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The Development of Education and Health Services in Asia and the Role of the State

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List of Abbreviations

ANU	Australian National University
AR	Acemoglu-Robinson
ASER	Annual Status of Education Report
BPHS	Basic Package of Health Services for Afghanistan
CDs	Communicable Diseases
CIEM	Calcutta Institute of Engineering and Management
CMS	Cooperative Medical System
EPHS	Essential Package of Hospital Services
GHIS	Government Health Insurance Scheme
IMR	Infant Mortality Rates
ISEAS	Institute of South East Asian Studies
JKN	Jaminan Kesehatan Nasional
LHIS	Labour Health Insurance Scheme
LSHTM	London School of Hygiene and Tropical Medicine
MMR	Maternal Mortality Rates
MSAs	Medical Savings Accounts
NCDs	Non-Communicable Diseases
NHI	National Health Insurance
NRHM	National Rural Health Mission
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-Pocket
PISA	Programme for International Students Assessment
RTE	Right to Education Act
SI	Social Insurance
SOE	State Owned Enterprise
TIMMS	Trends in International Mathematics and Science Study
TVE	Technical and Vocational Education
UNHDR	United Nations Human Development Report
WHO	World Health Organisation
WIDER	World Institute for Development Economics Research

The Development of Education and Health Services in Asia and the Role of the State[1]

Sudipto Mundle

Abstract

This paper analyses the dramatic spread of education and healthcare in Asia and also the large variations in that spread across and within countries over fifty years. Apart from differences in initial conditions and income levels, the nature of the State has also been an important determinant of these variations. This is because social development has typically been led by the State. But in most countries, public resource constraints and the growing dependence on private provision and private spending have generated a pattern of nested disparities in the access to education and healthcare between rich and poor regions, between rural and urban areas within regions, and between rich and poor households within these areas. However, as the better-off regions, areas, and households approach the upper limits of achievable education and health standards, a process of convergence is also underway as those left behind begin to catch up.

Keywords: Asia, comparative studies, disparity, education, health, institutions, State

JEL Classification Codes: B25, B52, H51, H52, I13, I14, I18, I21, I24, I28, O43, O53, P16, P26, P48, P52

1) In writing this paper, I have benefitted a great deal from discussions with Deepak Nayyar and Pronab Bardhan, and comments of an anonymous referee on the earlier versions of the paper. Earlier versions of the paper were also presented at two workshops on Asian Transformation in Hanoi on 9-10 March, 2018 and in Shanghai on 29-30 June, 2018. I would also like to thank the participants at these workshops, especially Amit Bhadhuri and Rajiv Malhotra, for their very helpful remarks. Financial support from UNU-WIDER for the preparation of this paper is acknowledged. Excellent research assistance from Satadru Sikdar is also acknowledged.

1. Introduction

The transformation of Asia's education and health profile over the last fifty years has been breathtaking. It would have been difficult to imagine such a transformation fifty years ago when Myrdal published *Asian Drama* in 1968, because the scale and pace of this transformation was unprecedented in human history. But there was another reason for this view. Comparing the countries of Asia[2] with the developed countries, Myrdal identified several disadvantages in the initial conditions prevailing in Asia. That led him to believe that development of the social system in Asia, including education and health, would be very challenging.

With the benefit of hindsight, we can now see that his assessment was overly pessimistic. Asia transformed at an unprecedented pace despite the disadvantages of its initial conditions. However, the narrative of this transformation has fully validated his 'institutional approach' of seeing development as the upward movement of a social system through circular causation of all its constitutive elements. Several of the key constraints he had identified and the consequences he had anticipated are very much in evidence today. Ironically, human development has been the most striking in East Asia, a sub-region he unfortunately excluded from the canvas of his *magnum opus* (World Bank 1993, Sen 1998a, and ADB 1997).

The central idea of the institutional approach, as Myrdal (1968:x) puts it, "is that history and politics, theories and ideologies, economic structures and levels, social stratification, agriculture and industry, population developments, education and health, and so on, must be studied not in isolation but in their mutual relationship".[3] Myrdal referred to this process as development of the social system as distinct from the narrower concept of economic development that primarily focuses on the rise in per capita income and related macroeconomic relationships.

Three aspects of this approach are particularly important for purposes of this chapter. First, the approach specifies that initial conditions, i.e., elements of the social system, lay down the boundaries of what is possible. Myrdal discussed this in Chapter 14 of his first volume and elsewhere in *Asian Drama*. Second, education and health, "investment in man", as he called it, were central to Myrdal's conception of development. Accordingly, the entire third volume of *Asian Drama* was exclusively devoted to this subject. Third, the spread of education and healthcare are to be seen not in isolation but in their relationship with all the other elements of the social system. This is the concept of 'cumulative causation' Myrdal spelt out in detail in Appendix 2 of *Asian Drama*.

