

Industrial Planning in a Human Development Framework – Experiences in Asia

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A pro-active industrial policy in contrast to a purely market-led approach is central to achieving success in industrialization, economic growth and poverty reduction. Experiences of mainly China, South Korea, Malaysia, and to some extent, Taiwan suggest that governments played a central role in directing investments, promoting/protecting national industries and fostering R&D before they became mature economies. Evidences from Thailand and Vietnam supplement the point. South Asian countries having weak and uncertain industrial policies have not made any significant headway. Industrial policy alone is not sufficient for an industrial transformation. A sound educational and skill development policy to create human capital is equally important for success. The paper explains why most South Asian and Latin American and sub-Saharan African economies have experienced lesser success compared to East Asian economies.

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Introduction

Economic development which deploys workers for the welfare gains of people at large is the most effective form of sustained development. For this, firstly, workers should be adequately accomplished to perform basic beings' and doings' (in Amartya Sen's, 2001 sense), making a case for investing in people. However, that is not all: for sustaining economic growth, there should be large-scale inclusion of people in the development process (Mehrotra, 2016). Human endowments (education, skills, adequate nutrition and health) to improve people's empowerment in addition to the effective engagement of their labor power are central to achieving success.

HD (human development), being a highly flexible paradigm, requires a redefinition for each locale and time period, for its application in development planning. HD requires going beyond investments in health and education, keeping in view that much of Asia was/is labor surplus. It needs making optimal use of people and la-

bor in the growth process. This does not automatically happen; it has to be planned and carefully executed. This paper puts forth a case for HD-based planning with reference to employment creation through industrialization for which human capital—a process where human capital (education, skills, health)—and the modern industrial/ service sectors are brought together into an integrated framework. The paper attempts to:

- (a) Analyze how some countries in Asia have forged ahead on the development scale while others have lagged behind on account of the above mentioned two aspects, namely, industrialization and the corresponding job-creation, and human capital; and
- (b) Identify the roots of high achievers' success and low achievers' lack of it in the (implicit or explicit) planning process.

A Conceptual Framework¹

Economic growth, employment creation, human capital formation (for job creation and human empowerment), and poverty alleviation form the four vertices of a development pyramid. Mainstream economics (typically, which advocates free trade, minimal governmental intervention in markets, etc.), rooted in classical utilitarianism, has had limited success so far in unbundling the intra-household/ entity allocation of resources, and hence is inadequate for

¹ This section draws significantly on Mehrotra and Acharya (2017).

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developing an understanding of the intricacies concerning the outcomes of a development strategy (Sen, 1985; Nussbaum, 2001; Amsden, 1989; Nell, 1998). Despite this, it had been at the core of much of public policy throughout the 1980s and 1990s and still is; despite it having extremely mixed results in Latin American and Sub-Saharan developing economies. Most East-Asian economies, in contrast, performed very differently through this period, as they adopted policies significantly at variance from mainstream economics (Mehrotra & Acharya 2017; Rodrik, 1997). Therefore, the need for an alternative framework for employment creation and furthering development cannot be underscored more.

In this alternative framework, the existence of two forms of synergies is put forth. One synergy exists between different elements of human capital enhancement (i.e. health, nutrition, family-planning, water and sanitation and basic education); and the other between interventions that form the basis of employment creation, reduction in income-poverty, and improved health and educational status. With these two synergies as foundations, it is proposed to put forth an alternative approach here to integrate economic and social policies.

As a theoretical construct, the notion of dual synergies forms a conceptual framework for understanding a given situation in terms of human development outcomes².

This paper argues that the state has a central role in ensuring all the three desirable ends or outcomes: economic growth, employment creation, and improved health and education outcomes. In the contemporary Asian context, they translate into at least three broad propositions. The first relates to land and agrarian reforms for generating much larger marketed surpluses over consumption, release surplus labor from it and diversifying activities therein. The second relates to the need for an industrial policy that would guide investments and promote technologies in areas of maximum private and social returns and jobs. The third relates to increased investments in sectors that help raise human capital and human development.

