 2015-2016, Ministry of Finance www.mof.gov.bt, India: Ministry of Finance Union Budget 2016-2017. www.indiabudget.nic.in, Maldives: Maldives Monetary Authority. 2016. Monthly Statistics. www.mma.gov.mv, Nepal: Budget Speeches 2012-2015. Pakistan Economic Survey 2015-2016, Sri Lanka: Central Bank of Sri Lanka, www.cbsl.gov.lk, Ministry of Finance and Planning and The Treasury of Sri Lanka, www.treasury.gov.lk, Turkey: Ministry of Finance, Republic of Turkey; ADB (2016)⁴, World Bank (2016)⁵.

Maldives ballooning fiscal deficit, financed through the issuance of bonds and treasury bills, which stands at -7.36 percent of GDP in 2015, was due to increase in capital expenditure. The reason behind the increase in the capital expenditure is scaling up of public investment, as the government of Maldives mobilized the funds into harbor expansion, energy projects, and housing construction. Pakistan's budget deficit, covered by heavy borrowing from the commercial banks, stands at -5.30 percent of GDP in 2015. India took the advantage of the sharp decline in global oil and commodity prices, which allowed it to eliminate petrol and diesel subsidies, and increase excise taxes. Resources from lower subsidies and higher taxes have been utilized in lowering deficits, from 4.09 percent in 2014 to 3.94 percent in 2015. Turkey, on the other hand, maintained its fiscal balance at -1.2 percent of GDP in 2015, which brings its three years' average deficit at -1.43 percent of GDP, the resulting fiscal space for Turkey provides some room for public investment (The World Bank, 2014). Iran's fiscal deficit deteriorated to 2.7 percent in 2015, as low oil prices put pressure on country's finance. Revealing one of the lowest fiscal deficit in the sub-region, second to 0.65 percent in Afghanistan, Nepal unable to exhaust its capital expenditure, in 2015, due to the earthquake, and blockade at the southern part stands at a modest fiscal surplus of 1.04 percent. In the real sense, the lower fiscal deficit ensued from the lower expenditure, in Nepal, is mainly a reflection of the excessive political meddling in development projects and inability to spend the capital budget on time.

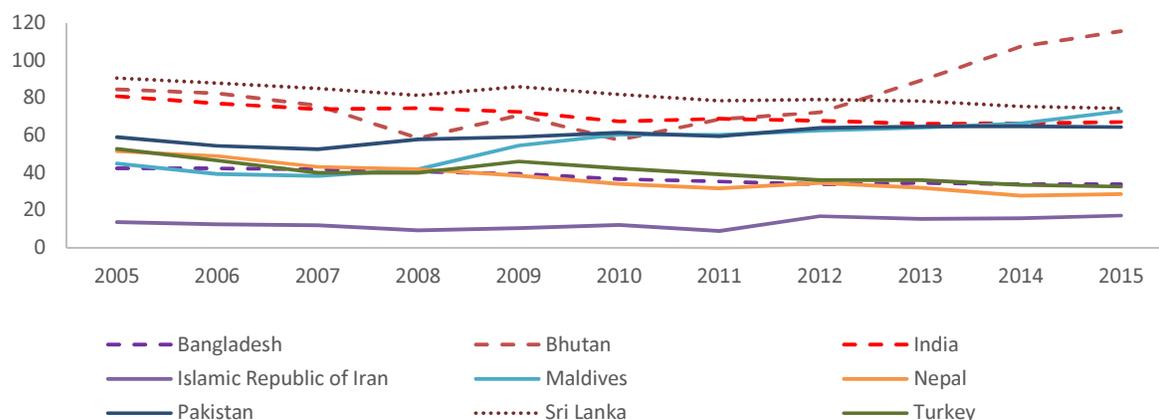
The International Monetary Fund (IMF)–World Bank debt sustainability analyses (DSAs) show the countries facing a huge fiscal deficit (Sri Lanka, India, and Pakistan) cannot fund spending through significant additional borrowing because of the resulting increase in their central debt-to-GDP ratios. In 2014, Sri Lanka, Bhutan, Pakistan, and India stood on escalating general government gross debt, which averaged more than 80 percent of GDP (International Monetary Fund, 2016). IMF-World Bank

⁴ <https://www.adb.org/sites/default/files/publication/182221/ado2016.pdf>.

⁵ <http://www.worldbank.org/en/country/iran/overview>.

analysis shows that for the next six to seven years, three countries- Sri Lanka India and Pakistan, currently with large debts will need to reduce their primary deficits significantly (The World Bank, 2012). Whereas, Bangladesh and Nepal still have sufficient cushion to withstand slightly larger primary deficits to keep their debt-to-GDP ratios at the relatively low levels (44 percent and 33 percent, respectively) (The World Bank, 2012). In the region, Bhutan with the highest level of government debt is likely to be sustainable because of its rising energy demand of India and committed support from the development partners.

Figure 6. General government gross debt (percentage of GDP)



Sources: World Economic Survey (2016).

The expenditure needs for building physical infrastructure, and inclusive development are enormous in South and South West Asia, but “the combination of low revenue, highly limited borrowing capacity, and stresses on donor grants” has left inadequate room for development spending. The stretching expenditure needs for infrastructure provides a strong rationale to establish a solid public finance strategy and framework, and rationalizing public expenditure to effectively allocate the financial resources and reduce the burgeoning fiscal deficit.

Lesson from Turkey's development experience- Improving Public Finance and investment

Table 3. Lesson learn from Turkey's development experience

Turkey's achievement	Lessons learned from Turkey's development experience	Challenges to reaching high-income status
Comprehensive structural reforms in the public sector have supported a sharp and continuing decline in Turkey's public debt to GDP ratio and created fiscal space for improved public services	Conservative budget policies and commitments to primary surpluses were combined with a wholesale reform of public financial management to escape from the fiscal politics of patronage and create a rule-based system for spending allocations, as well as expanding the revenue base	Continued fiscal prudence would support for Turkey's transition to high-income. Reforms on both the revenue and expenditure side of the budget remain incomplete, with highly cyclical revenue base, growing social entitlements, and pockets of spending (particularly in infrastructure) outside the scope of rule-based fiscal governance representing the main challenges.

Source: World Bank (2014).

The World Bank 2014 report on “Turkey’s Transition” highlights that the country went through wholesale reform of public financial management, which enabled it to escape from the fiscal politics of patronage and create a rule-based system for spending allocation for public investment, as well as expanding revenue base. Strategic Framework for Public Expenditure (2001) was at the heart of refined approach to fiscal policy and public finance management. It had three pillar macro-fiscal discipline, strategic allocation of resources and operational efficiency. (The World Bank , 2014). Annex I highlights the reforms introduced after 2000 in each of the three pillars.

