

Coalescing Human capital and Physical capital

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ABSTRACT

There is a strong urge to develop infrastructure but the workable infrastructure like accommodating the MSME and even giving boost to agriculture is lacking and hence the people are fighting with many odds like poverty and unemployment besides sleeping on the pavements. It is very strange despite the provisions of making the education available to every child the child labor is still persisting. After liberalization the government had to struggle with the inadequacy of infrastructure but in the process leaving education and health in the hands of the private sector without setting the standard is just like pushing the people at the mercy of the job provider. The gap in human capital and physical capital is making the allocation still more difficult.

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

In the early days of liberalization economy jump frog to much expected growth rate on the back of human capital formation. No doubt to give boost to physical capital financial sector had been given fillip. But strangely it was the existing manpower when the growth rate was barely 1.5% when the reforms were under taken in 1990s. Human capital formation is a slow process but capital formation talked in general sense could be much faster. The service sector in India was abysmal before liberalization and how it spurted up was on the strength of the human capital eagerly waiting to take up the neo-created avenues. The soft skills of every type which contributed in the growth of service sector were possible as the enrolment in the higher education was already significant. Hospitality, programming etc were dealt in decent manner in India. When the advanced countries are taken into consideration these keep looking for the specialized manpower and when the Indian economy was given improved look this manpower kept emerging out of nowhere and contributed strongly in building the service sector whereon doubt one time investment was committed.

The same IIT graduates who had been leaving the country in search of technology based jobs which India could hardly afford made best use of the existing opportunities and found themselves as comfortably placed in Domestic or MNC in India. Along with the growth in service sector the Industrial sector became the priority as the demand of production continued to gain strength. The huge incorporation of companies signify that demand for executives was growing rapidly and again there was spurt in the absolute value

addition in the industrial sector. The production level had gone up drastically. It was not possible without the quality of manpower which was getting readied in the existing professional institutions. The privatization has also contributed in providing the manpower matching the needs of industries. The business cycles turns up and down both and the globalization which India had embraced also had to go along the same business cycle. No doubt rise or fall is different from the global business cycle.

The market crash of 2008 was so severe that it jolted every emerging economy and therefore the projected growth in India before it could have acquired surprising level had to come down to as much as 3%. Therefore, it is evident that investment alone is not enough to keep the momentum going. Inspired by the overoptimistic growth of 1990s and early 2000s the government could easily decide the flagship program for alleviating poverty in the rural areas by launching rural employment guarantee program and it was possible without the condition on human capital as the rural work is performed by unskilled workers. Before 2008 the rate of capital formation was continuously increasing but the crisis in 2008 put brakes on capital formation because of the dwindling support to capital formation. The demand collapse is the underlying feature of the crisis and hence when demand crumbles the capital formation is reduced is proven phenomenon. However the countries like China which is spending hugely on human capital had not face the hit of the 2008 crisis and growth

inertia was maintained for another 5-6 more because of the broad based economic structure.

The tubular structure of investment without broad basing the economy was not fruitful in maintaining the growth momentum in India because demand was narrowed down in the tubular structure. Therefore the necessary condition that growth should not fall down steeply is broadening the economic structure in which all the sectors have the justified growth and proportion in the GDP. What essentially has happened in India is that agriculture share has been surpassed by the service sector supported by the fact that human capital matching to service sector was easily available and benefit of low hanging fruits was enjoyed. Even though labor force in agriculture sector has fallen from 65% to 50% but the loss in GDP by percentage is more than 35 percent. Since manpower continued to be stuck up in agriculture sector but the income which is shared by the workers there has steeply fallen down and hence poverty was obvious in the rural areas. The poverty from the rural areas is transferred to the urban areas as the labor force which left agriculture was not carrying the human capital but moved to cities where casual work low wage work was generated in the construction sector or industries. Urban poverty began to become stark with the passage of time. Without increase in productivity in agriculture the poverty still in India is proportionately much higher. The middle sector when the professional education growth in higher education mushrooming after educational sector passed on to private sector and the lower education continued to be staggering remained neglected and hence it became the cause of concern when the government had not timed the implementation of GST or demonetization wielded the sword on the informal sector. Therefore poverty which acts against the formation of human capital and leaving the lower education as the foster son had regressive effect on the human capital formation.