Some Asian countries have pursued policies that rely on these three pillars and have succeeded in forging ahead; some others have progressed though they have not succeeded to the same extent as the first group; while a third group consists of countries that have faltered and have remained in the low HD/low GDP bracket. It would be useful to examine empirically, the success and failure of countries on the pillars identified in Fig. 1.

² See Taylor et al 1997; Mehrotra 2013; Mehrotra and Delamonica, 2007; for applications of the framework to developing countries.

The HD paradigm works as effectively within the market framework with strong government intervention, especially in the following areas:

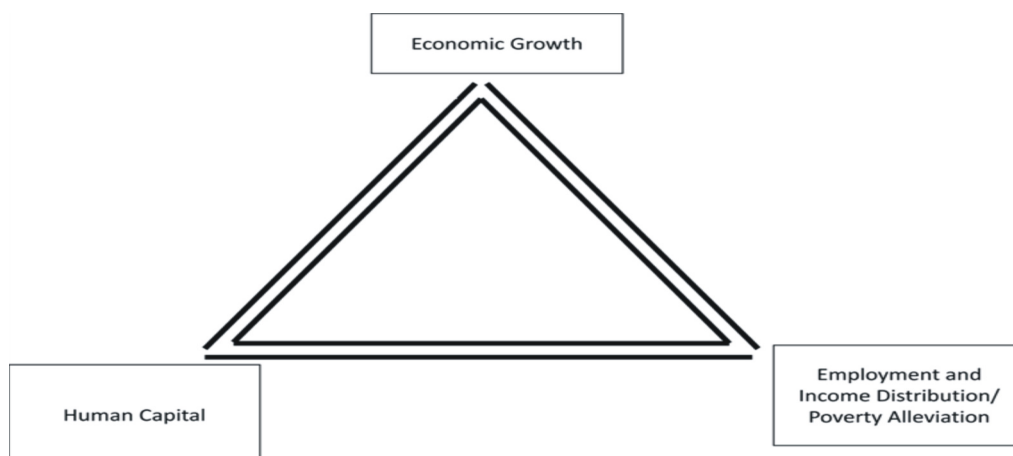
1. To help different market entities and institutions to mature in the earlier stages;
2. To monitor the functioning of institutions;
3. To eliminate distortions in factor prices;
4. To ensure factor flexibility and mobility;
5. To help train and re-train workers recurrently;
6. To provide bearings to national entrepreneurs in regard to market trends; and
7. To assist in R&D, in conjunction with the industry.

Country Experiences

In Table 1, the first three countries have relatively high GDP per capita and high Human Development Index (HDI), the second five countries have medium GDP and HDI, while in the last five both GDP and HDI are low when seen from a comparative perspective.

The said synergies and the associated policy instruments as in (1)-(3) above should form the main discussion in this section. However, since agrarian reforms and agricultural growth are discussed extensively elsewhere, this paper restricts itself to industrial poli-

Fig. 1 The Economic Growth-HD-Employment/Poverty-reduction Link.



Source: Adapted from Mehrotra (2016)

- (1) Economic growth is fuelled by skilled human-power/ human capital;
- (2) Employment is created (from (1) above), and correspondingly, poverty falls.
- (3) Improved employment and incomes finance human capital, in turn, which further fuels economic growth.³

Table 1 HDI & GDP Per Capita, Select Asian Countries

Country	Global HDI Rank (2014)	GDP Per Capita (2014)
(1)	(2)	(3)
South Korea	17 (Global category: very high)	27,195
Malaysia	62 (Global category: high)	11,307
China	90 (Global category: high)	7,990
Thailand	93 (Global category: high)	5,742
Sri Lanka	73 (Global category: high)	3,389
Indonesia	110 (Global category: medium)	3,362
Philippines	115 (Global category: medium)	2,858
Vietnam	116 (Global category: medium)	2,088
Lao PDR	141 (Global category: medium)	1,779
India	130 (Global category: medium)	1,617
Pakistan	147 (Global category: low)	1,450
Bangladesh	142 (Global category: medium)	1,217
Cambodia	143 (Global category: medium)	1,168
Nepal	145 (Global category: low)	751