2) Myrdal's study excluded the countries of East Asia because, he modestly claimed, he did not know enough about them, he limited his study to the countries of what we describe today as South Asia and Southeast Asia, designating the whole region as South Asia. Present day South Asia was described by Myrdal as either the Indian subcontinent or 'India and Pakistan'. The geographical coverage of this chapter is limited to mainland Asia excluding West Asia, the Central Asian republics and island economies of the Indo-Pacific region.
3) Myrdal (1968), Preface, p.x.

This paper traces the spread of education and healthcare in Asia during the past fifty years through a similar methodological lens. Following the end of the Second World War new post-colonial states came to power throughout the Asian region. These were 'developmental' states aspiring to lead the transformation of their countries into developed societies at the quickest possible time.[4] Sustained development of education and health services were important components of this agenda. This was partly because of their intrinsic value in improving the quality of life, as was recognized by Myrdal (1968) and much emphasized subsequently by Sen (1998a, 1999). But possibly more importantly it was because political leaders of the time recognized the instrumental value of education and health for promoting growth, the human capital relationship that was originally highlighted in modern economic literature by Schultz (1961) and later incorporated in the endogenous growth theories of the 1990s (Grossman & Helpman 1994, Pack 1994, Romer 1994).[5]

There were differences among the countries of the region in the initial conditions under which development programs were launched and in the nature of the postcolonial states that led these programs. These differences were reflected in the specific policies that were followed, their implementation and outcomes. By the late 1960s, when Myrdal published *Asian Drama*, there were already large differences in the education and health status of the different countries as he noted. There were also large differences in the pace of their subsequent development. Human development in South Asia lagged behind human development in Southeast Asia, which lagged behind human development in East Asia, with some important exceptions to this general pattern.

Trends common to most countries are discussed in the paper along with the variations across countries. Section 2 presents a comparative analysis of the spread of different levels of education in countries across the different sub-regions. Section 3 presents a similar comparative analysis of trends in health conditions of countries across the different sub-regions. Brief remarks on selected countries are also added in two appendices, Appendix 1 on education and Appendix 2 on health, to capture the variety of country experiences across the whole region. Section 4 pulls together the threads of the analysis in the preceding sections to draw some conclusions, admittedly tentative, on why the social development outcomes of different countries/sub-regions in Asia have differed widely. Based on these conclusions some speculations are offered about the main challenges that lie ahead and possible trends during the next 25 years.

4) For the original formulation of the concept of a 'developmental state' in the context of Japan, see Chalmers Johnson (1982). For its subsequent elaboration in the context of South Korea (henceforth Korea) and Taiwan see Amsden (1989) and Wade (1990).
5) On the relationship between education, human capital formation and growth in a specifically Asian context see Tilak J.B. (2002).

2. The Spread of Education

A quantitative picture of the spread of education is presented in Tables 1 and 2.[6] The spread of primary education is best captured by the net enrolment rate, which corrects for enrolment of children older than the normal primary education age cohort. By the end of the 1960s (1971) most countries in East Asia, the richest sub-region, had already achieved near universal primary education enrolment (>95%). China is the only country in the sub-region where net primary enrolment rose to 94% by 1987, then regressed to 89% (2014), also pulling down the sub-regional average.

In South Asia, the poorest Asian sub-region and demographically the largest, primary enrolment rates in 1971 were among the lowest in Asia, amounting to only 60%, 50% or even less.[7] But these rates have improved very significantly in all countries of the sub-region over the past fifty years. Bangladesh, India and Nepal are approaching near universal primary enrolment now (2014). Sri Lanka is a remarkable positive outlier in the sub-region, having achieved a net primary enrolment rate of over 78% by 1977 and near universal primary enrolment by 1985. Afghanistan and Pakistan are still a long way away from this milestone though enrolment rates have improved significantly in these countries also.

Primary enrolment trends in the countries of Southeast Asia lie between the trends in East and South Asia, but there are important variations around this general pattern. Near universal primary enrolment had already been achieved by 1971 in Singapore, a relatively rich country, and soon thereafter in countries like Vietnam (1977) and Philippines (1976) that had much lower levels of per capita income. But 1971 enrolment rates were quite low in Lao PDR and Myanmar.[8] In Malaysia, Thailand and Indonesia the rates were respectively 87%, 76% and 70%. Almost all the countries in the sub-region have achieved near universal net primary enrolment now (2014). The exception is Indonesia, where the net primary enrolment rate has regressed to 89% after having peaked at 98% in 1985.

