

The MacrotHEME Review

A multidisciplinary journal of global macro trends

What are the rationales to pursue Public Private Partnerships in Pakistan?

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Abstract

Today, Pakistan's population growth and urbanisation trend is increasing rapidly. This drastic increase is putting pressure on infrastructure services demand. Consequently, the gap between infrastructure services demand and supply is widening continuously. Likewise, developing countries Pakistan is also lagging behind in achieving its development goals mainly because of inadequate infrastructure facilities. Alongside other problems like weak institutional framework, political and governance issues, financial constraint is the major barrier in infrastructure development. At present, the country is unable to finance infrastructure projects through traditional methods (public funds) due to heavy public debt. Accordingly, government should adopt an innovative approach to deal with financial constraints for economic revival and to avoid future debt traps. Therefore, a solution could be to take an initiative to establish partnership with private sector investors in terms of Public Private Partnerships (PPPs) that could meet the increasing infrastructure services demand without further burden on public budget. The objective of this paper is to investigate that whether PPPs is a viable solution to the financing problem for sustainable public infrastructure development for Pakistan.

Keywords: *public private partnership, Pakistan*

1. Introduction

Today, Pakistan is facing many challenges from all quarters of the economy like budget deficit, severity of energy shortages, heavy defence and security services expenditures, incompetent public sector enterprises, huge public debt servicing and declining trend in growth rate. Besides, rapid increase in population growth, and urbanisation trend, these challenges inadequate infrastructure services. Therefore, bottlenecks in infrastructure development have been serious concerns in Pakistan and its basic infrastructure facilities such as power supply, telecommunication, roadways, railways, aviation (airport) and seaports, are not comparable with its neighbouring countries.

Pakistan is the sixth most populous country in the world with 177.10 million people. Projections suggest that it will become the fifth largest country with a population ranging between 230 and 260 million people by 2030 (Planning Commission, 2005). The country is the most urbanised in South Asia, because, 37% of its population lives in cities (Ministry of Finance, 2011). However, this trend is increasing at the rate of 3.3 per cent. Consequently, urbanisation is expected to raise nearly two-thirds of the total population by 2030 (Planning Commission, 2005).

The rapid urbanisation is putting more pressure on insufficient infrastructure, which is one of the main reasons of increasing demand for infrastructure facilities (Bjorvatn, 2000).

Excessive urbanisation is also causing environmental problems such as pollution, waste management, road congestion and destruction of fragile ecosystems. Conversely, improvement in public infrastructure facilities has not kept pace with population growth and urbanisation in Pakistan. Subsequently, a larger part of the population will not have access to infrastructure facilities in future. For instance, there is typical power shortfall; Pakistan's power shortfall has now reached 5,000 MW (Ministry of Water and Power, Pakistan). Firms in Pakistan lose approximately 5-8% of their businesses only due to power-related problems (Nataraj, 2007). Overall, Pakistan's infrastructure rank is low in the Global Competitiveness Index 2010-11.

Presently, overall economic outlook of Pakistan is weak. The country's gross fixed investment is 13.4 per cent of GDP including 3.5 per cent by the private sector during 2010-11. Total allocation for Public Sector Development programme (PSDP) for the year 2011-12 is 3.5 per cent of GDP. Country's current budget deficit is 4% of GDP and total public debt at end of first quarter financial year (FY) 2012 (end of September 2011) stood at 52.6 per cent of GDP. Whereas, country's foreign exchange reserves are US\$ 16,238 million as at 6th June, 2012. According to Moody's and Standard and Poor's assessments Pakistan's credit rating are B3 and B- respectively. This means country's economic, financial and institutional position is low, high susceptibility to event risks, vulnerable to adverse business, but has the capacity to meet financial commitments.

In view of the current economic position, it could be ascertained that Pakistan would not be able to achieve growth targets in long run without prudent resolution of persistent challenges such as: loss making public sector enterprises, increasing public debt burden, low capital investment and inadequate infrastructure facilities. Therefore, a review of empirical evidence points that proper utilization of resources of both public and private sectors is needed to attain desired growth rate. In this scenario, private sector participation in terms of public private partnerships (PPPs) is vital to sort out financial constraints problem for infrastructure development. Therefore, the objective of this paper is to investigate that whether PPPs is a viable solution to the financing problem for sustainable public infrastructure development for Pakistan.

2. Present Economic Position

Overall economic outlook of Pakistan is weak. The Planning Commission recognises (2012) that Pakistan's growth and development has remained unsustainable mainly because of insufficient physical and social connectivity and inappropriate use of economic growth software, which drives the growth rate on sustained basis. The software includes effective governance mechanisms, better organisation of institutions, efficient management of physical infrastructure, and human capital development in relation to globally successful experiences.

Pakistan's current budget deficit is 4% of GDP (Ministry of Finance, 2011). Total public debt at end of first quarter FY 2012 (end of September 2011) stood at US\$ 122.38 billion, which is 52.6 per cent of GDP including external debt of US\$ 53.12 billion that is 22.8 per cent of GDP. Whereas, country's foreign exchange reserves are US\$ 16,238 million as at 6th June, 2012. Current inflation rate is 14 per cent while domestic savings have declined from 16.3 per cent in

2005-06 to 9.5 per cent of GDP in 2010-11. Country's gross fixed investment is 13.4 per cent of GDP in FR 2011, including 3.5 per cent by the private sector during 2010-11. Total allocation for PSDP for the year 2011-12 is 3.5 per cent of GDP. Table 2.1 shows country's brief economic review from 2001 to 2012.