Sources: For HDI, Human Development, Global Report 201.; For GDP, IMF and World Bank databases

³ This model has been tested empirically by Mehrotra and Parida (2018). See also, Ranis and Stewart (2000); Suri, Stewart & Ranis (2002).

cies and the human capital approaches.⁴

Industrial Policy

The Washington Consensus states that governments are mainly required to provide a favorable macroeconomic environment (low inflation, devalued currency, labor flexibility, neutral trade regimes, etc.). The rest should be the responsibility of the private sector. This, however, might not hold for most developing countries. There are at least four reasons for this, at least in Asia:

First: The asymmetry in information availability across different entities is huge, resulting in some having access to information and becoming ‘crony-capitalists’.

Second: The maturity required among national entrepreneurs for advancing industrialization without any assistance is extremely limited.

Third, the scale of the national industrial houses is small to match with international companies.

Fourth, the technological prowess and resource availability with the national private sector are very limited.

There is no developing country that has followed the Washington Consensus path and succeeded on either the

⁴ Academic journals like the Journal of Peasant Studies are fully devoted to agrarian issues since several decades. See also, Mehrotra and Acharya (2017).

economic growth or human development targets (Rodrik, 2003).

Some country-specific details in select Asian countries are given below:

Successful Planning Cases

South Korea: In South Korea in the 1950s (the first phase), import substitution strategies were put in place to promote local entrepreneurship/skills and also save on foreign exchange drain. Industrial policies in the 1960s and 1970s aimed at promoting identified *sectors* through allocating government resources to them. They developed light industry products, toys, shoes, garments, and the like; each of them labor intensive, and were in conjunction with the comparative advantage stemming from surplus labor at that time.⁵ Agrarian reforms and investments in human capital facilitated the process (Park, 1991). The governments were promoting industry through fiscal and monetary instruments in addition to guiding/directing investments and providing attractive loans (World Bank, 2014; Huck-ju Kwon & Koo, 2013; Amsden 1979). Seen from an HD perspective this was ‘inclusive’ and efficient economic planning.

The second stage of industrialization began in the 1970s after the comparative advantage in low-skill labor intensive products began to wane. There was a shift towards industries such as steel, petrochemicals, machinery, auto industry, shipbuilding, and electronics (e.g., South

⁵The capital intensity in these countries was low earlier and even today it is lower than, say in India despite that India is labor surplus (Table 2).

Korea's 2nd 5-year plan in late 1960s-early 1970s). The government enacted laws to promote specific industries (Sakong & Koh, 2010). Key policy instruments were: concessional credit, state-financed infrastructure, low taxes, duty-free import of machinery and materials, protective import duties on items that threaten local industries, and permitting monopolies in several industries to achieve scale (Park, 1991). Additionally, effort was made to promote national ownership of capital (Haggard, Lim Y & Kim, 2003). Finally, there was strong emphasis on Research and Development (R&D), with strong private sector partnership.⁶

Some key elements of South Korea's industrialization:

1. Policies changed with shifts in markets, factor endowments (labor) and innovations in science and technology. Thus, earlier the (incremental) capital-output ratio (ICOR) was low, but it increased after inclusion of more workers into the mainstream (Table 2).
2. Government-industry partnership assumed a central place.
3. National industrialists were promoted for maximum retention of value-added and for indigenization of cutting-edge technologies.

⁶ The government established and expanded vocational schools and training outlets and created government-funded research institutions to conduct R&D activities (Sakong & Koh, 2010 for Korea; Yang, 1993 for Taiwan). For data on R&D expenses see <http://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS>.

4. There was emphasis on R&D, to the extent of 4+% of the GDP in South Korea, was spent on it – among the highest in the world. The private sector contributed more than the government did on R&D.
5. Export orientation ensured product quality, competitive costs and current account surplus. Firms were supported but were required to deliver on exports.
6. In South Korea it is incredibly easy to do business, attracting large volumes of capital from indigenous and external sources (Korea rank: 6).

