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## Atmanirbhar Bharat Abhiyaan And Skill India Mission: Way Forward For Long-Run Economic Growth Of India

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### Abstract:

The present study attempts to look into the Atmanirbhar Bharat Abhiyaan and Skill India Mission in the light of the Endogenous Growth Model and the New Growth Theory. I employ the Ordinary Least Squares (OLS)-based Auto Regressive Distributed Lag (ARDL) approach to estimate the determinants of economic growth of India in the long-run for the period 1960 to 2014. The choice of the study period is based on data availability and also on the fact that 2014 has been threshold year for India. A number of institutional reforms have been undertaken in the country since the year 2014. Human capital followed by physical capital and openness are found to be main determinants of growth for the period 1960-2014. The institutional variables are insignificant during the study period. Since 2014 there has been a shift in political regime which has ushered a new wave of institutional reforms. The study tries to justify the ongoing reforms undertaken to address the weak institutional quality observed in our period of study.

**Keywords:** *Atmanirbhar Bharat Abhiyaan, Skill India Mission, Endogenous Growth, New Growth Theory, Time- Series Model*

### I. INTRODUCTION

Economic growth has the power to transform societies, but growth alone is not enough. To ensure that the benefits of growth reach every citizen of the country, growth needs to create more, better, and inclusive jobs. Improving financial access, strengthening skills training, supporting a strong private sector, and building sustainable infrastructure all connect people to job opportunities that can help end extreme poverty in the poorest countries (World Bank 2019). While economic growth is an important tool for improving living conditions, to ensure the reach and impact of the benefits of growth for the common man, the role of state along with its various institutions is vital.

The present study tries to identify the long-run determinants of economic growth using time-series data for the period 1960-2014. The choice of the study period is based on data availability and also on the fact 2014 has been threshold year for India. A number of institutional reforms have been undertaken in the country since 2014. We know institutional changes affect economic growth in the long run. So, the post-2014 period has not been considered for the time-series study as the period post-2014 is too short to study the impact of these reforms. The present study finds that in the long-run human capital is the key determinant of economic growth followed by physical capital and OPENNESS (measured as trade-GDP ratio). The coefficient of Dopen is found to be negative but insignificant in the long run. The institutional variables are insignificant during the period. In this respect, the present study attempts to look into the Atmanirbhar Bharat Abhiyaan and Skill India Mission in the light of the Endogenous Growth Model and the New

Growth Theory. Given the current demographic profile of the country, the paper tries to justify that these initiatives taken by the Government of India can be the way forward for self-reliant, sustainable, and long-run economic growth of India.

## II. LITERATURE REVIEW

Traditionally, economic theory emphasised physical capital to be the main determinant of growth in the short-run with exogenous technical progress being the long-run source of growth. Attempts to make the long-run determinant of growth endogenous rather than exogenous, since the mid-1980s, experienced a new boom, beginning with the work of Romer(1986) and Lucas(1988). In these models growth may go on indefinitely because returns to investment in a broad class of capital goods - which includes human capital – do not necessarily diminish as economies develop. Spillovers of knowledge across producers and external benefits from human capital are parts of this process; they help avoid the tendency of diminishing returns associated with accumulation of physical capital. Developing countries' economic experience had an important role in the rise of New Growth Theories (Islam, 2004). The New Growth Theories, by emphasizing the role of institutions have brought growth theory closer to development theory. Eicher and Leukert (2009), Lee and Kim (2009) have confirmed in their work the importance of institutions during the early stages of economic development.

There is a growing body of empirical literature on the magnitude of the contribution of various factors to fostering growth of India. Mallick(2001,2002), Self and Grabowski (2004) confirm that the human-capital accumulation is more relevant for economic growth in India. Using time series data, Haldar (2009), Bhattacharjee and Haldar (2011), Bhattacharjee and Haldar (2014) have observed that human capital accumulation led growth is more crucial for the Indian economy. Using time series data, Marjit and Raychaudhuri (1997) and Sarkar (2007) have found that there has been no export-led growth in India; rather it is growth-driven exports. Love and Chandra (2004) have used cointegration technique to show that aggregate investment does not affect growth in income rather openness (measured by openness index) positively affects the income growth in India. Using panel data, Bhattacharjee and Haldar (2015a, 2015b) have confirmed that institutional quality needs to be improved for sustainability of economic growth of the major South Asian economies. Using time series data, Bhattacharjee (2016) has observed that though institutional quality does not have significant influence on economic growth of India, but the speed of adjustment diminishes when institutional quality is incorporated. Hence, the quality of institution deserves attention to sustain economic growth of the country. The country since 2014 has seen a number of institutional reforms which are expected to bear fruit in near future. The study tries to justify the ongoing reforms undertaken to address the weak institutional quality observed in our period of study. The present study tries to explore the link between the recent policy initiatives of GOI, namely, the Atmanirbhar Bharat Abhiyaan and Skill India Mission and the Endogenous Growth Model and New Growth Theory.

