Omer Siddique
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Total Factor Productivity and Economic Growth in Pakistan: A Five Decade Overview

- The evolution of total factor productivity (TFP) is a key determinant of the long-run output growth. There is substantial evidence available that shows that the countries that managed to boost their TFP grew at a much higher rate and for a sustained period.
- This study presents an account of Pakistan's output and TFP growth rates for the total economy as well for three main sectors, viz. agriculture, industry, and services sectors.

Box 1: What is TFP?

- In the growth accounting framework, total factor productivity (TFP), also known as multifactor productivity, tells us how productively the economy uses the factors of production to produce output.
- TFP is that part of the GDP growth that cannot be attributed to factor inputs.
- TFP may also increase economic growth by allocating inputs more appropriately and efficiently, resulting in production getting very close to the optimum combination of inputs and outputs.

The Findings

Table 1: Sources of Growth in Pakistan's Economy:1972-2019

	Annual Average Growth (%)				Investment (% of GDP)
Period	GDP	Capital	Labour	TFP	
1972-2019	4.81	4.11	2.21	1.62	18.32
1972-1980	5.06	1.80	5.04	1.71	15.00
1981-1990	6.00	6.25	-0.06	2.77	23.43
1991-2000	4.01	4.49	2.81	0.33	20.82
2001-2010	5.06	3.32	4.21	1.31	17.03
2011-2019	4.28	2.82	1.55	2.07	14.60

- As Table 1 indicates, GDP, TFP, and capital grew at the highest rates during the 1980s. The growth rate of employed labour was negative during that period. Hallmarks of this period were halting the nationalization regimes of the 1970s and the revival of private industrial investment.
- The impressive, important performance also came on the back of the large public sector investments made in the 1970s, such as Tarbela Dam, and fertilizer and cement factories
- Table 1 also shows that TFP was the highest in the period (the 1980s) when the investment-GDP ratio was also the highest at 23.43 percent.
- In the 1990s, also sometimes remembered as Pakistan's "lost decade", the economy took a turn for the worse.
- There are many explanations, such as soaring external and public debts, for the lackluster performance of Pakistan's economy during the 1990s.
- The TFP growth rate improved during the 2000s to 1.31 percent and so did the GDP growth rate, which was 5.06 percent. The improvement in the growth rate in the 2000s can be attributed to improvements in stabilization policies and most importantly to structural reforms. There were improvements in trade openness and financial depth.

- In the 2010s, the GDP growth declined to 4.28 percent from 5.06 percent in the 2000s. What is surprising, though, is the impressive growth rate, by Pakistan's standards, of TFP.
- It grew at 2.07 percent during this period, which is higher than TFP growth rates in all the decades except for the 1980s.
- In the 2010s, the TFP growth rate accounted for almost half of the GDP growth during the decade. It may reflect, the growing contribution of the services sector in Pakistan's economy, which requires less investment as compared to the industrial sector and an increase in capacity utilization, especially in the latter half of the decade, which was lying idle due to the energy crisis in the first part of the 2010s

INTERNATIONAL COMPARISON

Table 2:GDP and TFP Growth Rates (%): Cross-Country Comparison

	1971-2017		1971-1980		1981-1990		1991-2000		2001-2010		2011-2017	
Country	GDP	TFP	GDP	TFP	GDP	TFP	GDP	TFP	GDP	TFP	GDP	TFP
Pakistan*	4.81	1.62	5.06	1.71	6.00	2.77	4.01	0.33	5.06	1.31	4.28	2.07
India	5.40	1.37	2.96	-0.30	5.40	1.75	5.32	1.69	7.17	2.40	6.50	1.31
China	8.50	2.87	6.03	0.27	8.87	3.36	9.92	4.55	10.02	3.54	7.30	2.54
South Korea	6.59	1.94	8.46	2.66	9.32	2.97	6.72	2.10	4.45	1.03	2.89	0.54
Taiwan	6.41	2.36	9.94	3.19	7.89	3.23	6.49	2.21	4.08	1.65	2.46	1.14

- Pakistan's TFP growth rate, compared internationally, is not dismal, especially when compared with India's TFP growth.
- Pakistan's lackluster TFP growth performance, however, becomes clearer if compared with other high-performing countries, especially China and Taiwan.
- During the current decade, though, surprisingly, Pakistan's TFP growth is quite impressive at 2.07 percent compared to India's 1.31 percent. It is the period during which India's GDP has grown at 6.50 percent whereas Pakistan's GDP growth rate is 4.28 percent.

Takeaways

- On average it is the input accumulation that has driven growth in Pakistan. It was only in the 1980s and 2010s that the TFP growth contributed respectably to the output growth—in the total economy and the industrial sector. In the other sectors, the main contributors to the output growth have been capital and labour.
- The labour input has contributed the most in the agriculture output growth, except for in the 1980s.
- In the services sector, the main contributor has been the capital input except for in the 1980s.
- There has been some revival in the TFP growth in the current decade (the 2010s) because of, perhaps, the utilisation of idle capacity and some of the reforms undertaken in the previous decade.
- The Paper argues that there is substantial scope for the private sector to invest and lead the economic recovery of Pakistan