Table 2 Incremental Capital-Output Ratios (ICOR), Select Countries

Country	Year	ICOR
(1)	(2)	(3)
China	1991-2011	3.90
	1990-1996	1.75
Japan	1961-1970	3.20
South Korea	1981-1990	3.20
India	2001-2007	4.14
	2014-	6.50
Bangladesh	2001-2007	4.80
Philippines	2001-2007	4.09
Thailand	1983-1990	3.83
Sri Lanka	2001-2007	4.86
Nepal	2001-2007	5.73

Sources: Mehrotra and Acharya (2017); for India 2014, Kolhi (2014)

Seen from an HD perspective, the industrial policy created conditions for creating more jobs and skills, which promoted inclusion and eliminated poverty.

China; Industrial policy in China has evolved to bring about structural change in the economy (Felipe et al, 2010;

Gabriele, 2010; Heilmann, 2009; Kotz, 2005; Poon, 2009; Lin, 2013). China tried to emulate the Japanese/East Asian success in industrialization in the late 1970s/1980s, to the extent that it invited Japanese, Korean and Singaporean experts to work in Chinese ministries. It also sought technologies from abroad and made aggressive attempts to acquire prowess in these, through 'reverse engineering' (Heilmann & Shih, 2013). In the initial stages (1990-1996) the ICOR was low at 1.95 and only after a certain time did the ICOR rose to 3.9, implying that in the early stages a large number of workers were engaged in non-farm activities for industrialization. China has been following the 'most effective use of the most abundant resource (labor)' approach for industrialization.

At least four aspects in regard to Chinese industrial policy are significant:

1. The government, in close association with the industry, has been closely navigating the economic development process.
2. There have been planned shifts in industrial policy from time to time to match with the changing market conditions (and technological changes) for indigenizing technologies and increasing national prowess in science and technology.
3. In the initial phases the industry was labor-intensive, which changed in the second phase towards capital deepening (Table 2).
4. While R&D investment in China has not been as high as in say, South

Korea, it is still high at 2+% of the GDP (top 10% countries in the world in terms of percentage to GDP spent on R&D).

Seen from an HD/employment perspective, their industrial policy has created a large number of non-farm jobs, diffused skills in the populace and helped reduce poverty.

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Malaysia: Malaysia has had a systematic public policy for balanced industrial development and has made harmonious progress towards achieving higher human development to achieve this (Table 1; Singh, 2011). They had a flexible industrial policy coupled with synergy with the other pillars, it has yielded results.^{7,8}

Seen from HD and employment perspectives, the industrial policy in the development process in Malaysia has created a large number of non-farm jobs and diffused skills among them, which rapidly promoted inclusion and reduced poverty dramatically (<1% as per \$1.9 pov-

⁷ Malaysia's expenditure on R&D is 1.13% of the GDP, which is above the developing country average of <1%.

⁸ For a more detailed discussion of Malaysia's human development success, see Human Development Reports of Malaysia and also UNDP (2014).

erty line in 2010). Malaysia as well, is a case of successful planning for industrialization and job creation.

**Middle Rung Countries:
Competent Planning, but
Constraints Exist**

Thailand & Vietnam: Thailand, Vietnam, the Philippines and Indonesia have been dubbed as the second group of Asian tigers, as these countries achieved very high growth rates for some 5-8 years in the late 1980s and early/mid 1990s, and for a while in the new millennium. Thailand and Vietnam have had industrial policies somewhat similar to each other and have been molded to an extent on the East Asian success, though they lack technological prowess and national capital ownership compared to say, South Korea and China.

Thailand has had a flexible industrial policy, changing from one decade to another and improving by the decade. Compared to East Asia, though, the science and technology component is yet not that strong here. Also, while there has been progress on agricultural development, it is not strong enough to match the success of the East Asian countries. The country has achieved significant inclusion and poverty reduction (Poverty: 10.9% in 2013). In the ranking of countries, it is a significant achiever though not yet in the same league as the East Asian countries.