3.3 Tax revenue and savings

The countries in the region except Turkey, India, and Nepal have a tax-GDP ratio of about 10 to 12 percent of GDP, on an average. The shift in the structure of taxation towards indirect taxes (in particular an increase in excise duties on fuel, alcohol, and tobacco, as well as some luxury import good items) boosted tax revenues of Turkey by on an average 2.4 percent from 2002 onwards. India’s strong performance is attributed largely to its high economic growth but also to improvements in tax administration (The World Bank, 2012). However, India, compared to rest of the countries in the sub-region, although has a higher tax to GDP ratio, 16.6 percent, is much below the levels seen in countries with the comparable level of development. Nepal’s improvement is mainly because of improved administration, for instance, through establishing a large taxpayer unit and improving tax audits (The World Bank, 2012). But, for Nepal, reliance on import tax finance by the large influx of remittance is not sustainable.

There were a couple of good attempts to increase the tax envelope, for instance, uniform corporate income tax rate, 35 percent, applied by Pakistan in 2006, and, Sri Lanka's initiation to bring civil servants into the tax net. The efforts had some positive improvement, however, they did not generate a sustained improvement in both the countries (The World Bank, 2012).

Table 4. Tax to GDP (In percentage)

Countries	FY11	FY 12	FY13	FY14	Average Tax Revenue
Bangladesh	10.1	10.4	11.0	10.5	10.2
India	16.3	16.3	17.2	17.9	16.6
Nepal	13.0	13.9	15.3	16.3	14.4
Pakistan	9.3	10.2	9.8	14.0	10.6
Sri Lanka	12.9	12.0	11.6	13.0	12.4
Turkey	20.1	20.3	21.39	21.1	20.7
Iran	5.72	5.53	5.25	-	-

Source: (The World Bank , 2016), (Khadka, 2015), and UNESCAP (2016) - statistical database.

The low level of tax to GDP is problematic in the light of the huge infrastructure investment requirements in the region. There are several reasons why tax-to-GDP ratios are low in the region. First, personal income taxes schemes are not fully collected. This is because a large proportion of the labor force is employed in the informal sector or in agriculture, which the countries are not able to bring into income tax system. Apart from that, the multinational companies which are registered in the tax system, pay very little tax by creating subsidiaries located in tax havens, reducing the profits through transfer pricing and royalty payments (The World Bank, 2012). Additionally, there are weaknesses in tax administrations in these countries, which act as a barrier to effective and fair tax collection. For instance, the 2010 Public Expenditure and Financial Accountability (PEFA) assessment of Bangladesh and India report that the arrears from tax collection stood at around 9 per cent of the

collections.⁶ In South Asian countries, wealthier individuals avoid or evade tax payment. For instance; "in India, only 3 percent of the population pays the personal income tax, with the figure even lower at about 1 percent in Bangladesh, Nepal, and Pakistan" (Gupta, 2015). Second, the pursuit of several objectives through tax policy besides generating revenues through various tax exemptions, concessions and deductions have not only rendered the tax bases narrow but also has distorted resource allocations. The erosion, in particular, is visible in South Asia, where the practice of tax exemption (whole or partial) for certain sectors or individuals or corporates, have affected the tax base. In South Asia, tax incentive, also known as tax expenditure⁷, is higher than international averages (The World Bank, 2012). In 2005, the tax expenditure in Bangladesh was 4.5 percent of GDP, 4.5 percent in India, 0.4 percent in Pakistan, and 5 percent in Turkey (2004) (The World Bank, 2012). The weak efficiency of tax administration and increasing exemptions provides the scope for abuse of the system by taxpayers and relevant stakeholders which reduce the revenue further (The World Bank, 2012). For instance, Sri Lanka's tax base continuously declined overtime, from 1990-2010, because of generous tax incentives, and the weak efficiency of tax administration (The World Bank, 2012).

The low and static tax revenues of South and South West Asia, which stands at 15.08 percent of GDP on an average since 2005 (UNESCAP Statistical Database), have seriously constrained the ability to finance the much-needed physical infrastructure and human development (Khan, 2015). The huge central government debt faced by the countries exerts further constraints on scarce public resources, combined with low and static revenues, means that the region relies heavily on external financing for even the basic requirements, which results in an uncertain and unstable flow of resources thereby constraining the public infrastructure investment efforts.

Overall, the lower tax ratio of South and South West Asia suggests that there is a scope for raising tax revenue gradually to create a sufficient revenue envelope to help fund critical spending on infrastructure. The revenue could be raised through innovative tax policies, broadening the tax base, tax administration reforms that tackle tax evasion and that increases collection efficiency. There are some countries in the region, which are exploring innovative tax policies, and broadening the tax base. For example, in India, "The Central Road Fund" was established in 2000 by imposing the levy on petrol and high-speed diesel oil to mobilize resources for the development and maintenance of nation highways. The country also levies an additional 0.5 percent on all the services that attract a service tax, thereby increasing the effective service tax rate to 14.5 percent.⁸ The proceeds from the tax will be used to finance the sanitation campaign, to meet "the ambitious goal of making India open defecation free in 2019"⁹. Maldives also devised innovative tax system, known as green tourist taxes, where the revenue generated from the tax goes into managing the waste from local resorts and other islands¹⁰.

⁶ Accessed from <https://pefa.org/assessment/bd-dec10-pfmpr-public-en> and <https://pefa.org/assessment/mar10-pfmpr-public-en>.

⁷ Tax incentives are also known as tax expenditures because they are equivalent to expenditures made through the tax system—as if collecting proper taxes and then returning to selected taxpayers a number of prescribed tax incentives as spending (Gupta 2012).

⁸ <http://timesofindia.indiatimes.com/india/Swachh-pinch-Government-levies-0-5-cess-on-service-tax/articleshow/49692173.cms>

⁹ <http://www.ircwash.org/news/tax-raise-realise-india%E2%80%99s-dream>

¹⁰ Green Tax at US\$6 per tourist bed introduced in November 2015, http://www.ttgasia.com/article.php?article_id=26175

3.4 Climate finance

In recent years developing countries have created a more coherent route towards sustainable development in the form of “Low-carbon resilient development (LCRD)” (Rai, et al., 2015). Some, least developed countries, in particular, use wide range of initiatives to integrate the climate change and development agendas. In national scale countries are using diverse sources of finance, instruments and intermediaries available in domestic and international arena to mobilize and distribute funds in order to achieve sustainable development objectives. In this regard the levels of ‘Climate Finance’ is rising fast; for instance, nearly US\$10 billion has been pledged under the Green Climate Fund (GCF)” (Rai, et al., 2015). Incremental investments to decarbonize the Asian energy sector alone are estimated at a net USD 21 trillion or USD 600 billion per annum. Of the current global climate finance that is needed to decarbonize economies in a way consistent with the Paris Agreement 2016, USD 391 billion were invested globally, out of which USD 17 billion went to South Asia in 2014. Despite current climate spending and initiatives, there is a pressing need to scale up climate finance. The following sections discuss initiatives on policy and regulatory environment, bonds financing and available ‘climate fund’ financing for in climate financing, in selected South and South West Asian countries.