The middle sector which is skilled based and called MSME continued to be dominated by the informal sector leading to pull down effect on the economy. Any structural change brought about with a view to benefit the industrial sector like GST had adverse effect on the middle sector which is standing on shaking ground. Why human capital formation remained neglected is that government while trying to mitigate the poverty

based on the consumption of calories had not integrated the aspect with education and training resulting in the mitigation of poverty by few percentage points but failed to create infrastructure to provide education and training out of the fiscal support. The low base of the economy had to be supported with physical capital formation at higher rate and leaving very little for social capital good enough to improve the human capital formation. The government in the last thirty years could succeed in setting up the limited special economic zones and clusters which would have been good enough to absorb the manpower in the manufacturing or service sector capable of providing further growth and slowly growing capital to keep maintaining some decent growth unlike in China. While all the countries are staring at contraction in the pandemic China is ending up in getting growth rate of 2.5% positive. This is the first time in India that inequality is found increased and poverty achievements receded. The cause of urban poverty is somewhat rural migration which has been making the cities not worthy of living. The government is grappling with resistance from acquiring private property mostly the land held by the farmers. The low level of productivity in the agriculture sector kept the per capita income in rural areas much lower than the average per capita income and hence acquiring land for physical superstructure has become herculean task.

Objectives: 1. to understand the development index

2. to explore the gap in the spending

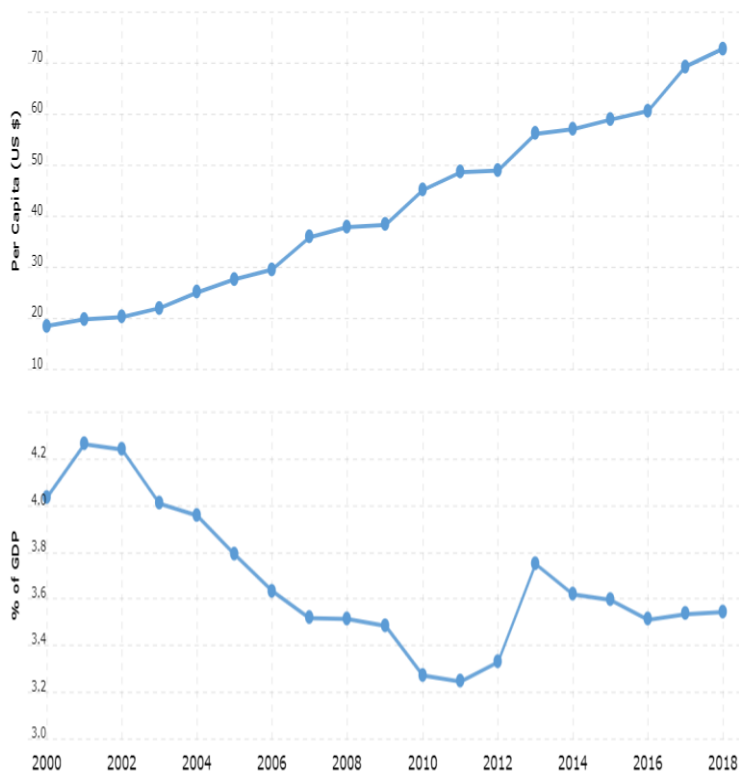
The push given during liberalization the consumption continued to rise and it was possible with rapid investment. Roughly 33 crores were considered to have achieved middle class level. The sectors which were benefitted strongly was construction because of the supply of land. MSME sector no doubt has gathered numbers but the share in the GDP continued to be abysmal. Finally export began to reduce at the backdrop of weak international demand. The export needed to be competitive with south east economies and India lacked skilled manpower and hence the labor laws were no so favorable to the companies becoming bigger and take the advantage of economies of scale. Generally it is the supply side which can make demand possible. The other weak spot was R&D. There is very poor incentive to increase spending on R&D either in the technical

institutes or create niche environment to allow the growth of MSME. Over the last many years urban aspirants are trying to acquire professional or general degrees without showing great interest in becoming professional in true sense. The rural education continuing to be substandard the skill education remained neglected. As a result of neither credit flow was adequate to MSME nor an incentive to grow to reap the full benefits of the

growth due to high exports. As the economy expanded in size the health and sanitation per capita expenditure was not good enough to keep general diseases under control which affected the productivity badly resulting in poor productivity growth.