## III. DATA AND METHODOLOGY

Annual data on per capita Gross Domestic Product (PCGDP), physical capital stock and OPENNESS are from Penn World Tables for the period 1960 to 2014. Since 2014 there has been a shift in political regime which has ushered a new wave of institutional reforms. The study tries to justify the ongoing reforms undertaken to address the weak institutional quality observed in our period of study.

I have used mean years of schooling (MYS) to proxy for human capital stock; MYS is the number of years of schooling received per person aged 15 and above. Barro and Lee data sets have been used, which provide five-yearly data on MYS; I have interpolated for the interim years, assuming exponential smoothing. To capture the influence of liberalization on Indian economy, I have introduced a dummy variable Dopen=1 post 1991 and Dopen=0 for the pre-reform period. I use Jagers and Marshall's (2000) Polity IV Project. This project provides the longest time series data on measures of institutions. The Polity score is calculated by subtracting the AUTOC score from the DEMOC score, the resulting unified polity scale ranges from -10(strongly autocratic or hereditary monarchy) to +10(strongly democratic). The data have been re-scaled (11+ POLITY score) so that all scores are positive, from 1(strongly autocratic) to 21 (strongly democratic). The variable on constraints on the executives refers to the extent of institutionalized constraints in the decision-making power of chief executives, whether as individuals or a collective. This is similar to the 'horizontal accountability' found in the democracy literature but it assumes that dictators may also be bound by certain institutional constraints. The degree of checks and balances between the various parts of the

government is coded on a 7-point scale which ranges from “unlimited executive authority” (1) to “executive parity or subordination” (7).

Since most macroeconomic time series data are non-stationary in nature, it is known that applying OLS to non-stationary series leads to spurious correlations and erroneous conclusions. I employ the Ordinary Least Squares (OLS)-based Auto Regressive Distributed Lag (ARDL) approach to estimate the determinants of economic growth of the India in the long-run. In small or finite sample data sizes the Auto Regressive Distributed Lag (ARDL) process is relatively more efficient.

#### IV. ESTIMATION

India has experienced rapid growth spur since the early 1990s. According to World Bank estimates real GDP grew at an annual average rate of 6 per cent in India during the last two decades. I have done a time series analysis on India from 1960-2014.

Table 1 gives the descriptive statistics of the variables under study. I find skewness for all conventional variables is positive, which implies that the values taken by the variables are mostly below average. However, the institutional measures for India display negative skewness, meaning that the values taken by the institutional measures in India lie mostly above average. The series for OPENNESS displays maximum volatility in India with coefficient of variation (CV) of 50 per cent and followed by PCGDP with CV of about 48 per cent. A possible reason for this volatility in OPENNESS is the increase in TRADE-GDP ratio in the post-liberalization period.

**Table 1: Summary Statistics**

	PCGDP	PCK	PCIY	OPEN	MYS	POLITY	XCONST
Mean	1960.66	2840.75	16.33	23.62	3.71	19.57	6.96
Maximum	4584.73	7471.78	31.06	51.75	6.32	20	7
Minimum	949.16	1496.76	12.79	11.91	1.53	18	6
SD	937.44	1444.43	3.971	11.92	1.38	0.57	0.20
Skewness	1.16	2.02	2.22	1.069	0.19	-0.94	-4.49
Kurtosis	3.53	3.32	7.46	2.71	1.88	-0.07	22.83
Observations	54	54	54	54	54	54	54

Source: Author's calculations

Notes: POLITY: Political Constraints, XCONST: Executive Constraints

In order to test for structural change over time in India, I have resorted to the two tests, CUSUM and CUSUMQ tests (not shown to save on space). The test results are robust, there is no structural break as the cumulative sum of residuals and squared residuals fall within the critical bounds at 5 per cent significance level.