Table 2.1. Economic Indicators

Indicators	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-2012 (Jul-Feb.)
Exports (Billion \$)	9.13	11.16	12.31	14.39	16.47	17.01	19.22	17.79	19.63	25.44	12.12
Imports (Billion \$)	10.34	12.22	15.59	20.6	28.58	30.54	39.96	34.82	31.05	35.73	19.74
Trade Balance (Billion \$)	1.2	1.06	3.28	6.21	12.11	-13.53	-20.74	-17.03	-11.42	-11.11	-1.024(P)
FDI (Billion \$)	0.49	0.80	0.95	1.52	3.52	5.13	5.15	3.72	2.21	1.573.6	0.558
Foreign Investment (Billion \$)	0.48	0.82	0.92	16.68	3.87	8.42	5.19	2.67	2.14	1.918.1	0.388
Worker Remittances (Billion \$)	2.39	4.24	3.872	4.17	4.6	5.49	6.5	7.81	8.91	11.201	6.32
Forex Reserves (Billion \$)	6.43	10.72	12.33	12.61	13.14	15.18	10.83	12.23	16.07	18.25	17.026
Exchange Rate (Rs. / US\$)	61.00	57.70	57.92	59.66	60.16	60.50	71.0	88.90	86.21	85.95	89.73
GDP Growth	3.60%	5.10%	6.40%	8.40%	6.60%	7.00%	5.80%	2.10%	4.10%	4.10%	2.4%
Inflation	3.40%	3.30%	3.90%	9.30%	8%	7.90%	10.30%	13.10%	12.90%	11.5*	14.1-*
Public Debt* (% of GDP)	-	-	-	-	-	55.4%	59.0%	60.0%	60.1%	59.3%	52.6%

Source: Reproduced the data collected from Board of Investment and *Ministry of Finance as at 28-03-2012

According to the Standard and Poor's August, 2009¹ assessment, Pakistan's credit rating is B-. This means the country is more vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments. However, Moody's Investors Service has declared in its annual report in February, 2012 that Pakistan's credit rating is B3, which reflects the country's low economic, institutional and government financial strengths, and its high susceptibility to event risk. Moody's assessment is based on four factors namely economic strength – which is characterized as "low"; institutional strength - "low"; government financial strength – "low"; and susceptibility to event risk – "high."

¹ Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories. Negative means that a rating may be lowered.

Moody's further explains that Pakistan's "low" Economic Strength reflects weak economic growth trend since the 2008 global financial crisis, and which has also been constrained by policy-framework and structural weaknesses. Macroeconomic imbalances: high level of inflation and pressures on payments position in the second half of 2011. The second factor, Pakistan's "low" institutional strength is partly a reflection of the factious character of politics. The third factor, "low" government financial strength, reflects the presence of a high debt burden and very large refinancing requirements. The cost of the 2010 floods and uncertain donor support put further pressure on government finances. The country's "high" susceptibility to event risk is the fourth factor. Moody's looks at political risk – including domestic and geopolitical threats – economic and banking system risks. The broad policy framework has not been robust enough to ensure support from donors and creditors, or to effectively contain macroeconomic imbalances, which have arisen since the global financial crisis in 2008.

2.1. *Infrastructure*

Infrastructure is basic physical and organizational structures needed for the operation of a society or enterprise (Oxford English Dictionary) or the services and facilities necessary for an economy to function (Sullivan et.al.). Physical infrastructure covering transportation, power and telecommunication through its forward and backward linkages facilities growth [sic]. Social infrastructure including water supply, sanitation, sewage disposal, education and health, which are in the nature of primary services, has a direct impact on the quality of life (Lakshmanan, 2008). According to the Fayyaz et al., (2007) infrastructure can be categorized as:

- Physical infrastructure: transport, power, communication and agro specific infrastructure
- Financial infrastructure: banking services and life insurance corporations
- Social infrastructure: health, education, medical care, aged care, nutrition, housing, water supply, sanitation, sewage collection and disposal, parks and sports facilities..

The Instate Pty. Ltd. (2001) explained that the most critical infrastructure for economic development is that which relates:

- Directly or indirectly, to the movement of people and goods – the physical (hard) infrastructure (the roads, the rail networks, the ports and the power stations etc.).
- To quality of life – the social (soft) infrastructure (the hospital, the health care facility, social services, the art and the law etc.).
- To the generation, storage and sharing of knowledge – the knowledge infrastructure (schools, colleges and universities, research bodies and libraries etc.).

At present, the gap between infrastructure services demand and supply is widening in developing countries including Pakistan. As a result, their existing roads condition is going from bad to worse, there is unavailability of safe drinking water, their sewage and sanitation system is very poor and their telecom sector is unreliable. In general, health and education facilities are miserable and unavailable in remote areas in particular. There are strong empirical evidences that infrastructure investment in developing countries has large and positive effects on growth. But the major bottleneck to growth in developing countries is dire infrastructure needs and lack of adequate infrastructure (Lin and Doerte, 2012). Pakistan's infrastructure ranks 89th out of 133 countries in the Global Competitiveness Index (GCI) 2009-10 and 115th position out 142 in the

GCI 2010-11. Inadequate infrastructure services and bottlenecks in infrastructure development have been serious concerns in Pakistan. Therefore, Pakistan's basic infrastructure facilities are not comparable with its neighbouring countries.

Table 2.2. Comparative Indicators of Infrastructure across South Asian Countries

Country	Total Population (Million)	Population Growth (Annual %)	Urban Population (% of Total)	Electricity (% of Population)	Water (% of Population) Rural	Water (% of Population) Urban	Sanitation (% of Population)	Telecom Density (% of Population)*	Road Density (by Population)*
Bangladesh	149	1.1	28	41	78	85	53	16	1.6
India	1171	1.3	30	66.3	84	96	31	71	3.2
Nepal	30	1.8	18	43.6	87	93	31	18	0.6
Pakistan	174	1.8	32	62.4	87	95	45	44	1.8
Sri Lanka	21	0.9	15	75	88	98	91	122	-

Source: Author (compiled from the World Bank data, 2009. *The World Bank Data, 2006)