YEAR-WISE HEALTH EXPENDITURE

YEAR-WISE HEALTH EXPENDITURE		
Year	Per Capita (US \$)	% of GDP
2018	\$73	3.54%
2017	\$69	3.54%
2016	\$61	3.51%
2015	\$69	3.60%
2014	\$57	3.62%
2013	\$56	3.75%
2012	\$49	3.33%
2011	\$49	3.25%
2010	\$45	3.27%
2009	\$38	3.49%
2008	\$38	3.51%
2007	\$36	3.52%
2006	\$30	3.63%
2005	\$28	3.79%
2004	\$25	3.96%
2003	\$22	4.01%
2002	\$20	4.24%
2001	\$20	4.26%
2000	\$19	4.03%



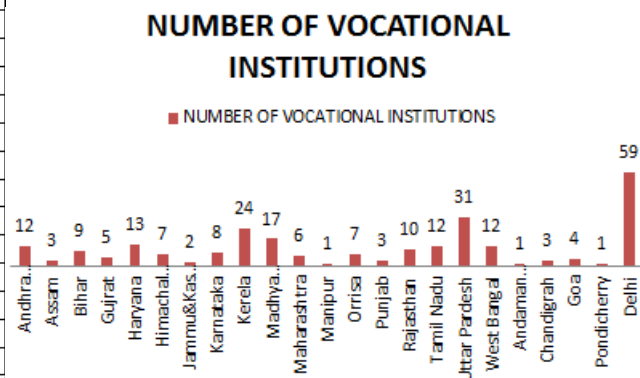
YEAR-WISE MIGRATION IN INDIA

Migrants	Percentage to total population					
	1961	1971	1981	1991	2001	2011 (estimated)*
Total migrants (PoB)	30.8	28.7	29.4	26.6	29.3	-
Total migrants (PoLR)	NA	29.1	30.3	27.0	30.1	-
Interstate migrants (PoB)	3.3	3.4	3.6	3.3	4.1	around 3.6
Interstate migrants (PoLR)	NA	3.4	3.5	3.2	4.0	

PoB and PoLR imply place of birth and place of last residence respectively; NA- data not available;
 *estimated by Life Table Survival Ratio (LTSR) method.
 Source: Computed using data from Census of India for different years.

STATE-WISE VOCATIONAL TRAINING INSTITUTIONS

STATE	NUMBER OF VOCATIONAL INSTITUTIONS
Andhra Pradesh	12
Assam	3
Bihar	9
Gujarat	5
Haryana	13
Himachal Pradesh	7
Jammu Kashmir	2
Karnataka	8
Kerala	24
Madhya Pradesh	17
Maharashtra	6
Manipur	1
Orissa	7
Punjab	3
Rajasthan	10
Tamil Nadu	12
Uttar Pradesh	31
West Bengal	12
Andaman Nicobar	1
Chandigarh	3
Goa	4
Pondicherry	1
Delhi	59



YEAR-WISE CAPITAL EXPENDITURE (Rs. Crore)

S. No.	Particulars	2014-15 (RE)	2015-16(BE)	2017 - 18	2018 - 19	2019 - 20
A.	NON-DEVELOPMENTAL REVENUE EXPENDITURE					
1	Interest payments	411,354	456,145	523,078	557,779	592,568
2	Defence (revenue)	140,405	152,139	175,861	186,413	197,598
3	Organs of state	5,617	7,819	8,520	10,003	11,745
4	Fiscal Services	10,100	11,804	13,566	15,617	17,978
5	Police	52,433	55,436	65,576	69,511	73,682
6	Other administrative services (@)	16,833	17,712	14,940	16,786	18,859
7	Pensions & other retirement benefits	81,705	88,521	131,201	139,073	147,417
8	Technical & economic cooperation with other countries	5,319	6,337	10,000	11,876	14,105
9	Social security and welfare (Non-development related)	1,616	3,235	2,382	2,044	1,753