Policy and regulatory environment

Governments in South and South West Asia have been developing policy framework for low-carbon, including emissions reduction or energy intensity plans and targets. Some of the countries have been successful in fully mainstreaming the policy targets into national planning and budgeting process. For example, in Nepal, the approach Paper for the Three Years Plan (TYP) (2013/14-2015/16) and (2016/17-2020/2021) highlights public–private partnership for developing hydropower, renewable energy and transmission lines, particularly climate change-friendly development (The National Planning Commission , 2013). Sri Lanka is preparing to scale up the share of renewable energy source from 50 to 60 percent by 2020¹¹. India framed target of 175 GW of new renewable energy capacity by 2022, and other ambitious targets for rail development water infrastructure and smart cities, are already attracting increased climate financing flows. Moreover, a conducive policy framework to invest in renewable energy helps crowd in private investments, as it clarifies investment opportunities and relevant markets.

In Maldives, waste management practices were threatening both the environment and its tourism industry. In 2008, the government introduced a national solid waste management framework to address these issues. Next, the Maldives Government with the help of International Finance Corporation (IFC), introduced best practices in solid waste management, with participation from private-sector investors. IFC helped government develop an integrated waste management strategy, along with other advisory roles on transparent bidding process and identifying strategic options. With clear policy framework and transparent bidding in place, Tatva Global Renewable Energy (Maldives) Private Limited, an Indo-German consortium, won a 20-year concession to build and operate an integrated waste management system for the Greater Malé region. The transaction mobilized \$50 million in private investment that is believed to improve waste collection, transportation and disposal; and further reduce marine and air pollution; and also help generate power through a 2.7MW waste-to-energy plant (International Finance Corporation , 2011).

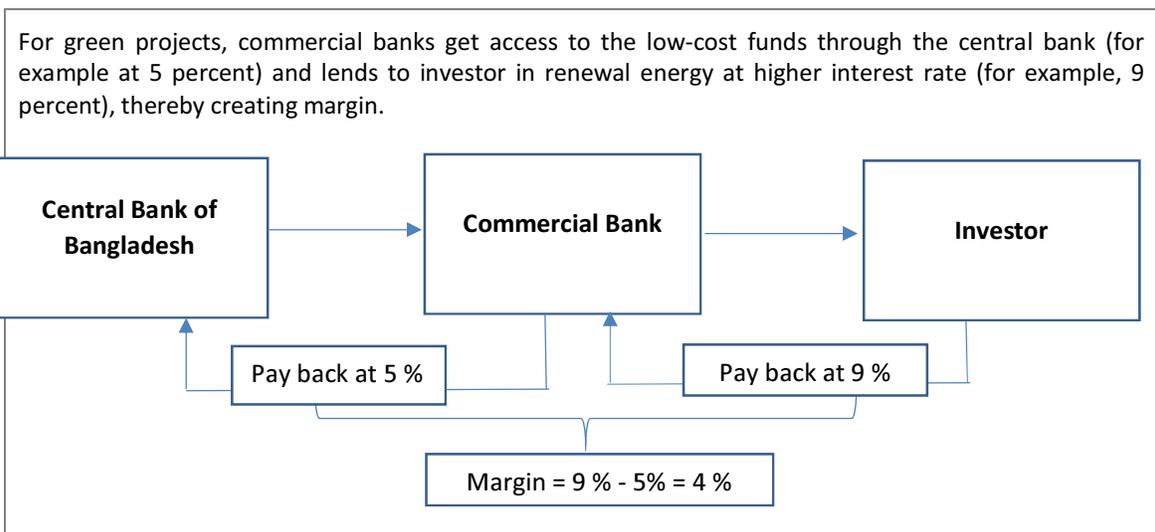
¹¹ http://www.island.lk/index.php?page_cat=article-details&page=article-details&code_title=140098.

Transaction Structure	Bidding	Outcome
<p>20-year concession to build, operate and transfer total project cost \$1 million, including donor contributions, which generated an investment of \$50 million.</p> <p>The concessionaire provides 100 percent of the required financing.</p> <p>At the end of the concession period, the government will either assume management of the waste management system or extend the operating period.</p> <p>The concessionaire will be responsible for the collection, transportation, storage, recycling and treatment of solid waste for the country's prime waste generation geography.</p>	<p>Fifteen firms initially expressed interest</p> <p>The award was based on both technical and financial considerations and took the environmental and social impact of the project into account.</p>	<p>Private sector investment in the solid waste management: worth \$50 million</p> <p>Solid waste management infrastructure and services in the catchment area for around 120,000 people</p> <p>Dumping and burning waste will cease, and reduce air and marine pollution</p> <p>120 hectares of land on Thilafushi Island will be reclaimed and made available for other uses, such as an industrial park and possibly a port.</p> <p>Helped Maldivian government's goal to become a carbon-neutral country by 2020</p>

Source: (International Finance Corporation , 2011).

Financial sector regulation can also be devised to encourage green finance to flow. Bangladesh provides an example of how Central Bank of Bangladesh, the first central bank in the world to take an active part in providing dedicated resource for sustainable development, have successfully deployed a range of intermediaries, instruments and planning system to address the specific financial needs of “Low Carbon Resilient Development” (Rai, et al., 2015). In 2005 the central bank introduced refinancing scheme advising commercial banks on finance for green energy, including solar and biogas project. To allow commercial banks access capital at lower rates, in 2010 the bank introduced USD 26 million refinancing facility for investment in green energy and effluent treatment plants, and in 2011 the central bank promulgated policy guidelines outlining phased steps for green banking practices. In 2014, the central bank announced targets for all the financial institutions to lend to green products. The highlights of the policy, refinancing modality and the circular that mandates lending to green products are provided in the box 1 below.

Box 1. Central Bank of Bangladesh - Policy, Refinance and Mandate Lending



Bangladesh Policy guideline (2011)

Phase I: Banks allocates specific budget to green finance. For instance; direct financing to renewable energy generation, clean water supply, wastewater treatment plants, solid and hazardous waste disposal plants, biogas plants and bio-fertilizer plants.

Phase II: Bank set achievable green banking targets and strategies and establish a green branch. Compliant banks can get access to low-cost financing through refinancing model.

Phase III: Banks independently report on green banking practices.

Targets for all banks (2014 circular):

The circular mandates all banking and non-banking financial institutions to make sure that direct finance for green products are available: banks operating in the Bangladesh financial market since 2013 are expected to disburse 5 per cent of their lending to green products (which include renewable energy products), while new banks are expected to disburse 3 per cent and non-banking institutions 4 per cent. More than US\$37 million (original allocation of US\$26 million) under the refinancing facility had been allocated to green projects, in 2014.

Source: (IEED 2015) and (Iqbal 2015).

Green Financial instruments

Green bonds: Green bonds, an alternative to conventional bank project finance, are debt instruments targeted to green investments. The bonds are earmarked for green projects, but are backed by the issuer's entire balance sheets and are increasingly popular among investors seeking climate-friendly investment opportunities. In 2015, worth USD 17 billion of climate-aligned bonds were issued in India billion (Climate Bonds Initiative, 2016). In the country 'The Green Bond Principles' states the procedure for certifying a green bond.