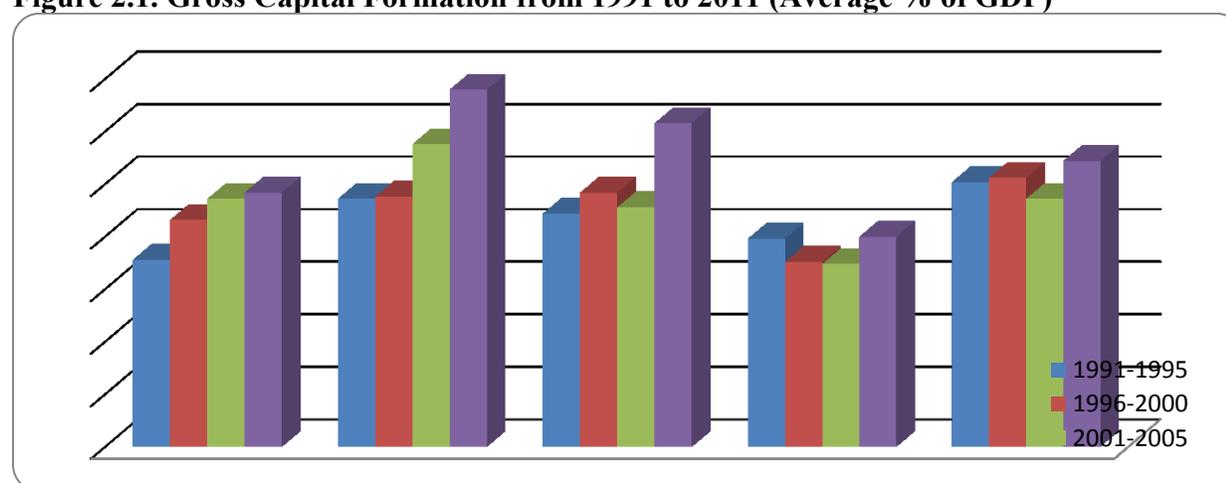
Low fixed capital investment is the main reason of inadequate infrastructure services. Pakistan's gross domestic investment on fixed assets² as percentage of GDP is the lowest within South Asia region.

Table 2.3. Gross Capital Formation from 1991 to 2011 (Average % of GDP)

Period	Bangladesh	India	Nepal	Pakistan	Sri Lanka
1991-1995	17.8	23.6	22.2	19.8	25.2
1996-2000	21.6	23.8	24.2	17.6	25.6
2001-2005	23.6	28.8	22.8	17.4	23.6
2006-2010	24.2	34	30.8	20	27.2

Source: Author (compiled from the World Bank data)

Figure 2.1. Gross Capital Formation from 1991 to 2011 (Average % of GDP)



Source: Author (compiled from the World Bank data)

² Fixed assets include land improvement: construction of roads, railways, schools, hospitals, buildings (offices, private residential dwellings, commercial and industrial buildings), purchase of plant, machinery and equipments.

According to the Ministry of Finance (2011) estimates, 2010 flood inflicted massive damage of \$10 billion, displaced 20 million people, submerged approximately 50,000 sq. Km area and damaged about 10 per cent (25,000 Km) of road network. Consequently, growth rate has declined about 2 percentage points. The reconstruction of road sector has been estimated at US\$ 2.07 billion. Devastating flood has created huge losses to crops, livestock sector, physical infrastructure and the GDP. Therefore, the growth rate of 2.4 per cent was recorded during FY 2010-11 as compared to the target of 4.5 per cent.

2.2. *Investment*

Pakistan's gross fixed investment is 13.4 per cent of GDP in FY 2011, which declined substantially from 22.5 per cent of GDP in 2006-07. The real fixed investment growth is 0.4 per cent of GDP for the year 2010-11 (Ministry of Finance, 2011). Whereas, estimated fixed investment by the private sector is 3.5 per cent during 2010-11. Since four decades it is the lowest ever investment rate, while private sector investment is recorded lowest ratio since 1998-99. The major declining trend has occurred in energy, transport and communication, large scale manufacturing and finance and insurance sectors. Simultaneously, foreign direct investment (FDI) inflows (Table 2.1 refers) also shows declining tendency (BOI, 2012).

The infrastructure projects are mainly developed by the public finance in Pakistan. According to the PPIAF and World Bank's database, 64 infrastructure projects with total investment of US\$28,553 million were developed with the private sector participation during the period from 1990 to 2011. Out of that maximum numbers of 50 projects were developed in energy sector with US\$10,933, while telecom sector was successful to attract the highest investment of US\$16,262 for 6 projects. However, water sector has been neglected by the private sector with no investment. A brief overview on the status of year-wise and sector-wise infrastructure projects with private sector participation is provided at table 2.4.

**Table 2.4. Private Sector Participation in Infrastructure in Pakistan
from 1990 to 2011 (US\$ million)**

Year	Energy Sector		Telecom Sector		Transport		Water Sector		Total	
	No. of Projects	Total Investment								
1990	-	-	2	20	-	-	-	-	2	20
1991	-	-	-	20	-	-	-	-	-	20
1992	2	7	-	20	-	-	-	-	2	27
1993	-	-	-	20	-	-	-	-	-	20
1994	1	1,631	2	502	-	-	-	-	3	2,134
1995	12	1,779	-	21	2	200	-	-	14	2,000
1996	8	2,365	-	18	-	-	-	-	8	2,384
1997	1	154	-	31	1	119	-	-	2	304
1998	-	-	-	6	-	-	-	-	-	6
1999	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	77	-	-	-	-	-	77
2001	-	-	-	60	-	-	-	-	-	60
2002	-	-	-	170	1	32	-	-	1	202
2003	-	-	-	240	-	-	-	-	-	240
2004	1	30	2	1,683	-	17	-	-	3	1,731
2005	1	346	-	4,364	-	64	-	-	1	4,775
2006	2	298	-	2,473	1	40	-	-	3	2,811
2007	5	1,197	-	2,741	1	581	-	-	6	4,519
2008	5	1,084	-	2,255	2	303	-	-	7	3,643
2009	11	1,376	-	1,266	-	-	-	-	11	2,643
2010	-	166	-	271	-	-	-	-	-	437
2011	1	500	-	-	-	-	-	-	1	500
Grand Total	50	10,933	6	16,262	8	1,356	-	-	64	28,553

Source: Author (Compiled from Public-Private Infrastructure Advisory Facility and The World Bank Database, April, 2012)

In South Asia region during the period from 1990 to 2011 India is at the top to develop 556 infrastructure projects with the private sector participation which involved total investment of US\$255,169 million. While Pakistan has developed 64 infrastructure projects with US\$28,546 million during the same period. Detail of infrastructure projects with private sector participation in South Asia is at table 2.5.