S. No.	Particulars	2014-15 (RE)	2015-16(BE)	2017 - 18	2018 - 19	2019 - 20
10	Other non-development expenditure (#)	15,148	19,692	31,713	35,643	40,060
11	Grants to UTs (NP)	516	557	600	600	600
12	Compensation to states for loss of GST			37,500	45,000	40,000
I.	Non-development revenue expenditure	7,41,046	8,19,397	1,014,938	1,090,344	1,156,364
B.	DEVELOPMENTAL REVENUE EXPENDITURE					
13	Social & Community Services	132,680	147,843	190,000	241,064	300,448
13.1	Education	66,955	66,132	75,000	97,460	112,289
13.2	Health	28,103	29,496	45,000	65,000	100,000
13.3	Others	37,622	52,215	70,000	78,604	88,158
14	General Economic services	28,269	28,207	30,000	12,000	15,000
15	Agriculture & allied service and Rural Development	103,130	103,384	170,000	191,098	215,941
16	Industry & minerals	72,898	44,024	65,000	72,000	80,000
17	Power, irrigation & flood control	13,355	14,683	19,000	21,337	24,111
18	Transport & communication	32,800	32,835	22,600	31,000	37,000
19	Public works	1,694	1,800	1,800	2,000	2,200
20	Grants to states & UTs	99,995	52,675	41,000	50,000	50,000
21	STATUTORY GRANTS TO STATES	64,675	88,865	103,101	111,063	133,678
22	Food subsidy	122,676	124,419	145,000	152,879	157,637
23	Fertilizer subsidy	70,912	72,969	70,000	70,000	70,000
II.	Total revenue development expenditure	743,084	711,704	857,501	954,440	1,086,014
C.	NON-DEVELOPMENTAL CAPITAL EXPENDITURE					
24	Defence (capital)	81,965	94,588	91,580	133,769	172,753
25	Other non-development capital expenditure (^)	13,478	10,033	13,741	14,000	20,000
III.	Total non-developmental capital expenditure	95,443	104,621	105,321	147,769	192,753
D.	DEVELOPMENTAL CAPITAL EXPENDITURE					
25	Transport & communication	49,668	78,204	111,713	137,036	215,144
25.1	Railways (Budgetary assistance)	30,100	40,000	55,000	76,439	118,768
25.2	Roads & bridges	11,997	31,628	48,500	51,597	86,376
25.3	Others &	7,571	6,576	8,213	9,000	10,000
S. No.	Particulars	2014-15 (RE)	2015-16(BE)	2017 - 18	2018 - 19	2019 - 20
26	Others *	30,284	34,528	72,767	83,667	119,318
27	Loans & Advances	10,697	13,359	20,000	22,000	24,000
IV.	Total capital development expenditure	90,649	126,091	204,480	242,703	358,462

Notes: @ These include stationery & printing, external affairs and others.

* Includes non-plan expenditure on information and publicity, pension to freedom fighters, non-developmental, non-statutory grants¹ to states other than those for police and natural calamities etc.

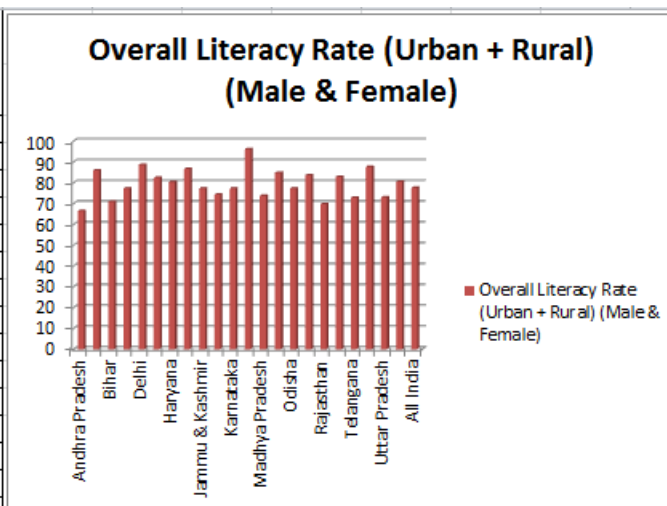
^ Includes border services, fiscal services and others.

* These include expenditure on aviation, ports and others.

* Includes scientific research, general investments, industry & minerals, public works and others.

STATE WISE LITRACY RATE IN INDIA

State	Overall Literacy Rate (Urban + Rural) (Male & Female)
Andhra Pradesh	66.4
Assam	85.9
Bihar	70.9
Chhattisgarh	77.3
Delhi	88.7
Gujarat	82.4
Haryana	80.4
Himachal Pradesh	86.6
Jammu & Kashmir	77.3
Jharkhand	74.3
Karnataka	77.2
Kerala	96.2
Madhya Pradesh	73.7
Maharashtra	84.8
Odisha	77.3
Punjab	83.7
Rajasthan	69.7
Tamil Nadu	82.9
Telangana	72.8
Uttarakhand	87.6
Uttar Pradesh	73
West Bengal	80.5
All India	77.7



