Child Under Nutrition and Poor Learning Outcomes in India Amidst High Economic Growth

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Abstract

The high economic growth since the late 1980s in India while laudable has not touched the lives of a large section of society. This is evident in myriad indicators, the most salient being the simultaneous existence of child undernutrition and poor learning outcomes in children in rural areas. The economic growth story has to engage a broader section of society for it to be sustainable, not to mention equity criteria. The poorly learning children amidst high economic growth are not only morally repugnant, but it is also economically wasteful now and hazardous in future.

Keywords: Economic Growth, Child Undernutrition, Learning Outcomes, Poverty

Introduction

In the heyday of 'India Shining' Joseph Stieglitz was asked in one of the discussions after his return from one of his trips to India whether India was really shining. He gave a cryptic reply. He said, 'Well yes, if you are talking about 250 million people, which is a lot of people but,…" In the reform era, the pursuit of economic growth has been thorough with a reformer's zeal. The focus on the growth of GDP has been so much so that it de facto became the only focus of the policy circle. Growth for growth's sake is nothing short of fundamentalism. Unfortunately, we saw such myopia regardless of which dispensation was behind the wheel (Kohli, 2006b, 2006a). Growth should be obsessed for its instrumental value, not so much for its substantive value. The transition from growth to development is neither imminent nor inevitable. It needs conscious decision-making from among the choices. It would become evident ahead in this paper that very scant regard, if any, is paid to the qualitative nature of the growth. Even after more than two decades of reform-mediated high growth, we have a huge proportion of the population vulnerable if not downright officially poor. Both the rural and the urban area has a significant section of the population leading a very precarious living. One of the starkest symptoms of this malaise is child undernutrition in

India. The direct consequence of this is reflected in low and dwindling learning outcomes among the children in primary schools in the country.

On the one hand, the accelerated growth in GDP in the reform era has come about through an increase in labour productivity and at the cost of employment (Bhaduri, 2008; Himanshu, 2008), while on the other hand, the deflationary fiscal and monetary stance emanating from the growth-oriented policy package made sure that the public expenditure support shrank cumulatively (Sen, 2014). The resultant pervasive hunger stalking the underprivileged is well articulated in Patnaik (2007b). The per capita availability of food grains has been dwindling since independence (Patnaik, 2007a; Tenzing, 2022). This is ironic for the simple reason that all these adverse outcomes are amidst a booming and growing economy, especially after the reforms of the 1990s. This paper attempts to contrast the high economic growth on the one hand with the poor and dire outcomes of child undernutrition and poor learning outcomes in India since the advent of economic reforms in the 1990s.

The remainder of the paper is structured as follows. The next section will discuss the economic performance since the reforms. This would be followed by a discussion of poverty enumeration exercises of the government of India. The next section discusses vulnerabilities as reflected in dwindling per capita food grain availability as well as rural per capita GDP. This is followed by a discussion on child undernutrition as reflected in various rounds of National Family Health Surveys (NFHSs) and poor and dwindling learning outcomes of the children in India as reflected in various Annual Status of Education Reports (ASER). The final section will conclude.

High Economic Growth since the 1990s

From a long perspective, it is now generally agreed that the GDP growth rate of India took off from the late 1980s. A quick statistical breakpoint analysis of the GDP growth rate data since independence returns clear-cut multiple breakpoints, the uptrend in the trajectory is clearly visible from the late 1980s. The following table is one such statistical breakpoint exercise of the GDP series since independence.

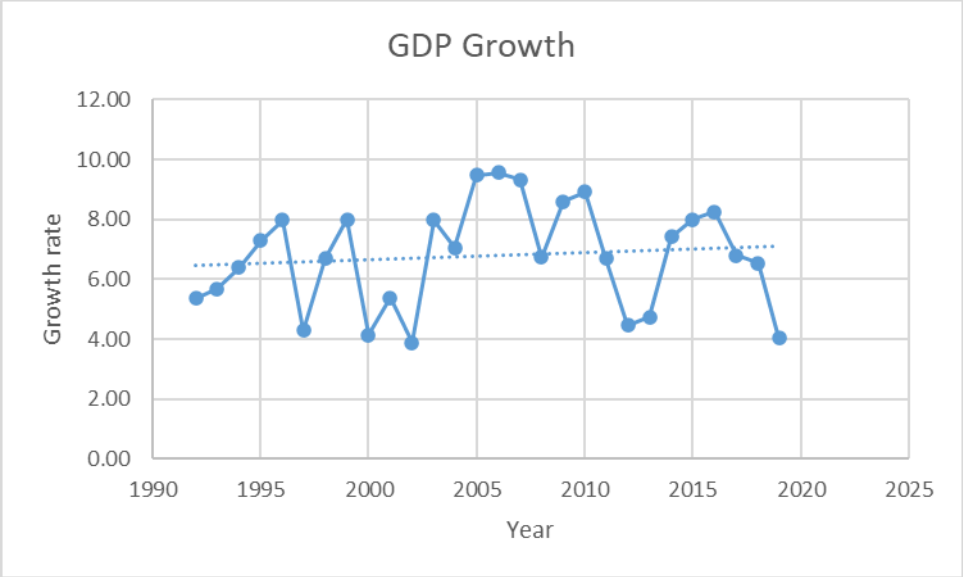
Table 1: Statistical Breakpoints in GDP Growth rates of India