The Green Climate Fund: Established by 194 parties as a financing mechanism under the United Nations Framework Convention on Climate Change (UNFCCC), Global Climate Fund provides the financial resource to developing countries to help them invest in climate mitigation and adaptation initiatives. Developed economies have agreed to jointly mobilize \$100 billion per annum by 2020. The sub-region government agencies could draw some lessons from India, the only country in South Asia that has secured its accreditations for its institutions (National Bank for Agriculture and Rural Development) by the GCF (Jha, 2014) 12. One of the main takeaways from of India is that, "if finance accessed through the GCF is to make its way into domestic efforts on climate in a meaningful way" government ministries responsible on funding for climate related activities should work closely. While the sectoral ministries, like Ministry of Environment and Forest (MoEF), is an obvious choice for making decision on climate-related activities requiring the funding, the ministry responsible for the funding arrangement (in this case Ministry of Finance) is better suited at negotiating large sums of international funding. Furthermore, it reveals that clarity on how to coordinate the multiple actors in order to align national priorities with the GCF's broad mandate and secure a significant amount of funding is important for the Ministry responsible for the coordination, which is established as a nodal point (Jha, 2014).

Public-Private Partnerships

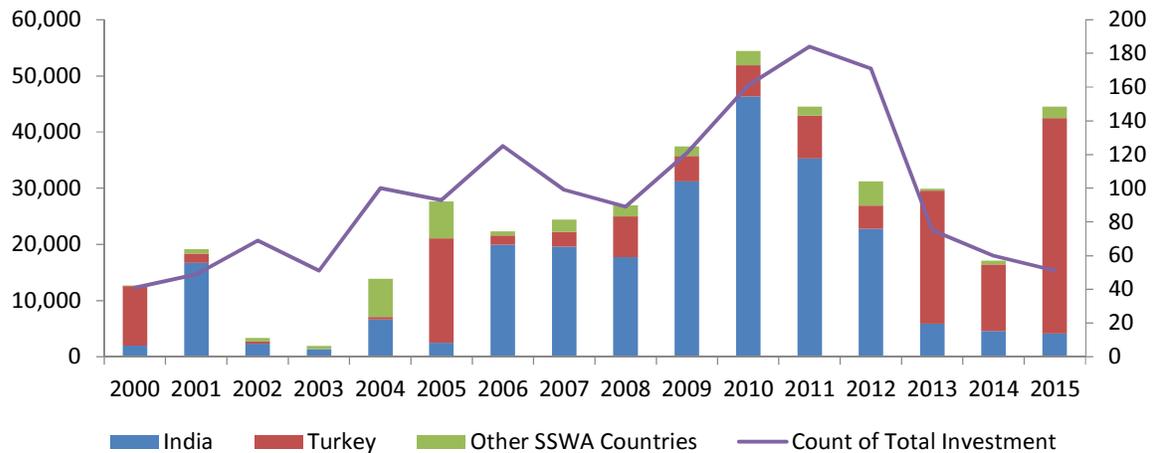
PPP Track Record in the Sub-Region

Infrastructure development in South and South West Asia, traditionally, has been fueled by the government expenditure, and various multilateral agencies including World Bank and Asian Development Bank (ADB). But, lack of sufficient fiscal cushion, low tax collection, and insufficient

¹² <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9329.pdf>.

financial resources has limited governments' capability, particular to finance the large-scale projects. Meanwhile, the private sector has entered the picture to support the government to finance and build large-scale infrastructure projects in the region. Private investment to infrastructure in South and South West Asia increased by almost 4-fold within 10 years from USD 12 billion in 2000 to USD 44 billion in 2015 (figure 7).

Figure 7. PPI in South and South West Asia (In USD million) (left) and Count of total investment (right)

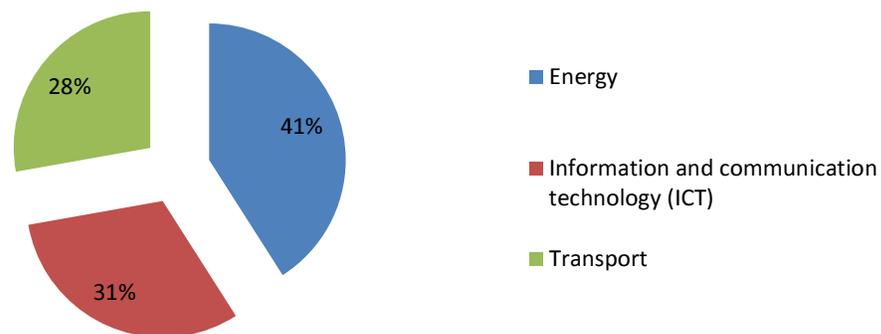


Source: World Bank PPP database.

The sector attracting the largest share of investment in South and South West Asia has been energy (Figure 8), followed by road (356 projects, USD \$ 65 billion) and ports (48 projects, USD \$ 11 billion). Greenfield projects have been the most common form of PPPs.

As PPPs is a fairly recent phenomenon in the South Asian and given the whirl of legal complexities in implementing this kind of financing arrangement there have been 30 projects canceled or in distress. The road projects are the most affected ones, with the highest number of distress or cancel status.

Figure 8. PPP in South Asia (sectors)-Active Status



Source: World Bank PPP database.

The Cases of India and Turkey

Countries like India and Turkey have made commendable progress in mobilizing private sector in infrastructure investment. In Turkey, private sector has played a progressive role after 1980s. It is reported that more than half of the Turkey's infrastructure investments in transport, energy and

telecoms have been fueled by the private sector. Turkey embarked upon a structural reform program anchored by a strong fiscal consolidation after 2001 crisis. Although country maintained fiscal surplus in the decade following the turmoil, the authorities deliberate choose PPP as a means to finance the infrastructure, because upfront infrastructure is financed by Private sector without requiring public investment. Even the Ninth Development Plan in Turkey called for extensive use of PPPs across sectors. Turkey, made the maximum use of debt assumption and traffic guarantees in PPPs for the motorways and bridge PPPs. To encourage the PPP initiatives, Treasury offered the debt assumption guarantees, and, highways agency offered the traffic guarantees, and, General Directorate of State Airports offered revenue guarantees for the airports (The World Bank , 2014).

Meanwhile, India has the largest PPP program in the South Asia and one of the largest in the world. Both countries have developed PPP programs to attract private financing and expertise as an option for expanding infrastructure service. For instance, India has approved more than 750 PPP projects since the late 1990s, mostly in transport. In the road sector, the country also experienced a surge in private funding, which stood at 5 percent in 10th Five-Year Plan (2002-2007) to 34 percent in 11th Plan (2007-2011). The increment amounted to more than USD \$20 billion. The World Bank study (Andres, et al., 2014) highlights that, in India, infrastructure projects are primarily financed through budgetary support from government (45 percent), debt from commercial banks (41 percent), Equity and FDI (14 percent). Out of the total debt financing for PPP projects in India, 72 percent is term loans from commercial banks and rest from institutional investors- IIFC (34.4 percent), IDFC (22 percent), and IDBI (17.3 percent) (Andres, et al., 2014).

The following boxes 2 and 3 explain some of success factors for PPP development in these two countries.