STATE WISE POVERTY RATE IN INDIA

Rank	State/U.T.	<u>Poverty (% of people below poverty line)</u>
1	Goa	5.09
2	Kerala	7.05
3	Himachal Pradesh	8.06
4	Sikkim	8.19
5	Punjab	8.26
6	Andhra Pradesh	9.2
7	Haryana	11.16
8	Uttarakhand	11.26
9	Tamil Nadu	11.28
10	Meghalaya	11.872
11	Tripura	14.05
12	Rajasthan	14.71
13	Gujarat	16.63
14	Maharashtra	17.35
15	Nagaland	18.88
16	West Bengal	19.98
17	Mizoram	20.4
18	Karnataka	20.91
19	Uttar Pradesh	29.43
20	Madhya Pradesh	31.65
21	Assam	31.98
22	Manipur	32.59
23	Bihar	33.74
24	Arunachal Pradesh	34.67

25	Odisha	36.89
26	Jharkhand	36.96
27	Chhattisgarh	39.93
U/T	Jammu and Kashmir and Ladakh	10.31
U/T	Lakshadweep	2.77
U/T	Andaman and Nicobar Islands	1
U/T	Pondicherry	9.69
U/T	Daman and Diu	9.86
U/T	Delhi	9.91
U/T	Chandigarh	21.81
U/T	Dadra and Nagar Haveli	39.31

STATE WISE WORKER PARTICIPATION RATE

State/Union Territory	Rural			Urban			Combined		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
A&N Islands	17.9	59.1	39.8	17.7	60.35	40.47	17.81	59.59	40.08
Andhra Pradesh	44.6	58.4	51.5	19.1	54.14	36.75	36.16	56.98	46.61
Arunachal Pradesh	39.5	48.5	44.1	21.3	50.91	36.97	35.44	49.06	42.47
Assam	23.7	53.1	38.7	14.9	56.79	36.41	22.46	53.59	38.36
Bihar	20.2	46.7	34.0	10.4	44.90	28.62	19.07	46.47	33.36
Chandigarh	14.2	62.2	42.6	16.0	56.34	38.17	16.00	56.51	38.29
Chhattisgarh	46.3	56.4	51.3	17.4	53.09	35.66	39.70	55.59	47.68
Dadra & Nagar Haveli	33.4	56.8	45.9	14.7	66.51	45.48	25.25	61.57	45.73
Daman & Diu	15.9	58.2	38.6	14.5	75.12	53.58	14.89	71.48	49.86
Delhi	9.7	49.3	31.1	10.6	53.08	33.34	10.58	52.99	33.28
Goa	22.6	55.5	39.1	21.5	57.48	39.89	21.92	56.76	39.58
Gujarat	32.0	57.1	44.9	11.4	57.18	35.73	23.38	57.16	40.98
Haryana	20.8	50.1	36.4	12.1	51.15	32.95	17.79	50.44	35.17
Himachal Pradesh	47.4	59.0	53.3	19.9	55.72	39.22	44.82	58.69	51.85
Jammu & Kashmir	20.8	46.3	34.2	14.5	52.68	35.23	19.11	48.11	34.47
Jharkhand	35.0	50.8	43.0	10.1	46.72	29.26	29.10	49.76	39.71
Karnataka	38.8	59.8	49.4	20.8	57.81	39.66	31.87	59.00	45.62
Kerala	20.2	53.6	36.3	16.0	51.76	33.12	18.23	52.73	34.78
Lakshadweep	12.6	52.3	32.9	10.5	44.56	28.01	10.96	46.25	29.09

Madhya Pradesh	39.3	54.3	47.0	15.1	51.66	34.18	32.64	53.56	43.47
Maharashtra	42.5	56.7	49.8	16.8	55.16	36.95	31.06	56.00	43.99
Manipur	41.2	52.4	46.9	33.2	49.87	41.41	38.56	51.58	45.09
Meghalaya	35.0	47.0	41.0	23.6	47.68	35.63	32.67	47.17	39.96
Mizoram	41.9	53.9	48.0	31.1	50.89	40.98	36.16	52.35	44.36
Nagaland	52.3	55.7	54.0	25.9	47.95	37.44	44.74	53.42	49.24
Odisha	29.7	56.5	43.2	14.1	54.08	34.81	27.16	56.11	41.79
Puducherry	21.1	54.2	37.4	16.1	54.41	34.84	17.63	54.36	35.66
Punjab	14.3	54.9	35.6	13.2	55.51	35.75	13.91	55.15	35.67
Rajasthan	42.7	51.7	47.3	12.0	50.75	32.27	35.12	51.47	43.60
Sikkim	44.6	61.0	53.3	24.8	57.52	41.90	39.57	60.16	50.47
Tamil Nadu	41.2	60.0	50.7	21.8	58.54	40.16	31.80	59.31	45.58
Tripura	26.3	55.3	41.1	16.0	56.97	36.76	23.57	55.77	40.00
Uttar Pradesh	18.3	47.4	33.4	11.3	48.94	31.16	16.75	47.71	32.94
Uttarakhand	32.9	49.1	41.0	11.3	50.98	32.36	26.68	49.67	38.39
West Bengal	19.4	57.2	38.7	15.4	56.84	36.69	18.08	57.07	38.08
India	30.0	53.0	41.8	15.4	53.76	35.31	25.51	53.26	39.79