Regime	1951-64	1965-74	1975-87	1988-97	1998-2009	2010-2019
Growth Rate	4.09	2.6	4.43	6	7.23	6.77

Source: Calculated from the Ministry of Statistics and Programme Implementation (Mospi) Website

As is evident, since 1988 average growth rate has been on a relatively high trajectory. Even the 2008 global recession could not bring it down in any drastic way. A more granular observation of the growth rate such as the one in the following figure also confirms the overall trend is one of rising consistently.

Figure 1: GDP Growth Rates in India



Source: Compiled from the Ministry of Statistics and Programme Implementation (Mospi) Website

Further, the years from 2003 onwards till about the disruption of the great recession, the growth rates of the Indian economy consistently flirted with the vicinity of the double-digit figure. This accelerating growth rate was tempered by first the great recession and then by some domestic political disturbances. But it is fair to say that notwithstanding the various headwinds, the growth rate remained high. But as much as this is a laudable achievement given the fact that we had very low growth rates for a very long period since independence, there is a growing indication as well as realisation that this high growth has failed to make any reasonable difference in the lives of the common people. We will try to understand this in the following section by way of quick stocktaking of the incidence of poverty and vulnerabilities.

Poverty & Vulnerabilities

Poverty incidence

The poverty benchmark that the government of India has is very controversial and counter-intuitive, to say the least. The threshold level of poverty is so low that some analysts called it the ‘starvation level’. Leaving aside this contentious aspect, we see that the country performed reasonably well in the 80s and many people were enabled to take a pathway out of extreme

poverty. But in the 90s and hence, the official statistics are not as encouraging. The Tendulkar methodology adopted a very unrealistically low per capita daily expenditure as a cut-off poverty line that there was bound to be disagreement. Interestingly what normally used to be an academic dissent caught the popular imagination. There were loud dissents in the media and on the streets which forced the government of the day to hastily appoint a new expert committee to review the methodology.

This new expert committee with Dr C Rangarajan as the chairman submitted its final report in late June 2014. Many experts believe that even this committee, like its predecessors, squandered a golden opportunity to make the concept of poverty more realistic (EPW, 2014; Mishra, 2014; Ray & Kompal, 2014; Subramaniam, 2014). Nonetheless, it definitely is an improvement on the Tendulkar Methodology. Without getting into the technical details, we can arguably hold that this is more broad-based a concept of enumeration than any of the earlier methodologies. Patnaik (2007a) has looked at the statistics in another way and she arrived at a poverty ratio which is way more than what the official methodologies have come up with. She looked at the 2400 Calorie equivalent of expenditure level in the NSSO data and arrived at a figure of more than 80 per cent for rural areas. This is, arguably, a more plausible conclusion as compared to the Tendulkar Methodology (TM) since TM discreetly moved away from the calorie norm of the Alagh Methodology of the early 1970s. However, the same can not be said about Rangarajan Methodology as it is explicitly calorie anchored, albeit a lower level based on the most recent Indian Council of Medical Research (ICMR) recommended daily allowance (RDA). Nonetheless, the situation is grim. Table 2 shows the poverty ratio of 2009-10 and 2011-12.

Table 2: Poverty Estimates in 2009-10 and 2011-12

Year	Poverty Ratio			No. of poor (million)		
	Rural	**Urban**	**Total**	**Rural**	**Urban**	**Total**
Expert Group (Tendulkar)						
2009-10	33.8	20.9	29.8	278.2	76.5	354.7
2011-12	25.7	13.7	21.9	216.7	53.1	269.8
Reduction (%age points)	8.1	7.2	7.9	61.5	23.4	84.9
Expert Group (Rangarajan)						
2009-10	39.6	35.1	38.2	325.9	128.7	454.6

2011-12	30.9	26.4	29.5	260.5	102.5	363
Reduction (%age points)	8.7	8.7	8.7	65.4	26.2	91.6

Source: Expert Group (Rangarajan) Report

The Rangarajan methodology gives a higher quantum of reduction in terms of percentages between the two reference periods. This is quite intuitive since the Tendulkar methodology is based on a very restrictively low benchmark threshold as compared to the Rangarajan's. Although a reduction of 91.6 million persons in a year's time is not a very credible claim, even if, for argument's sake, we accept the figures, the left-over actual incidence should be abhorring to any right-thinking civilized societal psyche. Remember, these 363 million are in absolute deprivation because the very benchmark for categorizing them so is a measly expenditure amount.