Table 2.5. Private Participation in Infrastructure Development by Region from 1990 to 2011 (US\$ million)

Region	Energy Sector		Telecom Sector		Transport		Water Sector		Total	
	No. of Projects	Total Investment								
Bangladesh	21	1,397	12	6,099	5	-	-	-	38	7,496
India	220	117,420	37	81,196	287	56,198	12	355	556	255,169
Nepal	5	273	3	135	-	-	1	-	9	408
Pakistan	50	10,933	6	16,258	8	1,355	-	-	64	28,546
Sri Lanka	13	448	7	2,602	1	240	-	-	21	3,290
Grand Total	309	130,471	65	106,290	301	57,793	13	355	688	294,909

Source: Author (Compiled from Public-Private Infrastructure Advisory Facility and The World Bank Database, April, 2012)

PADP/Annual Develop Programme (federal/provincial) are the main sources to implement public sector economic plans. Total allocation for PSDP for the year 2011-12 is 3.5 per cent of GDP, which was 2.6 per cent of GDP in FY 2010-11. Despite borrowing Pakistan also depends on external financial assistance for budget deficit. In FY 2010-11 external assistance was lower than the expectation, which led to sharp cutbacks in expenditure for the public sector development program (Ministry of Finance, 2011).

2.3. Fiscal Deficit

The fiscal performance of Pakistan over the last two decades shows that fiscal deficit is a permanent ingredient of budget document. Debt servicing expenditures remains the highest component of the expenditure as 4.92 per cent of GDP while development expenditure and defence and security services expenditures are 3.74 per cent of GDP on an average basis. On the other hand, performance of the public sector is poor, state owned entities suffer frequent losses and have limited budgetary and financial resources. Pakistan's current budget deficit is 4% of GDP (Ministry of Finance, 2011); its external debt liability is US\$ 59.536 billion; whereas foreign exchange reserves are US\$ 16,238 million as at 6th June, 2012³ (Central Bank of Pakistan).

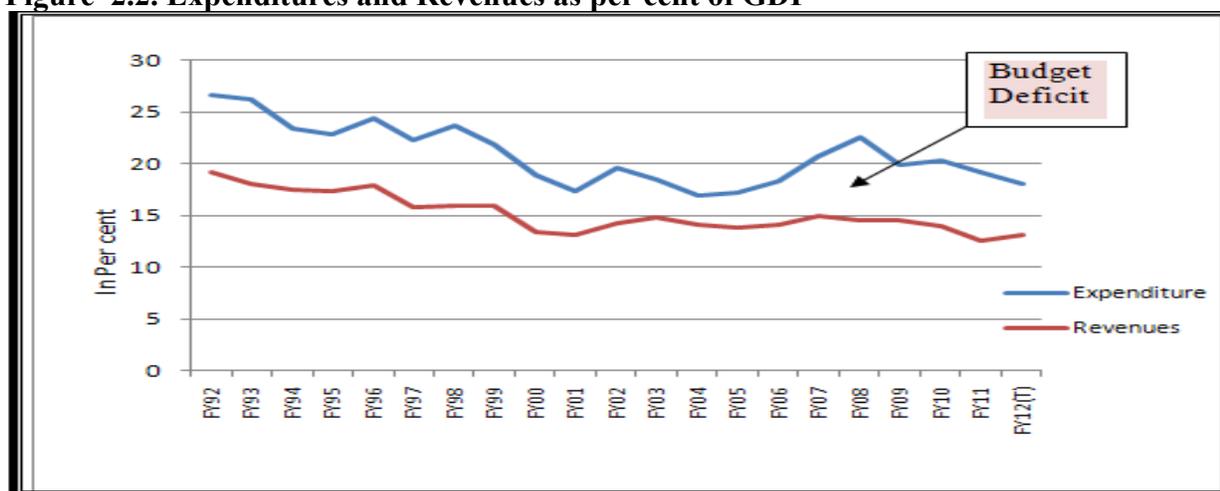
³ This entry gives the total public and private debt owed to non-residents repayable in foreign currency, goods, or services. These figures are calculated on an exchange rate basis, i.e., not in purchasing power parity (PPP) terms. Exchange rates: Pakistani rupees (PKR) per US dollar - 85.27 (2010).

Table 2.6. Fiscal performance, 1991-2011 (in Per cent of GDP)

	Period Improve 5 years 1991-1995	Period 2 Stability 3 Years 1996-1998	Period 3 V. improve 6 Years 1996-2004	Period 4 Poor 4 years 2005-2008	Period 5 Consolidation 3 years 2010-2011
TOTAL REVENUES	15.6%	14.0%	13.9%	14.6%	13.7%
Tax Revenues	11.8%	11.6%	10.9%	10.6%	9.7%
Non-Tax Revenues	3.4%	2.3%	3.0%	3.8%	4.0%
TOTAL	21.6%	19.9%	18.1%	20.5%	19.7%
Current Expenditure	16.7%	16.5%	15.5%	16.0%	16.3%
Defense	5.3%	4.5%	3.4%	3.0%	2.5%
Debt Servicing	4.8%	5.8%	5.5%	4.1%	4.4%
Current Subsidies	0.5%	0.4%	0.8%	2.0%	1.8%
General Administration	1.4%	1.8%	2.2%	2.7%	3.0%
Development	4.8%	3.3%	2.6%	4.5%	3.5%
FISCAL DEFICIT	-6.0%	-5.8%	-4.2%	-5.1%	-6.1%

Source: Reproduced from the data collected from Debt Policy Coordination Office (DPCO), Ministry of Finance, Fiscal Policy Statement 2011-12

According to Fiscal Policy Statement 2011-12, both revenues and expenditures have missed the targets and led to budget deficit during FY 2011. Gross revenue collection was 12.1 per cent lower (tax collection fell 6.4 per cent and non-tax collection were 23.6 per cent less than target), while total expenditures (current and development) were 2.4 per cent higher than the budgetary estimates. PSDP spending was 24 per cent lower than the target (Ministry of Finance, 2012). Overall performance of key macroeconomic indicators such as total revenue collection, total expenditures, public debt, and fiscal deficit deviated from fiscal targets during FY 2011-12.