To assess the robustness of these enrolment trends it is useful to check the trends in primary completion rates,[9] since dropouts can be quite significant especially at lower levels of per capita income. In some countries, the initial completion rate was very low but increased rapidly over the next fifty years. In other countries the completion rate was already high in 1971. In China, the completion rate in 2014 is lower than in 1987, similar to the regression in primary enrolment rates noted earlier. But it has recovered somewhat after bottoming out at 84% in 2004. The possible explanation for this is discussed in the

6) The benchmark years 1971, 1985, 2000 and 2014 reported in the tables are approximate milestones. Statistics for some countries relate to the nearest year corresponding to these benchmark years for which data is available. Details are given in the notes to Tables 1 & 2.
7) Afghanistan, for instance, had a net enrolment rate of only 27% reported in 1974.
8) No estimate is available for Cambodia until 2000.
9) The primary completion rate is the ratio of the number of students at the end of the final primary year, net of students repeating the year, to the size of the corresponding age cohort. It does not net out students older than the relevant age cohort. The ratio can therefore exceed 100%.

China country note in Appendix 1. In Indonesia, the only other country where the current primary enrolment rate has regressed, the primary completion rate has now gone up to over 100% after having regressed slightly in 2001.

There was a large deficit in the secondary gross enrolment rate compared to the primary enrolment rate in 1971 in all the sub-regions of Asia (Table 2).[10] By 2014, East Asia had achieved near universal secondary school enrolment at 94%. Secondary enrolment also increased very significantly by 2014 in Southeast Asia and South Asia at 85% and 70% respectively. But there are large variations around these sub-regional averages. In Southeast Asia it ranges from only 45% in Cambodia to 128% in Thailand. In South Asia it ranges from 42% in Pakistan to 100% in Sri Lanka.

Completion of basic education, 6 years of primary education plus 2 years of lower secondary education, is an important milestone since many countries have mandated compulsory basic education of 8 years. Streaming of students between 'academic' education at higher secondary and tertiary levels and technical and vocational education (TVE) also begins at this stage, setting the boundaries of their life chances for the future. East Asia had achieved near universal lower secondary completion rate at 98% by 2014. The countries of Southeast Asia and South Asia are not too far behind at 84% and 79% respectively. But again there are large variations around these averages. It ranges from 45% in Cambodia to 100% in Singapore in Southeast Asia. In South Asia it ranges from only 17% in Afghanistan to 96% in Sri Lanka.

Barring a couple of countries that have tended to fall behind, the general trend of access to primary and secondary education in Asia is one of convergence. Starting with large deficits compared to East Asia, the countries of Southeast Asia and South Asia have been catching up. The pattern in tertiary level education is different. Starting from negligible levels in 1971, tertiary enrolment in East Asia went up to 41% by 2014. Southeast Asia and South Asia had somewhat higher access to tertiary education initially with enrolment rates of around 4% to 5%, but were then left behind by East Asia. The average tertiary enrolment rates in Southeast Asia and South Asia are 32% and 22% respectively.

As usual there are large variations around these sub-regional averages. Among the East Asian countries, Korea has achieved near universal tertiary enrolment. Among the South East Asian countries, Singapore has a very high tertiary enrolment rate of 87%. Philippines already had a remarkably high tertiary enrolment rate of 18% in 1971, by far the highest in all of Asia at the time, and this has risen further to 36%. Cambodia and Myanmar on the other hand have tertiary enrolment rates of only 13%. In South Asia India had a tertiary enrolment rate of 5% in 1971 that has now risen to 26% (on this see the India country note in Appendix 1). At the other end, Pakistan and Afghanistan have

10) This is despite the fact that we are forced to compare gross enrolment rate at the secondary level with net enrolment rates at the primary level, that are by definition lower than gross rates. Unfortunately net enrolment data comparable across countries is not available at the secondary or tertiary levels. Since the numerator in gross enrolment rates does not correct for enrolment of students older than the age cohort used for the denominator, gross enrolment rates can sometimes exceed 100%.

achieved tertiary enrolment rates of only 10% and 9% respectively, which is the lowest in all of Asia.

Regarding gender disparity, there was significant disparity in primary enrolment rates and completion rates in the initial period in many countries, especially in South Asia. However, these had been largely eliminated by 2014 (Table 1). The picture is very similar for gender disparity in secondary and tertiary enrolment rates (Table 2). The exception is Afghanistan. It had a high level of gender disparity in 1974 in primary enrolment and completion rates. More recent data is not available to assess how this has changed. But estimates available at the secondary and tertiary levels indicate that significant gender disparity persists (see also the Afghanistan country note in Appendix 1). Since Afghanistan is a post-conflict country where there is still a high level of violence the patchy availability of data is not surprising.

All the indicators discussed so far refer to access. Nothing has been said so far regarding the quality of education, which is much harder to assess. Two sets of standardised global tests are conducted by the OECD, the Programme for International Students Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMMS) and these enable some limited comparisons of education quality (OECD 2018). Unfortunately, only 6 Asian countries participated in the latest 2015 PISA test for Mathematics, Science and Reading, i.e., China, Korea, Indonesia, Singapore, Thailand, and Vietnam. Malaysia participated but was not rated because it did not meet the required testing standards. India participated in 2009, performed very poorly being ranked near the bottom, then pulled out of the tests.