Vulnerability: At the risk of being poor

Ligon & Schechter (2003) found that poverty and risk play roughly equal roles in reducing welfare in their Panel data study of Bulgaria. The risk here denotes the risk of being poor which is otherwise known as 'Vulnerability'. Poverty is an ex-post concept whereas vulnerability is an ex-ante concept (Chaudhuri, 2003). And hence, if there is no mediating mechanism in between then vulnerability will get converted into poverty. Although there are many suggestive measures to operationally quantify the concept of vulnerability, we would desist from endorsing any of them. This is because the object of the present paper is to throw light on the phenomenon of pervasive vulnerability rather than precise measurement of the concept. However, drawing from the extant literature we may decompose the 'vulnerability' into two broad types of risks, viz., aggregate risks and idiosyncratic risks. As we intend to review the development experience of the post-reform era, we would concentrate on the aggregate risks component of vulnerability. Idiosyncratic risks although important in itself, somehow lie well outside the scope of the present analysis simply because we would be taking a macroeconomic perspective in our analysis. Let's look at some of the formative dimensions of this vulnerability:

On a little further thought, it is not difficult to imagine that those who are non-poor, especially those 91 million newly non-poor, are almost somewhere near the line and it will not take much of a crisis to suck them back into the abyss. We can club these together as an ultra-vulnerable group. So, in a sense even after two decades of reform, we have about 40% of our population under or near the measly poverty line. So, in a sense, two-fifth of the population is leading a life of virtual destitution. Be that as it may, this is just one aspect of deprivation, namely in income space. We

will now look at some of the other symptomatic indicators of mass destitution in the sections ahead.

Food Grains availability

Table 3: Trend in Net availability of Food grains

Year	Net Availability (gms/day)			Growth Rate of Food grain Production	Growth rate of Population	Net Availability	
	Cereals	Pulses	Food grains (Cereals + Pulses)			Growth rate of Food grains	Growth rate of Pulses
1971-80	396	43	442	1.11	2.28	-1.16	-4.31
1981-90	425	40	465	4.98	2.12	1.70	3.47
1991-2000	440	36	476	2.29	2.00	-0.30	-1.96
2001-10	409	34	444	0.91	1.57	-0.05	1.99
2011-13 (PE)	429	42	472	5.61	1.19	5.49	6.31

Source: Author's calculation from ECONOMIC SURVEY 2013-14, pp-21

Drawing from but unlike Patnaik (2007a) we have taken decadal averages to see a broader trend. As can be seen from Table 3 above, between the decades of the 70s and 80s there is a gain of 23 gms/day per capita, but this gain slowed down when we enter the decade of the 90s; in fact, it is only 11 gms/day per capita. Thereafter, there is a loss of 32 grams/day per capita. In a sense, the hard-earned gains of 30 years are blown away in a single decade. The net availability figure starts slowing down with the advent of the reform era and the second decade of reform is progressively worse than the first one. As a direct fallout, if we look at the nutrition level, the average dietary energy intake per person per day was 2147 Kcal for rural India as per the 66th round of the NSSO survey. With such a dire situation depicted by the official statistics, it was but natural for some explanation coming from the policy and some related academic circles. One of the popular explanations offered was via invoking the popular 'Engel's Curve'. But since Patnaik (2007a) has ably demolished this line of explanation, there is hardly a need to say more about it

Our food grain availability level is far worse than many of the countries, both developed and

developing. In the mid-90s, all the countries having per capita income higher than us have consistently higher availability ratios. Compared to our figure of less than 200 kg per capita a year, China had 325 kg. The comparable figure for the USA is 850 kg per capita per year (Patnaik, 2007b, p. 105). And since these countries are richer than us they sure are understood to be diversifying their diet, albeit with a positive income elasticity of food grains.

Dwindling share of vulnerable groups in the GDP in rural areas

Reddy (2015) has found that the unmistakable structural change that has taken place in India in the post-reform period has not necessarily been of a Lewisian type, although he did find evidence to that effect for some of the high growth states in India. In light of such empirical evidence, the prognosis is indeed not bright. This points towards increasing inequality in the economy. Table 4 clearly shows that this indeed may have been happening all along. The share of the primary sector in GDP has gone down consistently from about 40 per cent in the 70s to 22 per cent in the first decade of the new millennium and this has further gone down to 20 per cent in the last four years. As any development analyst would know that this in itself is not a bad thing. On the contrary, this can be a boon if a commensurate number of primary sector-dependent people are moved away from the sector.