Box 2. PPP Success Factors in Turkey

Private sector involvement in infrastructure started in the early 1990s with a number of projects in energy and transport and has grown steadily since. Factors for success of Turkey's Public Private Participation initiatives include:

- 1) Developing country with huge need of infrastructure investment can explore the option to use PPP without much considering value for money. The government believed that benefit of delivering the infrastructure service is greater than the potential cost of a PPP contract
- 2) However, adequate capacity within the government should be built up, with necessary reforms, to successfully execute PPP.
- 3) A strong political will is needed, which is reflected in improvements in the legal framework and guarantee mechanism.
- 4) Equally important is to develop strong pipeline projects. In Turkey, Projects on pipeline: Large scale ports, Marinas, and Motorways. Motorways projects alone is estimated USD 35 billion.
- 5) Strengthening of domestic markets for long term finance. Recently, in 2009, the Turkish government revealed a detailed action plan to developing Istanbul as a Global Financial Centre. The plan sketches ambitious agenda of new capital market laws, which is believed to strengthen financial services and enable formation of new investment vehicles.

Source: Global Economy and Development at Brookings, (Qureshi, 2016), and (Emek, 2015).

Box 3. PPP Enabling Environment - Key to Success (India)

Institutional Mechanism

- India has streamlined the procedures for systematic and speedy appraisal and approval of the projects. Further it has dedicated PPP cell under Ministry of Finance, established in 2006. It helps in mainstreaming and facilitating PPPs and capacity building.
- The country has opened up more sectors for private and foreign investment.
- It has standardized the contractual documents such as sector-specific model concessional agreements and standardized bidding documents such as model request for qualifications and Model request for proposals.

Financial Support to PPP projects

- The country has a well-prepared scheme, Viability Gap Funding, for financial support to PPPs in infrastructure. In addition to that, it also has dedicated institution for long-term debt to infrastructure projects, India Infrastructure Finance Company Limited (IIFCL).

Capacity-Building Initiatives

- The country has dedicated PPP capacity building programs for officials of the government (central and state), and urban and local bodies.
- There is a knowledge sharing platform, and system for exchanging best practices. For example, the website, www.pppinindia.gov.in, provides complete information on the status. It also has clear guidelines, with knowledge products for the use of PPP practitioners. In addition to that, the government has established PPP toolkit for five sectors to help improve decision making, and to better architect the financials of PPP projects.
- PPP- Pilot Project Programs helps structure PPP projects in challenging sectors. The success of pilot projects helps replicate it countrywide.

Source: Presentation by Abhilasha Mahapatra, Director (PPP), Ministry of Finance. UNESCAP Policy Dialogue on PPP Infrastructure, Kathmandu, 22nd September 2015.

Country Initiatives to Develop a PPP Enabling Environment

The governments have been putting effort to develop enabling PPP policy, regulatory and institutional frameworks (see Table 5 for a complete picture of the region). For instance, Pakistan Vision 2025 strategy is devised on maximizing "Off-Budget" financing by pursuing public-private partnership (PPP), Built Operate & Transfer (BOT) and Operating concession modalities. The Government of Nepal approved PPP policy in 2015 that defines the broader contours of private sector participation in the country. The country also incorporated the development of PPP framework as one of its actionable agenda in the "LDC graduation strategy" paper. Turkey has incorporated PPP in 10th Development plan, where the planned PPP projects have to comply with sectoral priorities mentioned in Development Plan, Medium Term and Annual Program

In addition, governments have also created financial mechanisms to support PPP development in their countries. For instance, the Government of Bangladesh (GoB) established an Infrastructure Development Company Limited (IDCOL) to deal with arrangements related to financing of PPP projects (*Uddin & Sultana, 2013*). Another initiative in Bangladesh is Bangladesh Infrastructure Finance Fund Limited (BIFFL), which is a Government-owned Non-Banking Financial Institution, established through cabinet resolution and owned by Ministry of Finance. The largest Non-Banking Financial Institution- BIFFL, with the capital base of BDT 19.40 billion (USD 252 million) was established in 2011. The government has given a strong mandate to the institution to invest in the

large infrastructure projects of Bangladesh and supplement the vision of achieving middle income status of the country by 2021¹³.

Table 5. PPP Policy, Regulations, and Initiatives in South and South West Asia

Country	PPP Policy and Guidelines	PPP Institutional Arrangements	Nb. Active PPP Projects
Afghanistan	A Public Private Partnership (PPP) Law was enacted in October 2016 to reinforce the PPP legal and regulatory frameworks in the country.	Ministry of Finance established a Central Partnership Authority (CPA) as a central coordinating body for PPP projects.	1
Bangladesh	A PPP law was enacted in 2015, intending to streamline the formulation and execution of PPP projects. It also referred to the establishment of a PPP Authority that will be in charge of developing policy and guidelines and providing capacity development training for line ministries and agencies.	The PPP Authority ¹⁴ under the Prime Minister's Office supports line ministries to identify, develop, tender and finance PPP projects, and publishes PPP process related and sector specific guidance documents. Another PPP unit in the Ministry of Finance assesses the financial viability of projects and the level of government support.	50
Bhutan	A PPP policy has been approved in March 2016, which replaces the 2010 "Framework for private participation in infrastructure".	According to the PPP Policy ¹⁵ , the government plans to establish an autonomous agency, Public Private Partnership Agency (P3A) under the Ministry of Finance.	1
India	To strengthen the national-level regulatory framework and streamline PPP procedures, the Department of Economic Affairs (DEA), under the Ministry of Finance, produced guidelines for the formulation, appraisal, and approval of PPP projects as well as standardized bidding documents. The guidelines also apply to the provision of financial support for PPPs based on financial and economic viability assessments. Model concession agreements have also been developed by different ministries to ease contract negotiation.	PPP projects can be implemented by central, state or local authorities. The PPP Cell ¹⁶ in the DEA is the central coordination of PPPs. The PPP Cell is responsible for the approval of central sector PPP projects, proposals cleared by PPP Appraisal Committee. The central government also supports the creation of PPP Cells at the state level. To streamline the appraisal mechanisms and guidelines at the central level, the PPP Appraisal Committee was created.	797
Islamic Republic of Iran	Iran has been taking significant measures taken to develop PPPs, including drafting the PPP Law which has been considered by the Council of Ministers, as well as the development of PPP Guidelines. In addition, the Foreign Investment Promotion and Protection Act (FIPPA) facilitates swift approval of foreign investment application. ¹⁷	The launch of a PPP Unit has been considered. ¹⁸ According to the procedure of the implementation of PPP projects, proposed projects will be reviewed and approved by the PPP Unit which reports to the Economic Council. In addition, the Organization for Investment Economic and Technical Assistance of Iran (OIETAI),	4

¹³ <http://www.biffl.org.bd/>.

¹⁴ http://www.pppo.gov.bd/ppp_office.php.

¹⁵ <http://www.gnhc.gov.bt/wp-content/uploads/2016/06/Public-Private-Partnership-Policy-2015.pdf>.

¹⁶ <https://www.pppinindia.gov.in/overview>.

¹⁷ In the Name of God PPP Regulatory Framework In the Islamic Republic of Iran, by Mehran Khamisizadeh, Ministry of Roads and Urban Development, January 2015, <http://www.unescap.org/sites/default/files/8.3%20PPP%20Regulatory%20Framework%20in%20Iran.pdf>.