Stationarity of the variables have been tested using ADF and PP tests as shown in Table 2. Most of the variables are I (0) at first differences.

I apply OLS based ARDL approach to cointegration. Based on the F-statistics I can conclude that lnPCGDP has a long-run relationship with the explanatory variables and that they move together.

Therefore I can now apply the ARDL method to cointegration to estimate the long-term coefficients and ECM. The optimal lag length has been selected using the AIC criterion.

$$\ln PCGDP = -0.12 + 0.20 \ln PCK + 0.50 \ln OPEN + 0.84 \ln MYS - 0.12 Dopen - 0.06 Polity + 0.10 Xconst$$

$$p\text{-values} \quad (0.34) \quad (0.05) \quad (0.10) \quad (0.01) \quad (0.34) \quad (0.34) \quad (0.39) \quad \text{-----}(1)$$

Equation (1) shows that in the long-run human capital is the key determinant of economic growth followed by physical capital and OPENNESS. The coefficient of Dopen is found to be negative but insignificant in

the long run. The institutional variables are insignificant during the period. The intercept term is insignificant, implying that the variables included in the model explain long-run empirics. The findings of the study are in line with those of Marjit and Raychaudhuri (1997), Sarkar (2007), Haldar (2009), Bhattacharjee and Haldar (2011), Bhattacharjee and Haldar (2014).

**Table 2: Unit root tests**

	ADF				PP			
	Level		1 <sup>st</sup> Difference		Level		1 <sup>st</sup> Difference	
	C	C & T	C	C & T	C	C & T	C	C & T
lnPCGDP	2.35(1)	0.39(1)	-6.6***(1)	-6.4***(1)	4.55(8)	1.54(8)	-5.34***(1)	-6.5**(7)
ln PCK	-3.1(1)	-1.45(1)	-3.3***(1)	-4.8***(1)	1.34(6)	0.28(5)	-2.07(0)	-2.88(0)
lnOPEN	1.88(1)	-1.86(1)	-6.07**(1)	-6.3***(1)	0.88(4)	-1.56(1)	-5.88***(3)	-5.98***(1)
lnMYS	-4.01 (2)	-1.86(1)	-20***(4)	-13***(5)	-2.87(3)	-3.5***(2)	-10.3***(4)	-10.5***(2)
POLITY	-2.60(1)	-2.76(0)	-6.9***(1)	-6.6***(1)	-2.34(2)	-2.16(2)	-7.4***(6)	-7.87***(7)
XCONST	-4.8***(1)	-5.1***(1)	-8.21***(1)	-8.15***(1)	-4.1***(4)	-3.53***(6)	-6.88***(5)	-16.38**(7)

Source: Author's calculations

Notes: \*, \*\*, \*\*\* indicate significance at 10%, 5% and 1% levels respectively. For ADF test, number within parentheses indicates optimum lag determined according to AIC criterion.

$$d\ln PCGDP_t = 0.64 + 0.03d\ln PCK - 0.11d\ln OPEN + 0.13d\ln MYS - 0.01Polity + 0.02dxconst$$

p-values (0.09) (0.22) (0.12) (0.12) (0.32) (0.45)

$$-0.02dDopen - 0.15ECM_{t-1}$$

(0.29) (0.09) -----(2)

Now, for the short-run dynamics, I consider the error correction model in equation (2). In short-run, I find the error correction term is correctly signed and significant at 9 percent. However, no significant influence of the explanatory variables is observed in the short run.