Vietnam started late on industrialization due to the war but has all along

had an explicit industrial strategy within its development planning framework (UNDP, 2014). Even in the 1970s, it had implemented import substitution and export promotion strategies. The Doi Moi of 1986 was a carefully worked out strategy to open up the economy, attract foreign capital and transfer-in technologies. However, the war and sanctions retarded the development of infrastructure and human capital, not creating conditions for really 'taking-off'. It is a starter on science and technology and has a relatively small industrial sector with limited diversification. However, it has made notable strides on the other pillars (typically, human capital), and has achieved considerable inclusion and poverty reduction (Poverty: 9.8%, 2016). During 1990 and 2010, Vietnam reduced the share of agriculture in GDP from 25% to 18%, raised the contribution of industry from 34.5% to 38.3% and services from 40% to 43.3%.

Seen in the light of progress made on HD indicators and in attracting foreign capital, the country is a significant achiever, although it is yet some distance from East Asia.

This achievement is underpinned by the completion rate of 81% at the secondary level (2014, according to UNESCO), and gross enrolment rate of 25% at tertiary level (2013). Education has also been backed by a TVET system that has been aligned to industrial policy: 44% of the firms in 2007 were conducting in-firm, enterprise-based

training, above that of India, where this number was 16% in 2009 (ADB, 2017). Seen in the light of progress made on HD indicators and in attracting foreign capital, the country is a significant achiever, although it is yet some distance from East Asia.

Poor Planning, Unsuccessful Results-The third Tier

*India, South Asia and Others*⁹: India's industrial policies have been mainly regulatory than promotional. Since the 1990s, it has had a policy akin to the World Bank/IMF dispensation. The policies as they have evolved through the last 70 years could be stated as follows:

1. The governments through the 1950s to 1980s (and even later)—under a dominant public sector, manned by inefficient bureaucracies—invested heavily in heavy/capital-intensive industries. All this effort ignored the comparative advantage, factor endowments or demand patterns. Thus, in a labor-surplus country, the focus was on developing capital-intensive industries. The ICOR was and is very high (Table 2). Very few formal industrial jobs were/are being created and people outside agriculture subsist in low-paying informal work (Table 3).
2. A highly regulated private sector was permitted to exist, producing mainly for the local markets. This sector, in the absence of a clear promotional

policy, never blossomed or reached a critical scale: in fact, there was an established rivalry and mistrust between the public and private sectors, much to the disadvantage of industrial development (Das, 1993).

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3. A number of goods were reserved for the small industry sector irrespective of whether this sector could actually produce these efficiently (Basu, 2016; Jalan, 1991).
4. For promoting science and technology a number of educational and research institutions were set up, though most functioned as bureaucracies and were underfunded. They were also disconnected from the industry. On its part, the industry extensively borrowed/bought dated technologies from foreign companies and/or partnered with them for making products and processes, to be sold in local markets.
5. In the period since the 1990s and later, with the reformist strategies in place, there has been significant de-industrialization in the country. The sectors which have grown are the services – low-end/back office computer software development on the one hand, and human migration to different parts of the world as guest workers, on the other. The trend established in the earlier periods—of

⁹ This section mainly discusses India.

setting up capital-intensive industries—has stayed unchanged and even strengthened.

To worsen matters, there has been discontinuity in the policy regimes; not smooth transition as in the East Asian countries. Also, there has been no support to industrialization from the other pillars (human capital and agrarian devel-

opment), which have further thwarted long-term planning for industrialization. The industrial policy has been exclusive of the larger populace. Not surprising, India has not been able to create a significant quantum of jobs in the non-farm sectors. All these countries have labor engaged in the informal sectors (or informally engaged in the formal sectors) on a large scale.

Table 3 Non-farm Informal Employment

Country	% Workers in Informal Employment
China (2010, 6 cities)	32.99
Thailand (2010)	42.30
Sri Lanka (2009)	62.12
Vietnam (2009)	68.19
Philippines (2008)	70.06
Indonesia (2009)	72.53
India (2009-2010)	83.59

Source: IMF, 2016, Regional Economic Outlook, Asia-Pacific, Chapter 4, at <http://www.imf.org/external/pubs/ft/reo/2016/apd/eng/pdf/areo0516c4.pdf>

To summarize, countries which have successfully industrialized—irrespective of whether it is through the market- or a mixed public/private sector route—have had a carefully architected and flexible industrial policy enforced by governments for strengthening those industries wherein the country has/had comparative advantage in terms of entrepreneurial maturity, scale, skills and competitiveness. R&D has formed an integral part of the industrial policy and strategy. They have effectively engaged workers in the industrialization process. One key factor that has helped the whole process is partnership between entities: private sector, public sector, the state, academic/R&D institutions, and the like. In contrast, the unsuccessful ones have had a patchy industrial strategy, non-absorption of work-

ers in non-farm sectors, little partnership between the different entities, and little if any R&D.