WORK FORCE PARTICIPATION IN INDIA (%)

Year	Rural		Urban	
	Female	Male	Female	Male
2000-2001*	28.7	54.4	14.0	53.1
2001-2002*	31.4	54.6	13.9	55.3
2002*	28.1	54.6	14.0	53.4
2004-05	32.7	54.6	16.6	54.9
2005-06*	31.0	54.9	14.3	54.0
2007-08*	28.9	54.8	13.8	55.4
2009-10	26.1	54.7	13.8	54.3
2011-12	24.8	54.3	14.7	54.6

LITERACY IN INDIA

Literacy (2017-18^[3])	
Total	77.7% ^[2]
Male	84.7%
Female	70.3%
Enrollment	
Total	(N/A)
Primary	95% ^[4]
Secondary	69% ^[4]
Post secondary	25% ^[4]

No well mannered methodology is needed to prove that economic growth and decent living conditions are dependent on the human capital and physical capital. Since the privatization of two important aspects i.e education and health are allowed without any cap after liberalization the States having scope of generating climate due to their own spending on public goods have succeeded in putting up best infrastructure and creating healthy environment of the public life. The commitment of the States towards giving the best on health and education pulls up the private investors to make investment on the physical paraphernalia and it is circuitous while poverty and unemployment remains under check. It is the non-uniformity of improvisation of education and health which is making the States lagging behind each other.

The geographical spread and political administration no doubt are the important factors in overall delivery system but more than that in case the strict enforcement on the education and health is kept in sight then definitely human capital aspect will get recognition and priority is decided. The road network and overall working system is appreciable in the States where the education and health expenditure is pre-emptive and not residual. It is matter of understanding that once State is alert about providing education and health to all then leaving the people to harshness of the private sector is reduced. Why tertiary health facilities in the public sector are so good in TN, Karnatka, Kerala, Maharashtra are so good because the States know that undue burden on the people when they are progressing towards attaining the state of comforts in terms of decent education and housing should be avoided. Till now people from many States were coming to

capital for availing specialized treatment as they did not have better facilities in their own State.

Over the years the Central Government had to intervene in setting up 10-12 AIIMS in few States but Kerala and WB run by the Left governments had too much concern about the people to be taken care with the in- State facilities. Migration data provides ample proof for that due to high drop outs from the schooling are leaving them with no option but to enter in the labor force in the unskilled form and demand-supply gap in the unskilled workers are bending them to accept the meager wages or sometimes fall into urban poverty and habitation in slums. The central government revenue and capital expenditure ratio provides the reason for compulsions emerging out of the poor State of human capital formation either because of lack of political will to enforce the standard of education or the governments do not have capital to set up quality schools. The differential in the quality of education is making the people insecure and hence half done approach is common in many States. Enrolment ratio itself is an indicator that why children in some States are keen on competing school education and in other States they are leaving the schools empty handed. Over the years manufacturing particularly which is skill based has come up in orderly manner in Gujarat and Rajasthan otherwise the medium States because the States had laid down the priority to school education and hence manufacturing has given them a semblance on employment and productivity in agriculture. Prosperity index is improving in some States which are focused on education and health. The States development efforts are making them eligible to take extra funds from the central government as well. While higher professional educational institutions have increased in large

number but the absorption capacity of the pass out is falling down because the support at the middle level is missing. Higher is the manufacturing more is the overall GVA. Therefore human capital formation over the hierarchy is the de-facto reason for the development if viewed from physical capital creation.

Conclusion: there is a need to align the human capital with physical capital in case the human development adjudged from their per capita income and poverty ratio to be satisfactory. It is not taking place due to excessive revenue expenditure and poor expenditure on health, education and nutrition.

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