Country	PPP Policy and Guidelines	PPP Institutional Arrangements	Nb. Active PPP Projects
		within the Ministry of Economic Affairs and Finance has provided public support. ¹⁹	
Nepal	The Government of Nepal approved PPP policy in 2015 that defines the broader contours of private sector participation in the country. PPP Regulation is yet on approval process.	PPP Policy 2015 calls for the establishment of National PPP Coordination Committee (NPCC). It also proposes to establish an independent PPP Centre under the National Planning Commission ²⁰ which is headed by the prime minister ²¹	31
Pakistan	A PPP Policy was approved in 2010. Subsequently, provincial level PPP laws were enacted in Punjab and Sindh. However, the federal PPP law is still under development. ²²	The Infrastructure Project Development Facility ²³ (IPDF) under the Ministry of Finance is the central PPP unit of the government, and provides implementing agencies expertise support in PPP proposals, tendering and bidding process.	76
Maldives	The island country made significant efforts to promote private sector investment, for example in telecommunications and tourism. With regard to PPPs, the country has had little experience, the Malé airport being a prominent exception.	A Privatization Committee has been established under the purview of the President's Office and will oversee the process for private sector participation.	1
Sri Lanka	While the 2010-2020 government strategy, the Mahinda Chinthana ²⁴ , set out the intention to promote PPPs, there is no PPP policy nor legislation in Sri Lanka. Projects are being implemented pursuant to the 1998 Guidelines on Private Sector Infrastructure Projects Part II.	PPP-related institutions were established such as the Bureau of Infrastructure Investment (BII), a permanent office under the Board of Investment ²⁵ within the Ministry of Finance, which was established to promote, facilitate and coordinate PPP efforts for the line ministries. Other committees are also foreseen on a project-by-project basis. ²⁶	77
Turkey	Turkey does not have a central unit but a number of high-level government bodies collectively take up the typical functions of a PPP Unit. In particular, the under-secretariat of Treasury, the Ministry of Development	In Turkey, the PPP legal framework is distinguished by a number of model-specific and sector-specific laws instead a single overarching law. Since the first of the PPP laws was enacted in 1984, over	153

¹⁸Review the Recent Development in PPP Scheme, Islamic Republic of Iran, by Naser Balar, Management and Planning Organization, and Mehran Khamisizadeh, Ministry of Roads and Urban Development, September 2015, <http://www.unescap.org/sites/default/files/Day%201%20-%20Session%202.3%20-%20IRAN.pdf>

¹⁹South Khorasan Investment Service Center, <http://www.en.investin-sk.ir/index.php?obj=News&taskName=ShowDetails&IDD=27>.

²⁰ <http://www.npc.gov.np/en/#Home>

²¹ Govt introduces much-awaited PPP Policy, The Himalayan Times, 2015 October, <http://thehimalayantimes.com/business/govt-introduces-much-awaited-ppp-policy/>.

²²ADB, Country Partnership Strategy, Pakistan, 2015-2019, <https://www.adb.org/sites/default/files/linked-documents/cps-pak-2015-2019-sd-06.pdf>.

²³ <http://www.ipdf.gov.pk/>.

²⁴<https://www.adb.org/sites/default/files/linked-documents/cps-sri-2012-2016-oth-01.pdf>

²⁵<http://www.investsrilanka.com/>

²⁶Report on Sri Lanka's current PPP environment and recommendations for future PPP strategy, USAID, 2016 September, http://pdf.usaid.gov/pdf_docs/PA00MB6R.pdf

Country	PPP Policy and Guidelines	PPP Institutional Arrangements	Nb. Active PPP Projects
	(MoD) and the Ministry of Finance play important cross-sectorial roles including related to project authorization. In contrast to other line ministries, the Ministry of Health has established its own PPP team, centralizing the different PPP-related tasks for this sector.	120 PPP-style projects have reached financial closure under various models. ²⁷	

Source: www.pppknoweldgelab.org, Amirullah (2014).

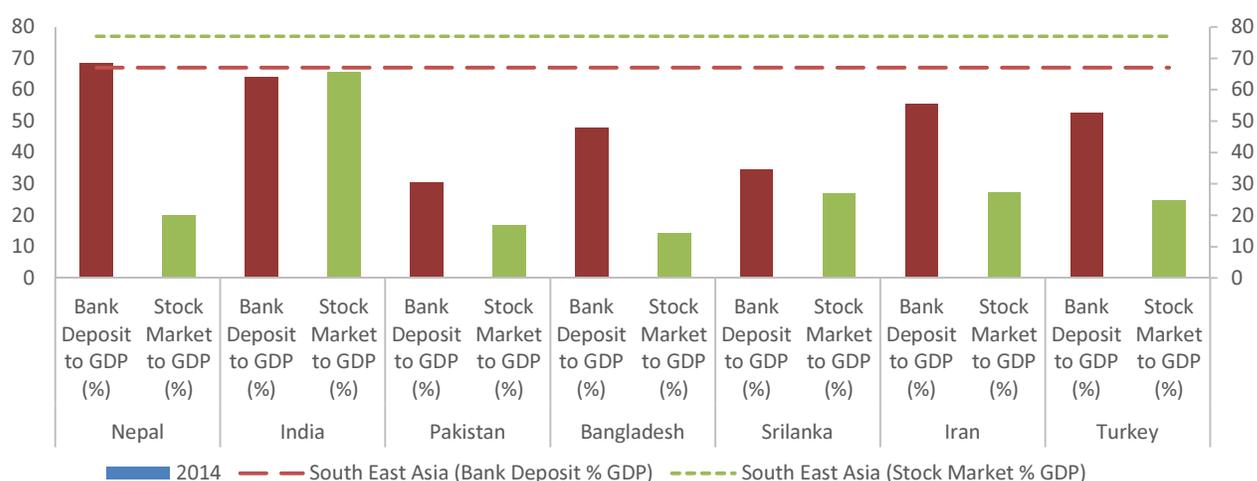
Given the narrow fiscal space of South and South West Asian countries and their limited access to long-term financing, PPPs are an effective way to leverage private capital and technical expertise for development. To take advantage of private sponsors' renewed interest in infrastructure projects, it is important for governments of the sub-region countries to develop risk-sharing arrangements that attract private operators while also benefiting governments, taxpayers, and users.

3.5 Financial markets

Notwithstanding the developments in PPP, a key issue is the shortage of funds for long term investments in infrastructure. The following sections of the paper are devoted to assessing the financial market in South and South West Asia and financing innovation in the region to finance the infrastructure projects.

South and South West Asia's financial systems—its banking system and its bond (public and private) and stock markets—remain relatively underdeveloped, when compared to South East Asia. The long-term debt financing also remains at an early stage in the region. Despite considerable growth in the banking system, rest of the financial sector in the region lags well behind the advancing frontier of global finance. India, with stock market capitalization to GDP at 66 percent, as an exception, in rest of the South and South West Asia, the stock market capitalization is not greater than 28 percent.