Singapore was ranked at the top of 77 participating countries in mathematics, science and also reading. Korea was another high performer, ranked 7th, 11th and 7th in mathematics, science and reading respectively. China was ranked 6th in mathematics, 10th in science, and 27th in reading, but it has been pointed out that it was represented by the provinces of Jiangsu, Guangdong, Beijing and Shanghai, which are far more advanced than most Chinese provinces and therefore not representative of China as a whole. Vietnam also performed above average, being ranked at 22, 8 and 32 respectively for the three tests. Thailand performed below average with ranks of 55, 56 and 59. Indonesia's performance was near the bottom with ranks of 65, 64 and 66 in mathematics, science and reading.

With only 6 Asian countries participating in these tests, none from South Asia, not too much can be gleaned from these tests about the quality of education in Asia. However, the results seem to indicate that while Asia has made tremendous progress in expanding the access to education, especially at the primary and secondary levels, the quality of education remains quite poor except in a few high performing countries. This is also confirmed by a large number of individual country studies in the available literature.

Table 1: Primary education

	Population (millions)	Per capita GNI (at current prices in US dollars)	Primary enrolment rate (net)				Primary enrolment rate (net), gender parity index (GPI)		Primary completion rate				Primary completion rate, gender parity index (GPI)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Country	**2016**	**2014**	**1971**	**1985**	**2000**	**2014**	**1971**	**2014**	**1970**	**1985**	**2000**	**2014**	**1971**	**2014**
East Asia	**1,559.9**	**10,827**	**98.3**	**94.7**	**90.2**	**90.1**	**0.9**	**1.0**	**102.4**	**102.1**	**86.5**	**96.8**	**1.0**	**1.0**
Japan	127.0	39,195	99.3	99.4	97.8	98.3	1.0[e]	1.0[f]	105.1[g]	99.4	102.4	102.1[j]	1.0	1.0[l]
Republic of Korea	51.2	28,099	95.9	98.6	99.0	94.6	1.0	1.0[f]	96.0[g]	105.2	103.6	96.5	1.0	1.0
Mongolia	3.0	3,842	–	94.4[b]	90.0	95.1	1.0[e]	1.0	95.7[g]	98.0[h]	87.0	98.3[j]	–	1.0
China	1,378.7	7,588	–	94.1[b]	89.1[c]	89.1	0.9[e]	1.0[f]	–	102.2[h]	84.4[i]	96.3	–	1.0
Southeast Asia	**638.2**	**4,034**	**79.7**	**95.4**	**93.3**	**93.0**	**0.9**	**1.0**	**56.5**	**87.6**	**92.2**	**100.3**	**0.8**	**1.0**
Singapore	5.6	55,107	–	96.1[b]	95.7	99.9[d]	0.9[e]	1.0	95.1	–	–	98.7	1.0[k]	–
Malaysia	31.2	10,814	86.7	97.2[b]	98.4	99.6	0.9[e]	1.0[f]	80.6[g]	93.9	100.6	101.9	0.9[k]	1.0
Philippines	103.3	3,445	96.8[a]	94.4	89.5[c]	95.7[d]	–	1.0[f]	–	89.2	100.4[i]	101.0	–	1.1[l]
Thailand	68.9	5,633	75.5[a]	–	98.9[c]	90.9	0.9	1.0	37.5[g]	71.4[h]	84.9	93.3	–	0.9[l]
Vietnam	92.7	1,916	97.3[a]	91.1	97.2	98.0[d]	1.0[e]	–	81.5[g]	–	99.0	106.2	–	1.0
Indonesia	261.1	3,484	70.1	97.8	92.0[c]	88.9	0.9	1.0	51.9[g]	94.2	93.8[i]	102.9	–	0.9
Cambodia	15.8	1,032	–	–	92.4	95.1	0.8	1.0	–	46.0[h]	51.1[i]	96.3	–	1.0
Myanmar	52.9	1,272	63.7	–	92.2	96.2	0.9	1.0[f]	35.7[g]	–	76.5	85.1	0.7	1.0[l]
Lao PDR	6.8	1,929	–	64.9[b]	75.6	97.2	0.6	1.0	–	42.1	67.5	100.3	–	1.0
South Asia	**1,765.2**	**1,500**	**59.7**	**74.7**	**78.7**	**89.9**	**0.6**	**1.0**	**35.0**	**58.6**	**69.8**	**93.2**	**0.5**	**1.3**
Sri Lanka	21.2	3,760	78.5[a]	98.3[b]	99.7[c]	97.2	0.9[e]	1.0	63.5	83.7	107.3	98.0	–	1.0
India	1,324.2	1,557	61.4	77.5[b]	79.8	92.3[d]	0.7	1.0[f]	39.7[g]	63.2[h]	71.8	97.5	0.5	1.1
Bangladesh	163.0	1,158	50.8[a]	61.1	91.7[c]	90.5[d]	0.5[e]	1.0[f]	43.3[g]	28.5[h]	64.4[i]	98.5[j]	0.5[k]	1.2[l]
Pakistan	193.2	1,418	–	–	58.9[c]	72.7	0.4	0.9	–	–	64.5[i]	73.7	–	0.8
Nepal	29.0	709	–	60.6[b]	72.7	94.1	0.2[e]	1.0	–	46.9[h]	67.2	104.1	–	1.1
Afghanistan	34.7	657	27.1[a]	28.2[b]	–	85.7	0.2[e]	–	16.8[g]	19.2	29.6[i]	–	0.2[k]	–

Notes: data are sorted with respect to mean years of schooling in 2014.