Human Capital¹⁰

The dual synergy model, which also traces linkages between education/health and economic development/poverty reduction, is a useful tool to compare experiences of countries.

Countries with Positive Outcomes

South Korea; South Korea has attached high importance to government investments on education. Confucianism

¹⁰A presentation on middle-tier countries is avoided here to cut repetition, as their outcome lie in-between the first and third.

historically places great emphasis on the benefits of education; accordingly, the demand for education has always been high in Korea. After independence in the mid-late 1940s and the Korean War in the early 1950s, educational facilities expanded rapidly with local communities providing facilities for schools and with US assistance (both, financial and skills). By the early-1960s primary education was universal, resulting in a transition to secondary education, which too was mostly universal by about 1970. The government spends some 7.6% of the GDP on education (2010-14 data), almost half of which is spent on higher (scientific) education. The private sector also contributes extensively in higher education, especially in science.

The health sector has received relatively less attention in Korea (government expenditure: ~2% of the GDP), though it was still higher than say, in India, Lao PDR or Cambodia. Despite this, the health status has improved: the IMR fell from 138 in 1950 to <3 during 2010-2015, and the reason is the said synergy between the three pillars of Fig. 1. When incomes and education improve rapidly, people adopt hygienic habits and also seek better health, even if they have to pay. Next, population control has been a significant component in the government's growth strategy, and it worked, again due to the said synergy. People have also progressively opted for late marriages due to increased education and employment opportunities for women, in turn, limiting the number of children per woman. The labor force participation of women, which was 36.5%

in 1965, rose to 40% in 1975, 47% in 1990, and exceeded 50% in 2014.¹¹ The state introduced compulsory medical insurance from 1976 onwards, which further provided a boost to people's health status.

China; There are several reasons why China managed to create millions of non-farm jobs, reduce poverty and gain on social indicators:

- (1) China had universalized primary schooling by the end of seventies. Its literacy rate was 67% (79% male, 54.4% female) in 1981-82 (for 15+ year olds), which rose to 96% in 2014.¹² This strengthened the synergies.
- (2) The health policy in the 1950s until 1990s focused a great deal on preventive and promotive health, especially in rural areas. By the beginning of the 1980s, China was undergoing an epidemiological transition: prevalence of infectious diseases radically decreased, and infectious diseases such as polio nearly eradicated. Underweight, stunting and wasting among children were all down to <5% in 2009 compared to them being in double digits in the early 1990s (UNICEF, 2013). There was a dramatic fall in infant mortality rate (IMR) as well, declining from 85 in 1969 to 10 in 2015. An important

¹¹ See for data, <http://www.tradingeconomics.com/south-korea/labor-participation-rate-female-percent-of-female-population-ages-15-plus-wb-data.html>

¹² <https://www.google.co.in/#q=adult+literacy+rate+in+china>

strategy in China was to train thousands of “barefoot doctors”: 3-4 months of initial training, in addition to further annual training (Hsiao, 1995).

- (3) Following from the human capital policy, China’s population growth began to slow in the 1980s to reach virtually a zero-population growth in the 2011-2020 decade (Hsiao, 1995). Better health, high mean years of schooling (especially among girls), rising female labor force participation, and no coercion explains the reduction in Total Fertility Rate (TFR).
- (4) While state expenditure data on education and health in China are not exactly comparable with other countries since its accounting methods are different, it is estimated that expenditure on education has exceeded 5% of the GDP all along, and on health, about 3.5%. The numbers of PhD students in sciences in single university departments in China are in hundreds, and not in units or tens, as in India.¹³

Malaysia: Malaysia is an ethnically diverse society. While the Malay stock forms a majority, the Chinese and Indian-Tamil population are significant in numbers and are an economically prosperous minority. At Independence in 1957, the majority ethnic Malay population formed the peasantry, who were relatively backward in terms of their

educational and health status and incomes.