Figure 9. Financial structure of South and South West Asian countries (left); and South-East Asia (right)



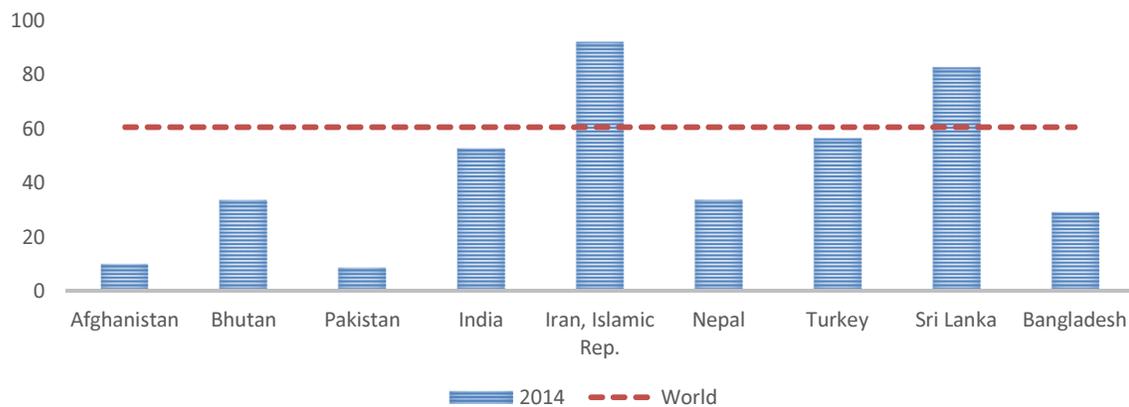
Source: The World Bank (2015), Financial Development and Structure Database.

²⁷ Establishing and Reforming PPP Units, Analysis of EPEC Member PPP Units and lessons learnt, The European PPP Expertise Centre, 2014 August, http://www.eib.org/epec/resources/publications/epec_establishing_and_reforming_ppp_units_en1 and <http://www.unescap.org/sites/default/files/Day%2020%20-%20Session%205.1d%20-%20Turkey.pdf>

Benchmarking South and South West Asian (SSWA) countries financial structure against that of South East Asia, all measured as a percentage of GDP, shows that SSWA- whether measured by bank deposits or stock market capitalization—is smaller than that of the South-East Asia region.

In the region, most deposits are short-term (for instance in Turkey where deposits are no longer than 3 months), and investment financing is correspondingly mostly short term, which restricts the longer-term funding into infrastructure projects. This funding constraint appears to be further exacerbated by the fact that financial inclusion is very low in the region, where only 46 percent (individuals above 15 years' age) on an average have accounts at banks or financial institutions. It is reported that in Turkey “merely 50 thousand depositors (the equivalent of the people attending a football match) control 90 percent of total deposits in the system, making it highly susceptible to the whims of a small section of the population.” (The World Bank, 2014)

Figure 10. Account at a financial institution (percentage, aged 15 and above)



Source: World Development Indicators.

Apart from maturity mismatch and unavailability of the longer-term funds the banking sector's exposure norms also limits commercial banks from investing in infrastructure projects. The single obligatory limits imposed by the regulatory limits the lending size of the commercial banks. For instance, even when all banks pool finance through syndication and club financing, the projects above USD 70-100 million are difficult to finance locally in Bangladesh, given the existing exposure limit of maximum 15 percent of total capital to any single borrower (Uddin & Sultana, 2013). Similar is the case for Nepal, where single obligatory limit restricts the maximum amount of loan concentrated in a single person including the groups not to be more than 50 percent of the core capital (in hydropower sector, cable car and transmission lines), 30 percent of core capital in case of productive sectors and 25 percent of core capital in case of other sectors (Nepal Rastra Bank, 2016). The funds and aptitude in domestic banking sector in the region alone can't support the investment requirements, so undoubtedly it requires the additional institutional and market setup, and foreign borrowings. The investment would not scale up unless there is an efficient public investment, diligent capital expenditure, financial innovation and capital market to structure and support the finance of infrastructure projects

The common need of SSWA countries is to develop a strong and inclusive domestic financial system that has an ability to provide long-term finance to match the long-term infrastructure investments. Additionally, deep, well-functioning domestic stock and bond markets are imperative for the economic development, as they facilitate long-term financing for areas such as infrastructure. Development of bonds markets will also provide long-term investment instruments for institutional investors, such as pension funds and insurance companies.

3.5.1 Project finance

Private sector infrastructure project finance in most of the countries has been viewed as an offshoot of corporate finance, seeking to apply similar covenants while relying heavily on collaterals. Commercial banks have also faced difficulties in assessing the bankability of infrastructure projects due to the short operating histories of comparable financed projects.

In addition, long term financing, such as project financing, weigh heavily on bank balance sheets. The full implementation of Basel III regime in 2019 is expected to make it difficult for internationally active banks to scale up long-term financing in the infrastructure projects, which are already very limited in numbers. Under such circumstances, there is a need for financial innovations in the market which could play a supplementary role in infrastructure in the region.

3.5.2 Financial innovations

a) IDFs and InvITS in India

For financing infrastructure development, India initiated new financing instruments such as the Infrastructure Development Fund (IDFs) (Debt Take out) and Infrastructure Investment Trust (InvITs) (Equity take out).

IDF, sponsored by commercial banks or NBFCs, act as a vehicle for refinancing existing infrastructure debts, thereby freeing lending capacity for banks and financial institutions to extend loans to fresh infrastructure projects (Reserve Bank of India , 2015)²⁸. More precisely, the fund takes over loans extended to PPP infrastructure projects that have completed at least one year of commercial operation. The takeover would be “covered by a Tripartite Agreement between the IDF, Concessionaire and the Project Authority for ensuring a compulsory buyout with termination payment in the event of default in repayment by the concessionaire.” (Reserve Bank of India , 2015). To finance these activities, IDF issue bonds in which insurance and pension funds can invest.

The Securities Exchange Board of India (SEBI) also introduced infrastructure investment trust (InvIT) regulations for infrastructure projects. These regulations have been in effect since 26 September 2014, and are expected to alleviate the burden on the banking system by making available fresh and patient capital for the infrastructure sector.” (PWC, 2015). InvITs are listed equity infrastructure fund which have been set-up to unlock tied up capital of developers and refinance the equity of infrastructure projects. Typically, InvITs raise resources in the market (e.g. from institutional investors) to purchase the majority interest in several SPVs created for infrastructure projects thereby refinancing the initial investments from developers. However, despite the structure being in place for 2 years, it had limited success. The major reason behind the delay was “investors were looking for additional incentives, like tax breaks, to make them attractive. Lately, the Government of India provided tax breaks on dividends in 2016 budget and SEBI relaxes the ownership in these funds”²⁹ which has revived the enthusiasm.