Some figures are not for the exact same year mentioned in the table. Details are given below.

[a] Afghanistan 1974; Bangladesh 1970; Philippines 1976; Sri Lanka 1977; Thailand 1973; Vietnam 1977.

[b] Afghanistan 1993; China 1987; India 1990; Lao PDR 1988; Malaysia 1994; Mongolia 1987; Nepal 1984; Singapore 1990 (from data.gov.sg); Sri Lanka 1986. Earliest available data for Cambodia are for 1997 and the value of NER at primary level was 83.12.

[c] Bangladesh 2005; China 1997; Indonesia 2001; Pakistan 2002; Philippines 2001; Sri Lanka 2001; Thailand 2006; Singapore (from data.gov.sg).

[d] Bangladesh 2010; India 2013; Philippines 2015; Singapore 2016; Vietnam 2013.

[e] Afghanistan 1974; Bangladesh 1970; China 1976; Japan 1972; Malaysia 1970; Mongolia 1975; Nepal 1970; Singapore 1970; Sri Lanka 1970; Thailand 1973; Vietnam 1976. Data collected from Econstat for Cambodia, China, Lao PDR, Malaysia, Mongolia, Pakistan, Singapore, Sri Lanka and Vietnam.

[f] Bangladesh 2010; China 2007; India 2013; Japan 2013; Korea Republic 2013; Malaysia 2006; Myanmar 2010; Philippines 2013. Data collected from Econstat for Cambodia, China and Malaysia). Data for Singapore collected from data.gov.sg.

[g] Afghanistan 1974; Bangladesh 1976; India 1971; Indonesia 1972; Japan 1971; Korea, Rep. 1971; Malaysia 1974; Mongolia 1978; Myanmar 1971; Thailand 1975; Vietnam 1979.

[h] Bangladesh 1981; Cambodia 1994; China 1989; India 1987; Mongolia 1983; Nepal 1988; Thailand 1981.

[i] Afghanistan 1993; Bangladesh 2005; Cambodia 2001; China 2004; Indonesia 2001; Pakistan 2005; Philippines 2001; Sri Lanka 2001.

[j] Bangladesh 2015; Japan 2012; Mongolia 2015; Philippines 2013; Thailand 2015.

[k] Afghanistan 1974; Bangladesh 1976; Malaysia 1974; Singapore 1975 (collected from Econstat).

[l] Bangladesh 2015; Japan 2012; Myanmar 2010; Philippines 2013; Thailand 2015.

Region

East Asia: Japan, Republic of Korea, Mongolia, and China.

Southeast Asia: Singapore, Malaysia, Philippines, Thailand, Vietnam, Indonesia, Cambodia, Myanmar, and Lao PDR.

South Asia: Sri Lanka, India, Bangladesh, Pakistan, Nepal, and Afghanistan.

Regional averages are calculated by applying the population share.

Source: author, based on data from the World Development Indicators Database.

