

IMPORTANCE OF INFRASTRUCTURE

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A Quote

“The link between infrastructure & economic development is not a once for all affair.

It is a continuous process, & progress in development has to be preceded, accompanied, & followed by progress in infrastructure, if we are to fulfill our declared objectives of generating a self-accelerating process of economic development.”

Dr. V. K. R. V. Rao [noted Indian economist, early 1980s]

Infrastructure for Development , WDR 1994

- **World Bank's World Development Report 1994 titled "Infrastructure for Development" states that "Infrastructure if cannot be the engine" then it is the "wheels" of eco. activity.**
- **Though no precise relationship has been reported between growth & investment in infrastructure, but WDR stated that 1% increase in the stock of infrastructure is associated with 1% increase in GDP across all countries.**
- **Generally around 6.5% of the total value added is contributed by infrastructure in low income countries, 9% in middle income countries & 11% in high income countries.**

Infrastructure endorses Growth

- **Good quality infrastructure is important not only for faster economic growth but also to ensure inclusive growth i.e. when growth benefits are shared by the majority of people of the city/region/country.**
- **inclusive growth will alleviate poverty & reduce the economic inequality i.e. the gap between rich & poor.**
- **For example, Micro, small & medium enterprises (MSME) are dispersed throughout the economy, their production & their growth require access to quality & reliable infrastructure services to compete efficiently with large-scale enterprises.**

Infrastructure endorses Growth

- **Large-scale enterprises are usually located at prime locations (near port, transport hubs) & very resourceful i.e. if required they can build their own infrastructure like small power plants or generators.**
- **While Small enterprises, usually labour-intensive units, are dispersed widely in the economy & have to rely on the availability of the general infrastructure facilities.**
- **By building good quality infrastructure, the small enterprises can successfully compete with large-scale industries, this will help alleviate the poverty in the country.**

Infrastructure endorses Growth

- Similarly expansion of infrastructure facilities such as irrigation, rural electrification, roads & road transport promotes agricultural produce & agro-processing industries.
- These infra. facilities help farmers & owners of agro-processing industries in not only getting raw materials, fertilizers & other inputs at cheap rate but also enable them to take their products to the markets located in big towns & cities.
- the expansion of infra. facilities ensures sustained growth of employment in agriculture & small-scale rural industries & brings prosperity in the rural areas, thus ensuring inclusive growth

Infrastructure endorses Growth

- This also prevents mass exodus of rural population to urban areas
- Thus it can be summarised that insufficient quantity of power, water, transport etc. result in sub-optimal utilization in manufacturing, agricultures, service sector, etc. & deficient transport sector further deteriorates the productivity.
- Also Besides promoting growth, infra. is an effective cure of slowdown, better than tax cuts & other Govt. spending
- Hence for inclusive growth some more considerations are required while planning, implementation & management of infrastructure.

Infrastructure & Economy – ESol 2013-14

- **Economic Survey of India, 2013-14 emphasises the importance of quality infrastructure by stating that “Rural economic growth in recent years has put enormous pressure on existing infrastructure particularly on transport, energy & communication. Unless it is significantly improved infrastructure will continue to be a bottleneck for growth & obstacle to poverty reduction”.**
- **Hence it can be said that, it is the challenge to ensure strong, sustainable & balanced development through integration of the economy with environmentally sustainable development of infrastructure.**

Infrastructure & Economy - Academia Input

- **Published Research in Economic Annals 2013, examined the relationship between infrastructure & economic growth by analyzing annual infrastructure investment 1999-2008.**
- **It used Principal Component Analysis & concluded that 7 broad sectors of infrastructure are complementary in nature & mutually reinforcing. These are: Road construction; Railways; Electricity gas & water supply; Communications; Irrigation; Storage; & Ports**
- **It also established that Infrastructure exhibits a very high rate of return, when compared to other investment, which might be due to its spill-over or externality effects.**

Infrastructure and Economic Growth

- **Infrastructure affects economic growth in two central ways— by directly boosting activity & by reinforcing productivity.**
- **Former involves construction and operation of new or upgraded infrastructure which supports economic activity, boosting demand for goods & services and providing jobs.**
- **Later involves infrastructure reinforcing productivity throughout an economy. For example:**
 - **Good quality roads & railways, make it easier, cheaper & faster to transport goods & people, while airports & sea ports connect firms across international boundaries, facilitates trade & investment.**

Infrastructure and Economic Growth

➤ Example *contd.*:

- Reliable electricity, water & telecoms infrastructures enable firms to function efficiently & without disruption, and support wider goals, such as those related to the environment.
- All this means that even in the most advanced economies, if infrastructure capacity does not increase in line with economic and demographic growth, it can instead act as a drag on progress.