The initiative to establish IDF and InvIT were at the right time, as exposure of Indian commercial banks to infrastructure sector has increased from 26 percent CAGR in 2009 to 28 percent in 2013.³⁰

²⁸ <https://rbi.org.in/Scripts/FAQView.aspx?Id=90>

²⁹ <http://energy.economicstimes.indiatimes.com/energy-speak/enabling-a-new-india-through-infrastructure-investment-trusts-invits/2047>

³⁰ <http://indianexpress.com/article/opinion/columns/passing-rate-cut-benefits-banks-face-alm-hurdle/>

Box 4. InvIT Modality (Hypothetical example):

Suppose a solar developer has 5 operational projects (i.e. solar farms), which have set PPAs for their power and generate stable revenues. Now, this developer might have 10 other projects in the pipeline that are in different stages of completion and require substantial capital infusion. It becomes complicated for the developer to balance capital needs for under-construction and stable projects, which could end up stifling growth potential for the said developer. By leveraging this structure, this developer can transfer the fully operational, cash making, projects into an InvIT as a separate vehicle, which then gets listed as an independent trust. The developer gets the equity value of the project debt back, which can then be used to either repay the banks or invest in new projects. Also, since the outstanding debt went down, the developer's interest rates go down. The InvIT becomes an independent entity with fully operational projects, fixed revenues and costs. These vehicles help retail and institutional investors own assets without having to invest in the parent company.

Source: (Ranjan, 2017).

b) Islamic Finance in Pakistan, Afghanistan and Bangladesh

Islamic finance, in recent years, has gained the traction as a new financing strategy that can fund long-term development (Iqbal 2015)³¹. It is reported that share of Islamic Finance in Bangladesh and Afghanistan is 18.9 percent in the deposits and 21.1 percent of total credit of country's total banking system. Pakistan also stepped up use of "Sharia compliant financing, to fund infrastructure deals, which could help to promote the use of longer-term transactions" (Vizcaino, 2016). In April 2016, Pakistani banks arranged \$955 million worth Islamic bonds for a hydropower plant, the 10 years' bond is considered as the largest infrastructure deal making the use of Islamic financing in the country.³² However, Islamic finance is relatively new and the modality and lot needs to be done to improve financial literacy of stakeholders, including policy makers, market stakeholders about this type of asset-based and equity finance.

c) Institutional Investors Development in Bangladesh

The Government of Bangladesh, recently, in Monetary Policy 2016 introduced long term pension saving schemes for general citizenry. The scheme supervised by a new Pension Funds regulatory will help the financial and capital markets in mobilizing long term savings for long term investments.³³

³¹ <http://blogs.worldbank.org/psd/can-islamic-finance-help-fund-large-infrastructure-projects-emerging-markets>.

³² <http://www.reuters.com/article/islamic-finance-pakistan-idUSL5N17N0FY>.

³³ https://www.bb.org.bd/monetaryactivity/mps/mps_current.pdf.

4. Conclusion

Infrastructure development is considered as one of the critical factors for economic development, and a core element for attaining Sustainable development goals. The countries in South and South West Asia have been prioritizing their budget in the development of infrastructure and its related institutions. But, the expenditure needs for building physical infrastructure, and inclusive development are enormous. Moreover, the combination of low revenue, highly limited borrowing capacity, and stresses on donor grants has left little room for development spending. Turkey's experience in fiscal consolidation and public financial management reform can be a very good reference case for countries in South and South West Asia suffering from burgeoning fiscal deficit and lower revenue.

The low level of tax to GDP in South and South West Asia is also problematic in the light of the positive relationship between tax collection and development. Weak tax administration and pursuit of several objectives through tax exemptions, concessions and deductions have limited the resources collected. Governments have, nevertheless, the possibility to raise more revenue through innovative tax policies, tax base broadening, and tax administration reforms that tackle tax evasion and that increases collection efficiency.

In recent years developing countries have created a more coherent route towards sustainable development in the form of 'Low-carbon resilient development'. However, despite current climate spending and myriad of initiatives, there is a pressing need to scale up climate finance. Green policies, targeted regulatory environment, bonds financing and 'climate fund' available through international commitment has been observed in selected South and South West Asian countries. Countries in the region need to pursue this route and seize such emerging financing sources for their infrastructure development.

Mobilizing private sector resources is also needed to tackle the existing infrastructure challenges in the region. In this respect, South and South West Asian countries government have PPP on the agenda to leverage the private sector financing. In the region, the sector attracting the largest share of private investment has been energy, followed by road and ports, most of which are greenfield projects. Countries like India and Turkey have made commendable progress in mobilizing private sector in infrastructure investment. A strong political will, strengthening of domestic market for long term finance, a robust institutional mechanism, financial support and capacity building initiatives from the government are the key factors that shape the success of PPP, evident from best practices from Turkey and India.

Notwithstanding PPP development, a key issue prevails with regard to shortage of funds for long term investments in infrastructure. In addition to maturity mismatch, the banking sector's exposure norms limit commercial banks from investing in infrastructure projects. The common need of SSWA countries is to develop a strong, innovative and inclusive domestic financial system that has an ability to provide long-term finance to match the long-term investment and infrastructure project finance requirements. The traditional banking model in South and South West Asia, heavily relying on balance sheet and collateral, as a result the number of infrastructure are very limited. The full implementation of Basel III regime in 2019, and unavailability of long term funds will further make it difficult for international and local banks to scale up long-term financing. Some countries like India, Turkey, Pakistan, Afghanistan and Bangladesh has been trying financial innovations and initiatives like project bonds, private equity investment and Islamic Finance tools to overcome the unavailability of long term funding.

Annex

Fiscal consolidation accompanied by fundamental public finance reform in Turkey

Macro-Fiscal Discipline	Strategic Allocation of Resources	Operational Allocation
<p>2000 Extra-budgetary funds, which had proliferated during the 1980s 1990s, were mostly abolished.</p> <p>Rationalization of revolving funds</p> <p>Legislation on preventing accumulation of duty losses in state banks (For Agricultural SOEs)</p> <p>2001 Independence of Central Bank, and Restructuring of Public Banks</p> <p>2002 Public Finance and Debt Management Law helped the country reduced the room for discretionary lending</p> <p>New Corporate Income Tax and Personal Income Tax Legislation increased the revenue base.</p> <p>2003 Modernize Debt management system and separate risk account establishment helped complemented the efforts to improve macro fiscal discipline.</p> <p>2006 Submission of Social Security and Universal Health Insurance Law</p> <p>Introduction and diligent implementation of Medium Term Expenditure Framework enabled the government to systematically plan the government expenditure.</p> <p>Introduction of Indicative Institutional Ceilings</p> <p>2008 Reform of Inter-Governmental Fiscal Transfer helped the government to become more efficient in transfer expenditure.</p>	<p>2001 Rationalization of public investment program lead to a significant decline in average completion period from 10 years to 4.6 years.</p> <p>2003 Enactment of Public Finance Management and Control (PFMC Law) -Transparency, Efficiency, Accountability in Public Expenditure</p> <p>2004 Introduction of New Metropolitan Municipality Law</p> <p>2005 Amendment of Law on Municipalities</p> <p>2006 New Budget classification in line with GFS standards</p> <p>Development of Strategy development units in all line agencies.</p>	<p>2002 Enactment of New Public Procurement Law, and strengthening of internal and external audit provisions.</p> <p>Establishment of Public Procurement Authority</p> <p>2003 Enactment of PMFC Law</p> <p>2006 Establishment of Internal Audit Units</p> <p>2010 Enactment of New TCA Law</p>

Source: World Bank (2014).

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