Table 2: Secondary and tertiary education

	Secondary school enrolment (gross)				Secondary school enrolment (gross), gender parity index (GPI)		Lower secondary completion rate				Tertiary school enrolment (gross)				Tertiary School enrolment (gross), gender parity Index (GPI)		Mean years of schooling (primary or higher)			
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Country	**1971**	**1985**	**2000**	**2014**	**1971**	**2014**	**1971**	**1985**	**2000**	**2014**	**1971**	**1985**	**2000**	**2014**	**1971**	**2014**	**1971**	**1985**	**2000**	**2014**
East Asia	**42.0**	**38.7**	**65.6**	**95.1**	**0.7**	**1.0**	**82.4**	**57.6**	**79.7**	**98.3**	**1.8**	**5.6**	**13.4**	**43.2**	**0.5**	**1.1**	–	**4.6**	**6.7**	**7.6**
Japan	86.5	94.9	101.8	101.7	1.0	1.0	98.5	99.4	103.2[i]	–	17.6	29.0	48.7	63.4	0.4	0.9	–	9.6	10.7	12.5
Republic of Korea	39.7	90.6	98.4	98.5	0.6	1.0	44.4	96.5	98.2	100.1	7.2	31.6	78.4	94.2	0.3	0.8	5.4	9.4	10.7	11.6[s]
Mongolia	64.0	87.5[b]	65.1	91.5[d]	1.0[e]	1.0[f]	52.7[g]	84.6[h]	62.7	106.6[j]	21.0	23.8	30.2	64.3	–	1.4	–	7.7[q]	9.0	10.0[s]
China	38.0	31.4	61.0	94.3	0.7[e]	1.0	–	52.3[h]	76.9[i]	98.2	0.1[k]	2.5	7.7	39.4	0.5[o]	1.2	–	4.0[q]	6.2	7.0[s]
Southeast Asia	**26.3**	**39.5**	**57.7**	**83.9**	**0.7**	**1.0**	**13.9**	**40.3**	**66.3**	**83.9**	**5.0**	**10.4**	**18.8**	**32.3**	**0.6**	**1.2**	**3.4**	**4.2**	**6.8**	**7.9**
Singapore	–	95.1[b]	98.7	108.1	–	1.0	–	–	–	–	6.5[k]	23.5	45.3[m]	86.6	0.4[o]	1.1	–	3.9[q]	10.5[r]	11.3
Malaysia	35.2	53.7	66.2	77.7	0.7	1.1	–	90.8[h]	87.7	84.7	3.9[k]	5.6	25.7	27.6	0.6[o]	1.5	4.0	4.0[q]	8.6	10.1[s]
Philippines	47.5	67.2	74.7[c]	88.4[d]	–	1.1[f]	–	66.0[h]	67.7[i]	82.2[j]	17.6	27.8	30.3[m]	35.8	1.3	1.3	5.0	6.3	7.7	9.1[s]
Thailand	18.1	30.6	62.8[c]	127.7	0.7	1.0	23.0[g]	–	81.3[i]	84.0[j]	2.9	20.7	34.9	52.5	0.7[o]	1.3	2.8	3.7[q]	7.2[r]	8.3
Vietnam	35.9	34.8[b]	57.8[c]	78.4[d]	1.0[e]	–	11.4[g]	–	68.3	93.8	1.7[k]	1.9[l]	9.4	30.5	0.7[o]	1.0	6.3	6.3[q]	4.0[r]	7.8[s]
Indonesia	18.6	34.3	55.1	82.5	0.6	1.0	12.9	38.8	69.1[i]	91.2[j]	2.9	6.1	14.9	31.1	0.4[o]	1.1	2.3	3.1[q]	7.8	7.8
Cambodia	8.4	27.8[b]	17.2	45.1[d]	0.4	0.9[f]	–	–	17.4[i]	45.1	1.4	0.3	2.5	13.1[n]	0.3[o]	0.8[p]	–	5.2	5.7	5.8[s]
Myanmar	20.1	23.1	36.3	51.3	0.6	1.0	12.9	–	32.6	48.7	1.7	4.8	10.6	13.5[n]	0.6[o]	1.2[p]	1.4	2.7[q]	3.1	4.7
Lao PDR	3.7	21.3	34.2	57.2	0.4	0.9	1.4	22.0[h]	35.3	53.9	0.2	1.5	2.7	17.3	0.2	0.9	–	2.5	3.9	4.6
South Asia	**22.7**	**33.5**	**42.5**	**69.5**	**0.4**	**1.0**	**20.3**	**42.0**	**50.8**	**79.0**	**4.2**	**5.3**	**8.1**	**22.2**	**0.3**	**1.0**	**1.3**	**2.1**	**4.2**	**5.3**
Sri Lanka	48.3	61.1	76.5[c]	99.7[d]	1.1[e]	1.0[f]	37.6	73.7	89.4[i]	96.2	1.1	3.7	4.8	19.3	0.7	1.3	4.7	5.7[q]	10.5[r]	10.9
India	24.0	37.4[b]	45.1	74.3	0.4	1.0	–	42.4[h]	53.5[i]	85.6	5.0	5.8	9.5	25.5	0.3	1.0	1.3	2.2[q]	4.4	5.4[s]
Bangladesh	20.5[a]	20.1	48.1	63.5[d]	0.3[e]	1.1[f]	–	–	53.2	67.6[j]	2.1[k]	5.0	5.4	13.4	0.1[o]	0.7	1.1	2.1[q]	4.2[r]	5.2
Pakistan	16.7	19.6	22.9[c]	41.6	0.3	0.8	–	–	33.4[i]	50.5	2.3	3.0[l]	2.7[m]	10.4	0.3	1.1	1.6	1.7	2.7[r]	5.2
Nepal	11.1[a]	26.8	36.0	66.9	0.2[e]	1.1	–	31.6[h]	42.7	82.8	1.6[k]	3.4	4.2	15.8	0.3[o]	1.0[p]	0.2	0.6[q]	2.4	3.3[s]
Afghanistan	9.4	13.5	13.0[c]	55.7	0.1	0.6	9.7[g]	13.6	17.0[i]	–	0.9	2.2[l]	1.3[m]	8.7	0.2[o]	0.3	0.7	0.8[q]	2.1	3.1[s]

Notes: data are sorted with respect to mean years of schooling in 2014.