No significant influence of institutional measures is observed either in the long run or in the short run. Though weak institutional quality has not negatively influenced economic growth of the country but to sustain high growth, major institutional reforms is the need of the hour. Various institutional reforms have been initiated since 2014, Aadhaar Linked Payments (ALP) system which leveraged the Jan Dhan, Aadhaar and Mobile (JAM) trinity to provide Direct Benefit Transfers (DBT) to the beneficiary accounts, stringent asset quality review introduced by Reserve Bank of India (RBI) in 2015, Goods and Services Tax (GST) reforms introduced in 2016 and many more which are expected to improve the institutional quality of the country and hence lead to a sustainable economic growth in the long run. The Rangarajan Committee (2008) broadly defines financial inclusion as universal access to financial services by the poor and disadvantaged people at an affordable cost. The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) came into effect from February 2, 2006. In the first decade of its existence, MGNREGS had been saddled with several inefficiencies, including widespread corruption, political interference, leakage, and significant delay in wage payments (Niehaus and Sukhtankar, 2013a,b; Ravallion, 2012; Agarwal et al., 2016). The programme was reviewed in 2015 and the government initiated major reforms using technology and emphasized on bringing in more transparency and accountability, robust planning and creation of durable productive assets. The scheme was also integrated with the Aadhaar Linked Payments (ALP) system. The ALP leveraged the Jan Dhan, Aadhaar and Mobile (JAM) trinity to provide Direct Benefit Transfers (DBT) to the beneficiary accounts. As a result, the wage payment system underlying MGNREGS was streamlined, thereby reducing the scope for delays in payment (Agarwal et al., 2019). The Indian Express, reporting National Sample Survey Office (NSSO 2011) data stated that 51% of the country's workforces are self employed, while 33.5% are engaged as casual labour. Hence, the majority of the



working population—the self-employed and casual labourers—are not able to access the Indian banking system. Iyer (2015) also confirms that small and marginal farmers who own more than 80% of the agricultural holdings are ‘disturbingly’ becoming more indebted to the moneylenders. It is apparent that the Indian financial system has not only fallen short of attaining meaningful financial inclusion but also displays regional and urban–rural disparity and increased dependence on traditional moneylenders. With the aim of reforming Government delivery system by re-engineering the existing process in welfare schemes for simpler and faster flow of information/funds and to ensure accurate targeting of the beneficiaries, de-duplication and reduction of fraud Direct Benefit Transfer (DBT) was started on 1st January, 2013. JAM i.e. Jan Dhan, Aadhaar and Mobile are DBT enablers and as on date more than 22 crore Jan Dhan Account, more than 100 crore Aadhaar and about 100 crore mobile connections provide a unique opportunity to implement DBT in all welfare schemes across country including States & UTs. DBT will bring efficiency, effectiveness, transparency and accountability in the Government system and infuse confidence of citizen in the governance. The Jan Dhan Yojana (JDY) was launched on 28 August 2014 and gauging by the 1.5 crore bank accounts that were opened on a single day, the government accelerated efforts to make financial inclusion a key goal to change lives, reduce risks, and make a broader section of the population a part of the growth process. Almost 7 crore accounts were opened up to 5 November 2014 which means one bank account being opened every 12 seconds.

## V. POLICY RECOMMENDATIONS

Based on my study period and data, I conclude that the endogenous growth theory emphasizing the importance of human capital is more relevant for the Indian economy. Physical capital is the other important growth enhancing variable for the country. The coefficient of OPENNESS is significant at 10 percent level. If OPENNESS has to affect growth via total factor productivity, the country should have rich human capital because without proper training and skills, technology adaptation will be inadequate resulting in slower growth. So, the country should provide for skills training, develop adequate physical capital by investing in infrastructure development and improve institutional quality. Digitization should be promoted in every sphere of life and proper training should be imparted to reduce the existing digital division among the rural and urban masses. The various online trainings and workshops on e-content development by Ministry of Education, University Grants Commission (UGC) and other educational institutions deserve special attention in this respect. Technology driven education system is the need of the hour and initiatives like PM e-Vidya, Manodarpan, SWAYAM, epg-pathshala, etc. should be encouraged to help the students at the farthest corner of the country with the state-of-the-art knowledge. The National Education Policy 2020 recognizing the importance of human capital accumulation and skill development has encouraged universalization of Early Childhood Care Education, vocational integration from Class VI, e-learning in regional language, digitally equipping schools, teachers and students. Government also needs to take initiative to provide better network connectivity and cheaper data in this crisis laden period to make Digital India, a success story. The Government needs to gear up Financial Literacy programmes in online mode to speed up financial inclusion. These initiatives can make the policy initiatives more inclusive in nature.