Figure 2.2. Expenditures and Revenues as per cent of GDP

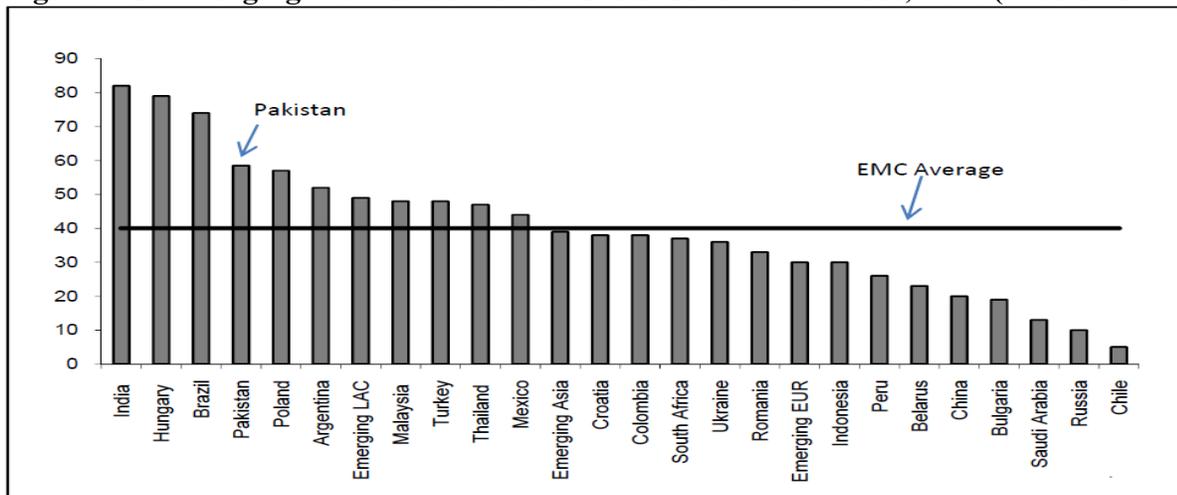
Source: Reproduced from the data collected from DPCO, Ministry of Finance, Pakistan Fiscal Policy Statement 2011-12

2.4. Public Debt

In 2005, Pakistan adopted a Fiscal Responsibility and Debt Limitation (FRDL) Act 2005. The FRDL was enacted to eliminate the “revenue deficit” and reduce public debt to a prudent level. The provisions of the act include: (i) eliminating revenue deficits to nil by June 2008 and thereafter maintaining a revenue surplus; (ii) ensuring that within a period of ten financial year, beginning from the 1st July, 2003 and ending on 19th June, 2013, the total public debt at the end of the tenth financial year does not exceed 60 per cent of the estimated GDP for the year and thereafter maintaining the total public debt below 60 per cent of GDP for any given year; (iii) reducing public debt by at least 2.5 per cent of GDP each year; and (iv) limiting the issuance of new government guarantees to 2 per cent of GDP in any given year. The Ministry of Finance publishes “Fiscal Policy Statement” and “Debt Policy Statement” each year to monitor implementation of FRDL act.

Pakistan has been facing financial constraints since long time e.g. at the end of financial year (FY) 2001 public debt was as high as 83 per cent of GDP. However, it reduced to 55.4 per cent by the end of FY 2007. But at the end of FY 2011 it has increase to 59.30 per cent of GDP. Pakistan’s gross public debt is approximately 20 per cent higher than the average emerging market countries (Ministry of Finance, 2011).

Figure 2.3. Emerging Market Countries: Gross Government Debt, 2010 (in % of GDP)



Source: Ministry of Finance, Economic Survey of Pakistan 2011-12

According to the Debt Policy Coordination Office (2011), increase in total public debt and shortfall in revenue during FY 2010-11 has mainly been driven due to increase in defence and security services expenditures, lower GDP growth as expected, acute energy shortage, high cost of doing business. Besides, distressing flood put an extra burden on fiscal operations. Secondly, Pakistan’s external debt grew by 24 per cent due to increase in foreign public debt inflows and depreciation in value of Pak Rupee. Pak rupee has lost 0.6 per cent approximately of its value against the US dollar during 2010-11. The total public debt at end of first quarter FY 2012 (end of September 2011) stood at US\$ 122.38 billion 52.6 per cent of GDP including external debt of US\$ 53.12 billion 22.8 per cent of GDP. The total public debt in terms of revenue has increase to 4.7 times during 2010-11.

Table 2.7. Public Debt, FY 2007 – FY 2012*

	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12*
	(In billion of Rs.)					
Domestic Currency Debt	2,601	3,266	3,852	4,651	6,014	6,223
Foreign Currency Debt	2,201	2,778	3,776	4,270	4,694	4,773
Total Public Debt	4,802	60,04 4	7,629	8,921	10,70 9	10,996
	(In percent of GDP)					
Domestic Currency Debt	30.0	31.9	30.3	31.3	33.3	29.8
Foreign Currency Debt	25.4	27.1	29.7	28.8	26.0	22.8
Total Public Debt	55.4	59.0	60.0	60.1	59.3	52.0
	(In percent of Revenue)					
Domestic Currency Debt	200	218	208	224	266	250
Foreign Currency Debt	170	185	204	205	208	192
Total Public Debt	370	403	412	429	474	442
	(In percent of Total Debt)					
Domestic Currency Debt	54.2	54.0	50.5	52.1	56.2	56.6
Foreign Currency Debt	45.8	46.0	49.5	47.9	43.8	43.4
Memo:						
Foreign Currency Debt (in US\$ Billion)	36.4	40.7	46.4	50.0	54.6	54.6
Exchange Rate (Rs./US\$, E.O.P)	60.4	68.3	81.4	85.5	86.0	87.5
GDP (in Rs. Billion)	8,673	10,24 3	12,724	14,83 7	18,06 3	20,905
Total Revenue (in Rs. Billion)	1,298	1,499	1,821	2,078	2,261	2,485

Source: Reproduced from the data collected from DPCO, Ministry of Finance, Pakistan, Debt Policy Statement 2011-12

The overall debt servicing levels have been increased since 2008-09. During the FY 201-11 the total external debt servicing was US\$ 4,799 million and during the first quarter of 2012 (July-September, 2011) was recorded US\$ 1,356 million.

Table 2.8. Pakistan's Public External Debt Servicing

Years	Actual Amount Paid	Amount Rolled Over	Total
	(in million of USD)		
2006-07	2,326	1,300	3,626
2007-08	2,558	1,200	3,758
2008-09	3,986	1,600	5,586
2009-10	3,880	1,723	5,603
2010-11	3,311	1,488	4,799
2011-12*	656	700	1,356

Source: Reproduced from the data collected from DPCO, Ministry of Finance, Debt Policy Statement 2011-12

The FRDL Act 2005 requires “(i) eliminating revenue deficits to nil by June 2008 and thereafter maintaining a revenue surplus” but revenue deficit for FY 2011 is 3.3 per cent of GDP.