Some figures are not for the exact same year mentioned in the table. Details are given below.

[a] Bangladesh 1973; Nepal 1972; Vietnam 1976.

[b] Cambodia 1991; India 1986; Mongolia 1986; Singapore 1990 (from data.gov.sg); Vietnam 1990.

[c] Afghanistan 2001; Pakistan 2003; Philippines 2001; Sri Lanka 1995; Thailand 2001; Vietnam 1998; Singapore (from data.gov.sg).

[d] Bangladesh 2015; Cambodia 2008; Mongolia 2015; Philippines 2013; Sri Lanka 2013; Singapore (from data.gov.sg); Vietnam (data for 2008 from London 2011).

[e] Bangladesh 1973; China 1976; Mongolia 1974; Nepal 1972; Sri Lanka 1976; Vietnam 1976.

[f] Bangladesh 2015; Cambodia 2008; Mongolia 2015; Philippines 2013; Sri Lanka 2013; Singapore (from data.gov.sg).

[g] Afghanistan 1973; Mongolia 1974; Thailand 1975; Vietnam 1979.

[h] China 1990; India 1987; Lao PDR 1988; Malaysia 1998; Mongolia 1980; Nepal 1988; Philippines 1990.

[i] Afghanistan 2005; Cambodia 1997; China 1997; India 2002; Indonesia 2002; Japan 1994; Pakistan 2004; Philippines 2001; Sri Lanka 2001; Thailand 2007.

[j] Bangladesh 2013; Indonesia 2015; Mongolia 2010; Philippines 2014; Thailand 2015.

[k] Bangladesh 1970; China 1970; Malaysia 1979; Nepal 1974; Singapore 1970; Vietnam 1976.

[l] Afghanistan 1986; Pakistan 1986; Vietnam 1986; Singapore (from data.gov.sg).

[m] Afghanistan 2003; Myanmar 2001; Pakistan 2003; Philippines 2001; Sri Lanka 1994; Singapore (from data.gov.sg).

[n] Cambodia 2015; Myanmar 2012; Singapore (from data.gov.sg).

[o] Afghanistan 1972; Bangladesh 1972; Cambodia 1972; China 1974; Indonesia 1972; Malaysia 1979; Myanmar 1972; Nepal 1976; Singapore 1970; Thailand 1976; Vietnam 1976.

[p] Cambodia 2015; Myanmar 2012; Nepal 2015; Singapore (from data.gov.sg).

[q] Afghanistan 1979; Bangladesh 1981; China 1982; India 1981; Indonesia 1980; Malaysia 1980; Mongolia 1990; Myanmar 1983; Nepal 1981; Singapore 1980; Sri Lanka 1981; Thailand 1980; Vietnam 1979. Data collected from the Human Development Report (UNHDR) for Cambodia, Japan, Lao PDR, and Mongolia.

[r] Bangladesh 2001; Pakistan 2005; Singapore 2005; Sri Lanka 2001; Thailand 2004; Vietnam 1989. Data collected from the Human Development Report (UNHDR) for Afghanistan, Cambodia, Japan, Lao PDR, Myanmar, and Nepal.

[s] Afghanistan 2012; Cambodia 2012; China 2010; India 2011; Republic of Korea 2010; Malaysia 2010; Mongolia 2010; Nepal 2011; Philippines 2013; Vietnam: 2009. Data collected from the Human Development Report (UNHDR) for Afghanistan, Bangladesh, Cambodia, Japan, and Lao PDR.

Region

East Asia: Japan, Republic of Korea, Mongolia and China.

Southeast Asia: Singapore, Malaysia, Philippines, Thailand, Vietnam, Indonesia, Cambodia, Myanmar, and Lao PDR.

South Asia: Sri Lanka, India, Bangladesh, Pakistan, Nepal, and Afghanistan.

Regional averages are calculated by applying the population share.

Source: author, based on data from the (i) World Development Indicators Database and (ii) UNESCO Institute for Statistics (Education Dataset).

2.1 The Spread of Education: Stylised Facts and Promising Pathways

The quantitative picture presented above is supplemented by notes on selected countries in Appendix 1 highlighting some of the special features or contexts of the best performers, the weak performers and the largest countries of the region. All of this can be summarised in the following set of stylised facts.