Atmanirbhar Bharat and Skill India Mission are the two initiatives taken by the Government of India in this direction. Atmanirbhar Bharat emphasizes Fast track Investment Clearance through Empowered Group of Secretaries (EGoS), introduction of Commercial Mining in Coal Sector to reduce import of substitutable coal and increase self-reliance in coal production, enhance self-reliance in defence production, ‘Make in India’ for self-reliance in defence production. India’s robust start-up ecosystem is also proposed to be linked to nuclear sector. Attempts must be made to complete the JAM trinity not only to enhance cash transfers, but also to empower citizens. Bhattacharjee (2020) has stressed the need to make financial inclusion effective for the masses. The crisis has thrown open opportunities to do intelligent industrial policy to restore India’s manufacturing capability and thereby replace China in the production of the essential Active Pharmaceutical Ingredients (API) used to manufacture drugs. Reforms have been made to improve governance for Ease of Doing Business. India’s position in World Bank’s Doing Business Report rank improved from 142 in 2014 to 63 in 2019. Initiatives have been taken to ease registration of property, fast disposal of commercial disputes and simpler tax regime for making India one of the easiest places to do business. Necessary amendments of General Financial Rules will be affected. Minimum threshold to initiate insolvency proceedings has been raised to Rs. 1 crore (from Rs. 1 lakh, which largely insulates MSMEs). Special insolvency resolution framework for MSMEs under Section 240A of the Code will be notified soon. ‘Atmanirbhar Bharat’ stresses on a self-reliant economy. If domestic production indeed displaces imports, it also creates jobs and possibly increases national income. All these together will lead towards Self-Reliant

India and support Make in India. This will also help MSMEs to increase their business. These initiatives may reap benefits after a few years, though will be laden with initial teething problems. However, attempt must be made to develop a self-reliant, efficient and competitive economy. It is further recommended to develop alternative sources of supply of crucial inputs to protect the country from any further disruptions in supply chains arising out of external threats.

India is a country today with 65% of its youth in the working age group. To turn this into a demographic dividend, skill development of the youth is the need of the hour for our country. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood. Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL). Under this Scheme, Training and Assessment fees are completely paid by the Government. The recent crisis imposed by the Covid-19 pandemic is a wake-up call to address India's severe limitations in the provision of basic health. However, the changing global economic order post Covid-19 has created huge opportunities for India. Ghosh (2020) has suggested that India must focus on the Sustainable Development Goals which are embedded in one form of capital or the other. Mandal (2020) has recommended to encourage virtual trade in services and increase public investment to capitalize on the recent turn of events of the USA-China trade war. Mandal (2020) has also laid stress to improve the health infrastructure of the country. Francis (2020) advocates that the Government of India (GOI) must use multiple innovation challenges and research grants in emerging technologies to incentivize the development of new indigenous solutions and products that incorporate domestic design/software/local data analytics. The Covid-19 crisis places India at an advantageous position to capitalize on the sustained global demand for electrical machinery. Banerjee (2020) points out that India must encourage domestic manufacturers to expand capacities, venture into new geographies and reach out to global manufacturers, making India an attractive destination of investment. Badri (2020) has also pointed to the opportunity offered by the Covid-19 crisis for India to evolve as a major exporting hub for manufactured goods. Nag (2020) has emphasised that skill development and issues related to product, process and design innovation should be enhanced through SME initiatives. Appreciating the policy decisions and the government's first response on addressing the immediate imperatives, Kapur and Subramanian (2020) have pointed out on the opportunity to do things that are not only good for now but for the medium term as well. The common thread that binds all policy prescriptions is that instead of myopic view and associated quick-fix solutions, the government should take up long term strategies.

## VI. CONCLUSION

Warnings about the deep import dependency of India's pharmaceutical and electronics industries (including computing and telecommunications equipment, medical equipment, etc.), particularly on China, have been made by observers for several years now. The recent crisis should serve as a wakeup call for policymakers. Simultaneously, end-user demand for indigenous products must be expanded on an urgent basis through government procurement. For this to work, the Preference for Make-in- India policy must be implemented in letter and spirit, discarding any built-in bias against indigenously developed products and services. We need to turn the challenges into opportunities. While many institutional reforms are already underway since 2014, however, speedier implementation of the various projects needs to be undertaken to tackle the present crisis. Also, investment in human capital formation, physical infrastructure and skills training through various schemes should be accelerated to grab the opportunities thrown open to India by this global pandemic. The Atmanirbhar Bharat and Skill India Mission can be way forward for India in the long run.

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