Table 2.9. Revenue Balance, FY 2003 – FY 2011 (in % of GDP)

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Revenue Balance	-1.5%	0.3%	0.5%	1.0%	-0.6%	-3.2%	-1.2%	-2.4%	-3.3%

Source: Reproduced from the data collected from DPCO, Ministry of Finance, Fiscal Policy Statement 2011-12

The public debt stood at 59.3 per cent during FY 2011, but within the limits of 60 per cent of GDP as envisaged in FRDL Act 2005 (DPCO, 2012). According to the Fiscal Policy Statement 2011-12 the public sector enterprises (PSEs) are making losses because they lacked the capacity to perform their obligations and have been an increasing burden of the government contingent liabilities.

3. Closing the Financial Gap

Conventionally, in developing countries infrastructure projects are financed by the public sector through taxes and by lending from multilaterals financial institutions and donors on concessional terms. However, in many low income countries infrastructure projects cannot be financed through tax revenues because of smaller tax net, inefficient tax administration and weak growth (Lin and Doerte, 2012). Besides, government cannot impose additional taxes, increase tax rates and tax net due to political reasons.

Lin and Doerte, (2012) explained other options to finance infrastructure projects such as, i) capital market – in developing countries capital market is very limited and unable to finance infrastructure projects. Major investors are bankers that prefer short-term maturities to meet their liability structure. Whereas institutional investors like pension funds and insurance companies are underdeveloped. In addition, saving rate in developing countries is also very low and unable to meet the growing demand of infrastructure, ii) issuance of international bonds – bonds could be supplement to domestic savings to finance infrastructure projects. But it involves significant risks such as uncertainty of returns, exchange rate exposure, repatriate of foreign investments and transaction cost, iii) Lending from international financial institutions – developing countries' debt ratio to GDP is generally high and their credit rating is low, which may not convince the creditors, and iv) private sector participation – private sector participation in infrastructure development has not limited to aforesaid types of finances. Private participation often engages through public private partnerships (PPPs) in infrastructure financing.

4. Public Private Partnerships – A Solution?

PPPs is a concept that involves the public sector authority and the private sectors working together to provide services. PPPs established through a long-term contract (usually around 20 to 30 years) between contracting authority (government) and the private investor. Under PPPs contract the private investor is generally responsible for designing, financing, constructing, maintaining, and operating the facility over the contracting period, before transferring the asset to the authority. During the operation the private investor receives a stream of payments either

through user charges or government payments as compensation (Lin and Doerte, 2012). PPPs allow each partner to concentrate on activities that best suit their skills. For the public sector that would mean focusing on developing policies and identifying service needs, while for the private sector the key is to deliver those needs efficiently and effectively.

There is no single universal definition of PPPs exists (Lakshmanan, 2008). The meaning of PPPs is different at international level and national level, and even when comparing different national infrastructure sectors (Alfen, 2010). There are as many definitions and meanings of PPPs as corresponding publications or practical contexts in which the term is used:-

PPP is a joint venture between public and private sector. The expertise and resources of both the public and private sector are supplemented to provide services to the public at the best value for money over the contract period of the partnership (Adrias, 2010).

PPPs are the forms of cooperation between the public and private sectors for the funding, construction, renovation, management or maintenance of an infrastructure or the provision of a service (Regan, 2009). Public private partnership is an arrangement in which the private sector supplies infrastructure assets and services traditionally provided by the governments (Peter and Pierre, 2008). PPPs – [An] institutional transboundary interactions between public and private actors, which aim at the provision of collective goods (Schaferhoff et al., 2009).

Public partner and private partner will establish a joint entity that will have the task of ensuring the delivery of the work or services for the benefits of the public (Alfen, 2010).

The key characteristics of PPPs are: i) long term contract between partners (for provision of specified type of public services in a specified area); ii) risk sharing between parties; iii) bundling of tasks (i.e. designing, financing, building, and operation of project contracting out to a single private firm); iv) identification of user needs; and v) mutual contribution of competence and resources for joint production (Alberto et al., 2010).

There are various forms of PPPs exist. The contract between the public sector authority and the private party defines the nature of the partnership between the parties. This partnership can take many different forms and range from a fairly simple contractual agreement, such as supplying a specific service (e.g. garbage collection), to complex arrangements such as the construction, operation, maintenance, finance and provision of an infrastructure service (e.g. construction of a new airport). Some of the (UNESCAP, 2007; Regan, 2009) common structures in PPPs are:

Service Contracts Outsourcing/contracting out

Management Contracts

Supply or Service Contract

Maintenance Management

Operational Management

Lease

Standard International Build-Own-and-Transfer (BOT) variants:

Build-Own-and-Transfer (BOT)

Build-Lease-and-Transfer (BLT)

Build-Own-and-Operate (BOO)

Build-Transfer-and-Operate (BTO)

Rehabilitate-Operate-and-Transfer (ROT)
 Rehabilitate-Own-and-Operate (ROO)
 Design, Finance, Build, Operate and Transfer (DFBOT)
 Concession
 Franchise
 Licensing:
 Quantity Licensing
 Quality Licensing
 Private Finance Initiative (PFI)
 Annuity Model

4.1 Advantages of PPP Procurement

Empirical studies recognise PPPs in infrastructure development as an engine of growth. PPPs provide a new source of investment capital for required infrastructure projects, free up government resources and fuel growth, innovation, technology and know-how. PPPs focus on the satisfaction of the general public in terms of more convenient and acceptable quality of public service at affordable prices (Yuan et al., 2009). PPPs bring private investment to the market, while creating long-term employment, increase efficiency and productivity, reduce costs, generate more wealth and higher standard of living and strengthen economy. PPPs encourage development of specialist skills, such as life cycle costing. PPPs make projects affordable and maximise the use of private sector skills (IPDF, 2007).

PPPs reduce government sovereign borrowings and associated risks, drive the creation of local long term capital markets, utilize efficiencies of the private sector in running public services and stabilize economic growth, employment creation and certainty. Under PPPs arrangements governments bear little or no risk; however, while remaining entitled to impose penalties or reduce payments, abatements or compensation if the service is not available or not delivered to the specific agreed standards (Jin and Zhang, 2010).

PPPs offer greater price certainty than more traditional forms of procurement. Across Europe PPPs is growing element of public sector procurement due to effective project delivery (better and early project delivery) and cost effectiveness (Ugboaja, 2010). Among the benefits is a single point of responsibility for the design and the construction in PPPs procurement method. Therefore, claims are also less likely to materialise due to the single point of responsibility. In other words, projects can be developed within budget and scheduled period under PPPs modality (IPA, 2010 and Koveos and Yourougou, 2008).

