

Where is India's Growth Headed?

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The recent decline in investment in India has raised concerns about an ongoing economic slowdown. There appear to be elements of both a business cycle and trend slowdown. The paper identifies a cyclical downturn post-financial crisis caused by external and domestic idiosyncratic factors. India's economy was part of the global slowdown owing to its trade and financial linkages with the rest of the world. Further, over exuberance in investments in infrastructure and non-infrastructure capital due to easy financing conditions faced a correction post-crisis, dragging down growth below its long-term trend.

Besides external and domestic cyclical reasons, investment projects were also stalled due to policy decisions, or in some cases, policy inaction in the face of regulatory hurdles and severe bottlenecks in factor markets. The policy framework that hampered firms' investment activity and investors' business confidence acted like a negative shock which could have affected the long term component of output growth, namely the trend.

Against this backdrop, Patnaik and Pundit (2016) on which this one-pager is based asks the question: where is India's growth headed? The paper argues that there are two reasons to support the long run growth of output. One is that negative shocks to trend arising from policy uncertainty can be rendered temporary by appropriate policy changes that can act as positive shocks to growth. The policy uncertainty and inaction in India, with frictions in various factor markets, may be a negative shock to trend growth. But appropriate policy changes aimed at reform can resolve the bottlenecks so that the negative shock has a temporary effect. These policy changes can in turn act as a positive shock to growth.

The second reason for believing that trend growth can be strong going forward is that the long run supply of factors of production – namely labour, human capital, infrastructure and non-infrastructure capital which contributed to growth in the last 3 decades appears to be

robust; and total factor productivity which measures efficiency of inputs has a potentially strong growth path as well. First, the supply of quality-adjusted labor does not appear to be declining given that: the proportion of the population in the working-age group is favorable to a strong supply; there is scope for increasing the labor force participation rate (LFPR); and education and skill levels are low, but improving. Then, though investment has slowed recently, the rate of gross fixed capital formation in India is still high at around 30% of Gross Domestic Product (GDP) and the growth of capital stock remains one of the highest among emerging economies.

Again, barring the recent slowdown, investment in infrastructure capital has been increasing over the years, and additions to the physical stock of infrastructure, in terms of roads, rail, telecommunication networks, remain strong. Of course, there are a number of frictions in these input markets, and even if sufficient and high quality resources are available, laws and regulations must enable their efficient allocation to contribute to output growth in the future.

Finally, the strong output growth in the past 3 decades was not only due to additions to labor and capital, but also because of improvements in productivity. Total factor productivity (TFP), computed as a residual in the production function, dragged down growth in the 1980s, but has been increasing since then to become a key contributor to growth. Based on the literature on factors facilitating productivity growth, such as globalization, development of information and communication technologies in India, and spillovers from infrastructure development, the paper conjectures that productivity can potentially leap forward to the frontier with the right policy environment.

The paper decomposes trend growth of GDP per worker into its components for the period 1980 - 2013 using a growth accounting approach based on a Cobb-Douglas production function. This suggests that while capital has always been a key contributor to growth through the

decades, the role of TFP has assumed greater importance. The paper makes assumptions for the growth of factors of production to project trend growth rate going forward (2014 – 2030). In the baseline scenario, the paper projects trend growth of GDP per worker to be 6.5% on average and present some downside and upside scenarios of alternative growth paths.

In other analyses of long-term growth, typically cross country studies, similar optimistic results are obtained for

India. The models have the same basic ingredients of trend output determined by a Cobb Douglas production function with constant returns to scale featuring physical capital, human capital and labor as production factors along with TFP. It is noteworthy that in all these cross country projections, India is estimated to have the highest growth rate in the world by 2050, particularly in the period after 2020 when China is expected to slow down.

Table: Contributions to GDP per worker growth

	Percentage points		%		
	TFP	Capital	Infrastructure	Human capital	GDP
1980s	-1.10	0.79	2.18	1.12	3.00
1990s	0.07	1.07	0.66	1.41	3.21
2000s	1.91	2.06	0.70	0.93	5.60

GDP = gross domestic product, TFP = total factor productivity.

Source: Author's calculations.

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