But as is clear from the table below, this is far from being realized. Consequently, the average Monthly Per Capita Rural Income (MPCRI) is, even in terms of current prices, very low. It is a great irony that a 3 trillion-dollar economy has a bulk of its people earning only about $50 a month. This is all the more alarming if we take cognizance of the fact that food prices have been rising sharply for the last many years. And, since a majority of the rural people are net purchasers of food items (Dev & Ranade, 1998), even these meagre income share is made weaker in terms of their real purchasing power.

Table 4: Trend Share of Rural sector in GDP

Year	Average yearly % of Primary sector	Average Yearly Rural Sector Product*(Rs. in Cr.)	Rural sector (% in Total GDP)	Average yearly Rural population (Cr)	Average MPCRI (Rs)
1971-80	40	39809	50	47	69
1980-91	34	131897	46	57	190

1991-2000	30	488186	42	68	594
2000-10	22	1269680	36	77	1353
2010-14 (PE)	20	3067944	35	83	3101

Notes: * Primary Sector+ 10% of Secondary sector+ 25% of Trade, Hotels and Transport+ 40% 0f Community services; MPCRI-Monthly Per Capita Rural Income

Source: Compiles from Handbook of Statistics on the Indian Economy, RBI, 2013-14

Child Under-nutrition

One of the stark indications of the inequity of the obtained high growth rates is the outcomes of child undernutrition in India. It is plausible that the situation might have been dire since independence but it is now possible to confidently assert so as we have reliable data from the various rounds of National Family Health Survey (NFHS) rounds beginning in 1992-93. We have five rounds of the survey, the latest being in 2019-21. Across these rounds, the indicators of child undernutrition as reflected by stunting and underweight makes a very grim reading. The following table is a compilation of these rounds.

Table 5: Child Under-nutrition in India

Year	Stunting	Underweight	CMR
1992-93	52	53	109
1998-99	46	47	95
2005-06	48	42.5	74
2015-16	38	36	50
2019-20	36	32	42

Source: Compiled from NFHS rounds

More than half of the children in India were stunted and underweight in 1992-93, just about the time when the GDP growth rate was embarking on its high trajectory. What is worse, the child

mortality rate was high at 109 at the time. These grim and perversely high numbers have come down since. However, even today, about one-third of the children in India are stunted and underweight although the mortality rate has come drastically. Ironically, it seems we as a country are unable to keep our children adequately nourished while at the same time preventing their deaths. This observation is not a helpless cynicism, it is a pointer to the repercussion of having under-nourished children for the future of these children and the country at large.

Repercussions

It is common knowledge that children in India are poorly learning, at least the poor ones. We have clear evidence to this effect from the Annual Status of Education Report (ASER) surveys conducted by Pratham. The government data, although not as regular, also confirm this reality. The following table is compiled from various rounds of the survey. The outcome is of mathematical performances of the children in grades III and V.

Table 6: Learning Outcomes of rural children in India

Year	Standard III	Standard V
2007	40.2	41
2008	35.4	34.4
2009	36.5	36.1
2010	33.2	33.9
2011	25.2	24.5
2012	19.8	20.3
2013	18.9	20.8
2014	17.3	20.7
2015	18.7	20.9
2016	20.2	21.1
2017	19.9	21.9
2018	19.6	22.7

Source: Compiled from various ASER surveys

In 2007 about four in ten grade III children could not do a simple arithmetic sum and similarly, about four in ten grade V children could not solve a simple division exercise. A similar situation is obtained with regard to language proficiency for both grades. These are pertaining to the rural children; urban children would presumably have fared better although there is no conclusive data to

prove it.

Although there can be any number of obstacles in these children faring so dismally, one of the determining factors would be explained by way of compromised cognitive capacity due to poor nutrition access right from the time of their conception in the womb of their mothers. As is well recognized in medical biology, poor nutrition during the first 1000 days does irreversible damage to the cognitive capacity of children. And so compromised children, despite all the stimulation may not do well in the learning process in the schools. What is worse, these poorly learning children will end up having poor labour market outcomes when they eventually join the labour market. Thus completing the cycle of pervasive poverty and vulnerabilities, not just for them but also for the country as a whole.

Conclusion

To reiterate, the high growth rates of the last few decades have largely failed in bringing meaningful changes in the lives of a significant section of the population in the country. This is all the more true for rural areas. The high growth rates while laudable have somehow been unable to be widely shared. The pervasive and dire outcomes of child undernutrition as reflected in the ratios of stunting, wasting and underweight is an effect of this growth inequity. Child undernutrition, inter alia, has spawned the crisis of poor learning by the children in the schools as reflected consistently in the surveys. These poor learning outcomes if not arrested promptly have the potency to disrupt the high growth trajectory that the economy has been riding in the last few decades. A population that is well nourished will beget a firm foundation for future growth and all-round development. Otherwise, the very process of economic growth which is so celebrated may fizzle out in time and the very stability of the society may begin to unravel in time.

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