PPPs in infrastructure development usually generate efficiency gains in provision of services compared with conventional procurement methods. Furthermore, PPPs bridge the financial gap for the public sector. The private investor brings better financial and managerial discipline in the project company. This results in better and more sustainable project delivery than conventional government financed projects (Smith, 2007). PPPs generally provide public services cheaply and quickly and they can reduce pressure on government budgets (Hodge and Greve, 2007).

PPPs can free up government resources and fuel growth if the right factors are in place: the number, value, and type of PPPs, combined with supportive policies and institutions. Empirical studies suggest that countries with a large number of PPP projects generally enjoy better infrastructure. This means a higher standard of living, better prices, and elevated levels of productivity: i) PPPs foster services expansion and bring efficiency; ii) PPPs projects deliver in less time and offer more choices and modern services; and iii) risks are shared based on resources and ability of the partners. PPPs are the best method of procurement especially to deliver large, complex and expensive projects, achieving significant savings in both time and cost (IPA, 2010 and Koveos and Yourougou, 2008).

4.2 *Key Advantages of PPPs*

i) PPPs offer affordable good quality of services that are to be maintained for the entire life of the project; ii) PPPs maximise the use of private sector expertise and capital; iii) payment is based on availability and standard of the services; and iv) PPPs force the public sector to focus on outputs and benefits from the start (IPDF, 2007). PPPs have various non-financial benefits such as private sector has better managerial efficiency and cost recovery aptitude of the private sector that allows the public sector a degree of control over the project, rigorous risk analysis/allocation, new and innovative approach and capability of assets operation and maintenance.

Empirical evidence shows that PPPs improve infrastructure services and further play important roles in determining economic and social development. However, the success of the PPPs scheme depends on clear PPPs guidelines and policy, an appropriate legal framework and institutional and administrative set ups (Ugboaja, 2010). Public administration, policies, laws and institutions are the key drivers of private sector participation in infrastructure services provision (Koppenjan and Enserink, 2009). Effective and efficient institutional structure (legal and regulatory frameworks) is an essential element of successful public partnership with the private sector (Jamali, 2004).

5. **Empirical Review of Literature**

A review of empirical evidence points to a positive association between infrastructure investment and productive capacity & output growth, domestic and overseas trade, lower private costs, employment opportunities and incomes. Infrastructure also develops human capital and protects property rights. Infrastructure development and financing has formidable challenges. Existing poor performance of the public sector, over staffing and increasing demand of infrastructure services require huge investments that are beyond the capabilities of the government's scarce resources. Beside, public investment in infrastructure increases the taxation burden (Conrad and Seitz, 1998). Subsequently, public sector inefficiency, financial constraints and high levels of public debt have given rise to private sector participation in providing public infrastructure facilities. Private sector partnership in infrastructure development may improve efficiency, can help extend services delivery and remedy for government budget deficits (Koppenjan and Enserink, 2009).

Public infrastructure projects can be financed through various resources in developing countries like Pakistan such as through tax revenues, bilateral, multilateral lenders and private

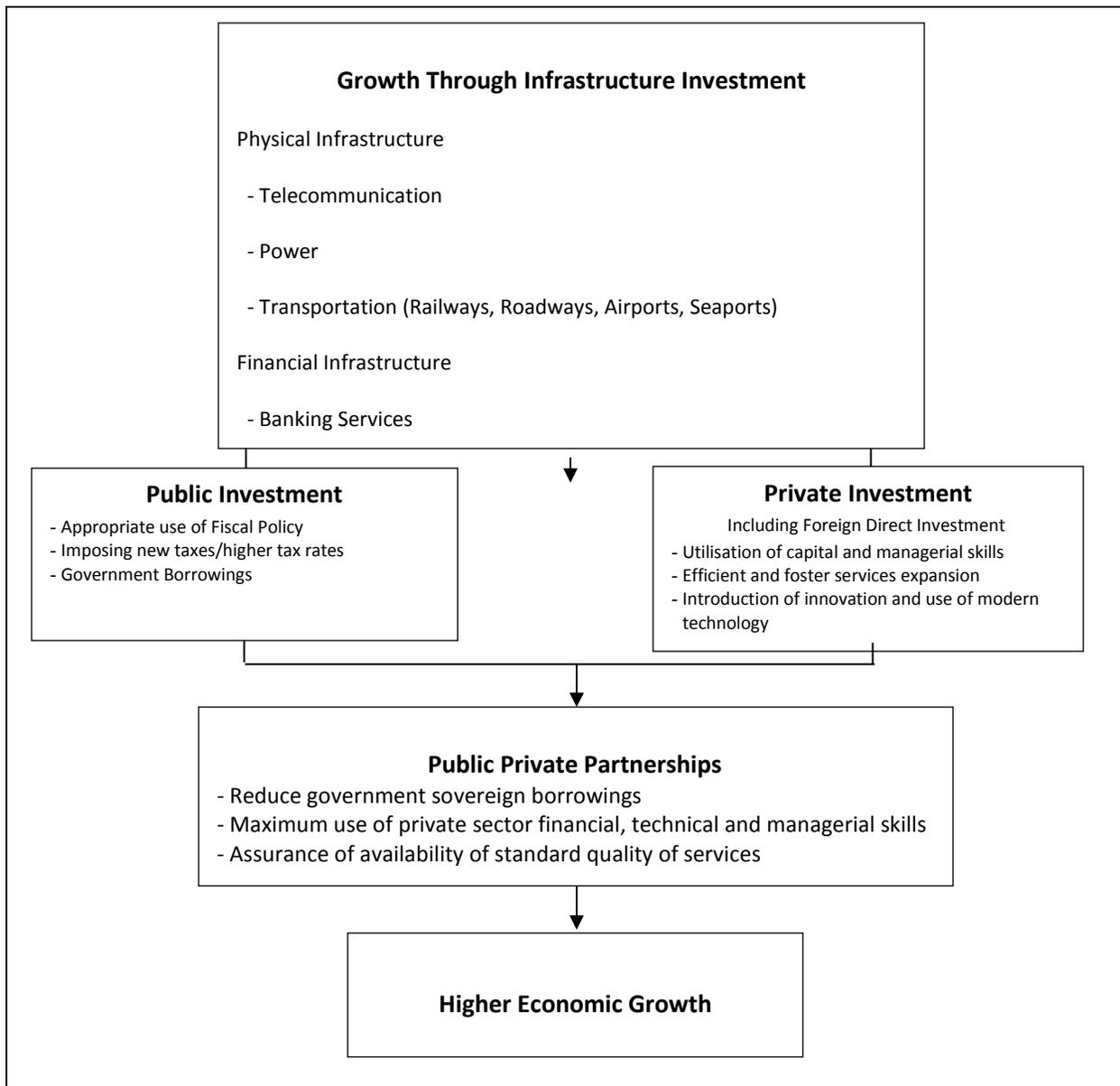
investment. Despite borrowing Pakistan also depends on external financial assistance for budget deficit. In FY 200-10 external assistance was lower than the expectation, which led to sharp cutbacks in expenditure for the public sector development program (Ministry of Finance, 2011). According to the Moody's (2012) Pakistan's broad policy framework has not been robust enough to ensure support from donors and creditors or to effectively contain macroeconomic imbalances, which have arisen since the global financial crisis in 2008.