At the time of independence, primary education was mainly in vernacular languages: in Chinese and Tamil for the two minority communities, respectively, and Islamic education for the Malay. The then government recognized that school education must be integral for improving the standards of living of the population in both rural and urban areas and introduced *Bahasa Malay* as the universal language. It launched a massive effort to unify the educational system and at the same time create an educational infrastructure to deliver education to the entire population with focus on the rural population. By 1967, 91% of all primary-school-age children were enrolled in schools. The process involved a state-led standardization of the school system – the curricula, syllabi, time tables, language(s) of instruction, organization and funding of schools and teaching. *Bahasa Malay* became the medium for all, with other languages including English, optional. As in 2009, the adult literacy rate was 95%, primary school enrolment exceeded 99%, and some 3/4 of them having moved to secondary education stream.

State expenditure on education exceeds 5% of GDP.¹⁴ Next, the R&D expenditure at 1.13% of GDP in 2012, was less than the OECD average but was higher than the developing countries average.

¹³Rao CNR 2016, 25th Kelkar Memorial Lecture, June 27, 2016 (https://www.youtube.com/watch?v=jm_1HDIaO_I&feature=youtu.be)

¹⁴ See, Malaysia Education Blueprint 2013-2015, Government of Malaysia, Kuala Lumpur 2012

Around 1957, some 70% of health services were concentrated in urban and semi-urban areas. Following advice from WHO, a National Rural Health Program was formulated to correct the unequal distribution of health services in the 1950s. In 1960, a public health system was developed across the country, consisting of a three-tier structure: health centre, health sub-centre and midwife clinic. The government integrated health planning (along with educational planning) into the overall development planning for ensuring an appropriate apportioning of finances for building health and education facilities. It also located the primary health care units based on the size of the population to be served. The state spends about 4.3% of the GDP on health (2013 data from World Bank).¹⁵

Outcomes: IMR fell from 67 in 1960 to 6 in 2015. All 100% population access safe drinking water and 96% access safe sanitation. Underweight children reduced from about 23% in 1991 to 12% in 2010-2012, and stunting reduced from 22% to 17% through 1999 to 2008-2012.¹⁶

The Third Tier Countries

India: (also applicable to most large countries of South Asia, except Sri Lanka)

In India in the 1970s, the literacy rate was 43.6% (for 7+ year olds), which rose

¹⁵ See, <http://www.tradingeconomics.com/malaysia/health-expenditure-total-percent-of-gdp-wb-data.html>

¹⁶ See for data, http://www.unicef.org/infobycountry/malaysia_statistics.html

to only 74% by the 2011. Some 40% Indian children could not actually read and write as in the early 2000s (China: $\leq 5\%$) (Banerji & Duflo, 2011; ASER, 2012). It took until 2007 to truly universalize primary enrolment. The primary school net enrolment exceeded 97% in 2007; for upper primary, the Gross Enrolment Ratio exceeded 95% in 2014; secondary gross enrolment (grades 9-10) rose from 58% in 2010 to 85% in 2015; and tertiary enrolment rose sharply from 11% in 2006 to 25% in 2016.

State expenditure on education India never exceeded 3%- 3.5% of the GDP. When the demand for more educational facilities became excessively large and the quantity and quality of these services (supply) did not improve, the gap was bridged by the private sector. However, the private providers are expensive and also uneven in quality; hence, the real gap never got bridged. As in 2015, the ratio of government schools to private was 7:5 (42% private), and 360 universities out of 754, i.e. 48%, were private – a reflection of the state absolving itself of its responsibilities.¹⁷

Out of pocket expenditure accounts for 70% of total health expenditure in the country.