IMF Study, Oct. 2014

- Infrastructure (infra.) spending yields best results, though it has the 'longest implementation lags'; tax cuts are obviously faster but the results will be modest if these are not targeted at 'credit-constrained consumers'.
- Upper limit for impact of infra. spending is 1.8, i.e. **Re 1.0 spent on infrastructure will lead to a Rs. 1.8 impact on the economy.**
- Upper limit for tax cuts is 1/3rd of this, as consumers who are facing uncertain job prospects, will not spend money saved through the tax cuts.
- Other forms of Govt. spending like social security, transfers to local govts & assistance to small enterprises are likely to be more beneficial than tax cuts

IMF Study, 2016

- Welfare multipliers of public spending (the consumption equivalent change in welfare for one dollar change in public spending) in a DSGE model. The welfare multipliers of public infrastructure investment are positive if infrastructure is sufficiently effective
- A dollar spent by the government for investment raises domestic welfare by equivalent of 0.8 dollars of private consumption.
- IMF (2014) concludes that increased public infrastructure investment raises output in both the short and long term, particularly during periods of economic slack and monetary accommodation.

IMF Study, 2016

- **improving the productivity of public spending is the key to fully reaping the benefits of an infrastructure spending push**
- **IMF (2015) findings were that improvements in public investment management can significantly enhance the productivity of public investment and suggested that governments should strengthen institutions that are responsible for the planning, allocation, & implementation of public investments.**
- **Policy implication of this 2016 study being - The time seems right for a Global Infrastructure Push : it would not only increase output & reduce public debt-to-GDP ratio (shown by earlier studies), but also yield quite sizable welfare benefits.**

Other Studies

- **Studies indicate that with a 20% sustained increase in public investment in infrastructure, Govt can accelerate real growth by 1.8% pts in medium to long run (6 to 10 yrs) after the policy change. This will be accompanied by a 0.2 % decline in the rate of inflation.**
- **Increase in income will lead to a 0.7% point annual reduction in poverty in rural India.**
- **Potential for achieving the much-debated 8 to 10% aggregate real GDP growth in the Indian economy is thus established.**
- **Infrastructure development boosts short-term as well as potential growth rate of GDP.**

Summarizing

- **Infrastructure providing efficient services, corresponding to effective demand, manifests major benefits in economic growth, poverty alleviation & environmental sustainability.**
- **Growth raises demand for infra. with increase in income levels, & change in composition of infra. occurs in following manner :**
 - **for low income countries, basic infra. like water, irrigation are most important**
 - **in middle income economies, demand for transport grows fast,**
 - **in high income economies, power & telecommunication occupy more importance.**
- **Due to such linkages between the economy & infrastructure, efficiency, competitiveness & growth of the economy depends upon the development of the infrastructure sector.**

India's Competitiveness

- **Success of 'Make in India' program as manufacturing competitiveness critically depends on infrastructure.**
- **For faster growth to meet the target of USD 5 trillion economy by 2025, more supply-side reforms are needed.**
- **Creating new & upgrading existing infrastructure is key to raising India's competitiveness & achieving this target.**
- **Infrastructure creation is labour absorbing which boosts employment & income generation in the economy & further spurs domestic demand.**

India's Competitiveness

- Improved infra. capacities also create efficiency gains through improved logistics & networks, which would improve the competitiveness of the economy.
- This can boost the virtuous cycle of higher investments, growth and employment generation in the economy.
- The emerging economies need to enhance their institutions & their infrastructure significantly if they are to realise their long-term growth potential
- Complexities of infrastructure development need to be understood in order that the support frameworks are sensitive to these needs:

Complexities of Infrastructure

- **Lack of infrastructure is the primary constraint on economic growth.**
- **Infra. development decisions taken now will shape the future world.**
- **Though Govt. is progressively adopting PPP, yet more effective models for co-working between public & private spheres need to be devised**
- **Governments & businesses must make vital strategic decisions now & promote changes in behaviour, before Climate Change becomes severe.**
- **Natural disasters / unpredictable events test the resilience of infra., not only in terms of reconstruction, but also in terms of disruption to supply chains.**
- **High-speed broadband is already a part of infra. thinking, but innovations, like IoT & AI , will make infra. more efficient & sustainable**
- **Solutions to be explored for the needed extent of financing infra.**

**Thanks for
kind
Attention**