During the last two decades, demand for infrastructure services has been increased dramatically in Pakistan due to drastic increase in population and urbanisation. Infrastructure projects in Pakistan have traditionally been established, owned and managed by the public sector. The role of the private sector has been limited, generally restricted to subcontracting at construction stage (Nataraj, 2007). Therefore, projects are typically financed through taxes or borrowing from domestic commercial banks and/or also from international financial institutions. Conversely, the government is no longer being able to finance infrastructure projects from public funds due to budgetary constraints. Besides, weak economic conditions, high cost of debt servicing, substantial defence and security expenditures and smaller/unexpected foreign aid inflows.

The possible options for Pakistan to finance infrastructure facilities could be: i) Lending from international financial institutions – under FRDL Act 2005, the country cannot borrow more than 60 per cent of GDP. However, during FY 2011, the country's public debt has reached at its highest limits i.e. 59.3 per cent of GDP. The total public debt in terms of revenue has increase to 4.7 times during 2010-11. This option is no more workable for the time being. Secondly, country's credit rating is low, which may not strong enough to convince international financial institutions (creditors). ii) Capital market – the country's capital market is very limited to only 3 stock exchanges. Therefore, limited network is unable to attract investors from small cities and remote areas. iii) Infrastructure financing facilities – infrastructure projects typically require long-terms investment (10-20 years). Therefore, traditional lending resources (commercial banks) do not offer long-term loans facility for infrastructure projects. iv) Tax revenue – fiscal deficit is around 4–6 per cent of GDP during two decades, current budget deficit is 4 per cent of GDP. Conversely, government cannot increase its revenues by imposing additional taxes, increase tax rates and tax net due to adverse effects on weak economy and political reasons. v) Issuance of international bonds – this option may not attract international investors. Because credit rating agencies have assessed that the country's susceptibility to event risk is high such as uncertainty of returns, exchange rate exposure and higher transaction costs.

Pakistan needs well developed, efficient and sustainable infrastructure to achieve higher growth rate. But the current economic position does not allow the country to employ traditional infrastructure financing methods i.e. public funds because of financial constraints including high level of public debt, lower credit rating, high expenditures and lower revenues. Today, governments all over the world are seeking for alternative measures, beyond the traditional ways to finance public infrastructure projects. Accordingly, government of Pakistan should adopt an innovative approach to deal with financial constraints for economic revival and to avoid future debt traps. In light of the literature review and appraisal of Pakistan's economic data, ways of possible causalities are ascertained to achieve higher economic growth through well developed infrastructure facilities with fewer burdens on the public sector budget.

Figure 3.1. Possible Causal Direction.



Source: Author

Public sector infrastructure investment could be supplemented through private sector participation. A solution could be to take an initiative to establish partnership with private sector investors that could meet the increasing infrastructure services demand. However, absolute reliance on the private sector will also not produce the expected results. Conversely, entire depending on the public sector is not a viable option for achieving the desired outcomes. This scenario makes the concept of public private partnerships attractive for provision of high quality infrastructure facilities. As PPPs create more job opportunities, forego the investment outlays and subsequently increase growth rate (Lin and Doerte, 2012). Therefore, PPPs could be the best possible option for Pakistan to utilise private sector’s financial, technical and management skills for infrastructure facilities improvement.

6. Concluding Observations

Population growth and urbanisation is increasing rapidly in Pakistan. This dramatic increase is putting pressure on infrastructure services demand. Conversely, improvement in public infrastructure facilities has not kept pace with population growth and urbanisation. Consequently, the gap between infrastructure services demand and supply is widening continuously. Therefore, it is suspected that a large part of the population will not have access to infrastructure facilities in future, if appropriate measures are not taken at the present.

Empirical studies recognized that infrastructure is an integral part of economic growth for economies. But the developing countries like Pakistan are lagging behind in achieving their development goals mainly because of inadequate infrastructure facilities. Alongside other problems like political and governance issues, weak institutional framework, poor infrastructure planning and policies, financial constraints is the major barrier for infrastructure development in Pakistan. At present, the country is unable to finance infrastructure projects through traditional methods: i) borrowing – under lending restrictions of FDRL Act 2005, ii) issuance of international bonds – due to high susceptibility to event risk factor, iii) capital market – which is very limited and unable to use savings of remote areas, iv) unavailability of long-term lending facility for infrastructure projects financing, and v) cannot impose new taxes or increase tax rates – due to weak economic conditions and political reasons.

Public debt has reached at its highest levels in Pakistan. The total public debt in terms of revenue has increased to 4.7 times during 2010-11. Studies investigate that decline in growth increases public debt. Without strong growth, it will be difficult to reduce debt burden. Therefore, increase in revenues and prudent fiscal operations are essential to limit public debt growth. Present situation needs growth lifting solution. Infrastructure development can be an important driver of economic growth but without putting further pressure on already high public debt levels. In this scenario private sector participation through public private partnerships can be a part of the solution to the development financing problem. Therefore, it is ascertained that public private partnerships for infrastructure development in Pakistan is intensely needed and justified. Provided projects are selected and prepared appropriately, which are self-financed and sustainable. Simultaneously, an efficient and effective institutional framework is also needed to monitor and regulate the PPP projects prudently and successfully.

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