In health, India has had no comparable scheme of barefoot doctors of China or any

¹⁷ The government provides land to private providers at highly subsidised prices for setting up facilities, but the providers charge full fees and reap huge profits. This holds true for all levels of education: school, college/university, technical or medical.

other reach out system. Successive Indian governments have neglected rural areas and preventive health care; instead, they have permitted investments to grow in (specialized) curative care in the high-cost private sector, principally in urban/semi-urban areas. Also, having mushroomed are small, specialized private providers, who are largely unregulated. The public health system simply did/does not have the wherewithal to cope with the disease burden (Rohde & Viswanathan, 1995).

State health expenditure as a proportion of GDP in India has been among the lowest in the cross-section of countries at 1.4% (2014 data); as a result, out of pocket expenditure accounts for 70% of total health expenditure in the country.

Some Outcomes

1. The IMR in 2012 was at 38 (World Bank, 2015), higher than all of Asia other than Pakistan, Afghanistan, and Lao PDR.
2. The main nutritional intervention, Integrated Child Development Scheme, although has existed since 1975 and has complete coverage since about 2010, has suffered from poor design and implementation.
3. Some 36% of India's children under-five, were underweight in 2015-16 according to the 4th Round of the National Family Health Survey.
4. Population accessing safe water: 96% (2011); and safe sanitation: 35%.

There has been a gross lack of synergy between key basic services like pre-

ventive health, adequate nutrition, basic education, water and sanitation. Low (quality) human capital stock is its direct outcome, resulting in high and sustained poverty. India's demographic transition too has been slow owing to high IMR and overall poor education. The population grew from 350 million in 1947 to 1.2 billion by 2011, and even in 2015-16, the TFR was 2.2 – higher than almost all of Southeast, East or South Asia other than Pakistan and Afghanistan. The larger South Asian countries other than Sri Lanka have fared not too differently.

India's demographic transition too has been slow owing to high IMR and overall poor education.

Summing Up

Countries having shown success in human capital formation are the ones that have integrated it into the overall planning process and strengthened the synergies as in Fig. 1. To create quality jobs, their delivery mechanisms have been inclusive, covering maximum areas and populations. The state expenditures on education have been in the range of 5% of GDP or more, and on health 2-3% or more. Finally, family-planning has been closely intertwined with reduction in IMR to make families adopt a small family norm.

Conclusion

This paper makes a case for HD-based planning: a process where human capital (education, skills, health) and the economic sectors are integrated into a

dynamic framework. Based on the development experiences of several successful and not so successful countries in Asia, it traces how investments in human capital and integration of human capital, industrial development and agrarian transformation, form synergies, to create meaningful results. It also traces the histories of countries that missed the opportunities of investing in human capital and developing the said synergies.

The paper argued that to achieve all three desirable ends or outcomes—economic growth, decent job-creation and improved health and education outcomes, the state must adopt appropriate means. In contemporary Asia, they are interpreted as at least three broad propositions for policy-makers. The first is that land and agrarian reforms generate much larger marketed surpluses over consumption, release surplus labor from it, and enable diversifying activities therein, all resulting in the wellbeing of the populations. The second is that an industrial policy would guide investments and promote technologies in areas of maximum private and social returns, thereby increasing value-added rapidly and creating jobs. The third is that increased investments in sectors would raise human capital and human development and would prepare people for gainful employment in modern sectors. What is striking about the East/South East Asian policies is that in all the planning strategy was characterized by an industrial policy, and the latter policy was underpinned by an education and vocational skills strategy that was aligned to the industrial policy.

That planning is an essential tool to achieve these objectives has been another argument of the paper. All developing regions of the world had national level planning institutions from the middle of the last century onwards, which focused on import-substituting industrialization that was state-led (state-led capitalism). Most Asian economies sustained planning throughout the last quarter of the 20th century and have continued with their planning institutions over the first two decades of the current millennium. It is remarkable that most East/South East Asian governments maintained a system of planning throughout the 1980s and 1990s and beyond.

Human development does not happen automatically through markets, as claimed by many: it has to be carefully nurtured through government interventions.

The main argument of the paper is that human development does not happen automatically through markets, as claimed by many: it has to be carefully nurtured through government interventions. Much more importantly, it has argued that industrial development was key to the East/South East Asian human development success story, underpinned as it was by an industrial policy, supported by human capital formation that was aligned to it.

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