The spread of education in Asia during the past 50 years has been dramatic. It has been led by post-colonial developmental states as part of their strategies of development.[11] Initial conditions varied, as did the motives & capacities of the governments, and so did the pace and systems of education development. However, the similarities in patterns of change are more striking than the differences. The principal goal was to maximise the access to education, especially primary education. Barring Afghanistan and Pakistan, all others have now achieved this goal. The access to secondary education has also seen vast increases throughout the region. Many countries, especially in East Asia, have achieved near universal access to secondary education while a few others have lagged behind. Many countries of the region have also achieved very significant expansion of tertiary education.[12]

An important aspect of the Asian experience is the tension between the resource requirements of massive expansion of education and actual resource availability. Several countries significantly raised the share of education in government expenditure but usually this was not enough. Hence, most countries have seen the rapid growth of private education. The two notable exceptions are Singapore and Sri Lanka, which have publicly provided education from primary to tertiary levels. Private provision, combined with biases in government spending in some cases, have resulted in rising disparities along multiple dimensions in the access to education: between rural and urban areas, between more and less prosperous provinces and between different socio-economic classes of households.[13] Another disparity is the streaming between academic education and TVE from the upper secondary level and onwards. Adopted in all countries to align students' capacities to workforce requirements, streaming has reified the socio-economic divide between lower income working class households and middle class or business owning households. These multiple dimensions of disparity in access to education is arguably the most important challenge facing education in Asia today.

Another major challenge is the quality of education. Asian governments have mostly focused on quantitative expansion at the expense of quality. Students from a few countries, or selected provinces within countries, top global learning tests like PISA or TIMMS. Most countries either do not participate in these tests or perform very poorly if they do. Domestic

11) That includes Thailand that was never formally colonised but was very much a part of the colonial system.

12) There are obviously upper limits to these quantitative indicators. Net enrolment rates cannot exceed 100%. Hence, once the leading countries approach these limits the lagging countries gradually catch up. There is a tendency towards convergence.

13) Several studies confirm this not just for the countries discussed in Appendix 1 but also other major Asian countries. See among others UNESCO 2013, Govt. of Malaysia 2013, Sagarik 2013, Saw 2016.

surveys in some countries also indicate very poor learning outcomes. Several countries are now beginning to address the problem of poor quality. It has been recognised that private provision is not a magic solution to the problem of public resource constraints since quality is usually compromised in private provision, except in the most expensive institutions. Different experiments have been tried such as incentivising teachers through performance linked pay, remedial teaching, etc. to improve learning outcomes. But there is little evidence that the promising lessons from such experiments are being reflected in reform of pedagogic techniques or school governance.

Finally, Asian governments recognise that the content of education needs to be completely overhauled to meet the requirements of the 21st century, where global competition will be driven by knowledge based societies. A few countries like Singapore, Korea, China and Vietnam have begun to seriously address this challenge. In most others, the transition to a knowledge based society remains an aspiration.

3. The Spread of Health Services

The central fact about the evolution of Asia's health profile during the past 50 years is its remarkable improvement. There were differences among individual countries in their initial conditions and the pace of change has varied. But large improvements in health conditions have been registered throughout the region.

To track these changes we have used a set of demographic indicators (Table 3) and a set of nutrition and anthropometric indicators (Table 4).[14] Life expectancy is taken as the principal indicator because it is a summary reflection of not just health conditions such as morbidity and access to health services but also underlying factors that determine these indicators: income levels and nutrition, education and literacy, access to sanitation and potable water, the quality of shelter and housing, inequality and identity biases, public policy, etc. Sen (1998b), Ahlburg and Flint (2001) have in fact suggested that life expectancy is the true measure of a country's economic success. Life expectancy data is supplemented by data on infant mortality rates (IMR) and the maternal mortality rates (MMR). The anthropometric indicators include measures of the incidence of undernutrition, stunting and wasting.

As in education so also in health, East Asia has achieved the maximum progress, followed by Southeast Asia, followed by South Asia. Average life expectancy has risen to 76 years in East Asia, 71 years in Southeast Asia and 69 years in South Asia since the early 1970s (Table 3). The IMR went down by 90% in East Asia, 76% in Southeast Asia and 74% in South Asia. The MMR went down by 72% in East Asia, 67% in Southeast Asia and 70% in South Asia. Such large improvements in health indicators over such a vast geography within 5 decades is probably unprecedented in human history. There are, of course, large variations

14) Comparisons across sub-regions or individual countries need to be interpreted with caution because data is not always available for all countries for the indicated benchmark years. In such cases the relevant data for the nearest available year has been used. Details are given in the notes to Tables 3 and 4.

around these sub-regional averages. Life expectancy, for instance, ranges from 63 years in Afghanistan to 84 years in Japan, a gap of 33%. However, there are technical limits to the achievable standards of health.[15] Hence, lagging countries are gradually catching up with the leading countries as the latter asymptotically approach these limits.

There is no evidence of gender bias in life expectancy, except in India in the early 1970s. In fact, life expectancy is now higher for women compared to men in all countries of the region. However, it is well known that son preference is usually exercised by aborting the birth of girls in some countries and this is reflected in their distorted sex ratios.[16]

Trends in nutrition are more nuanced. There is a clear pattern of large improvements over the period led by East Asia, followed by Southeast Asia, followed by South Asia, with country-specific variations around these sub-regional averages. But, disturbingly high levels of undernutrition, stunting and wasting persist in several countries. That more than 25% of the population of Afghanistan is still undernourished is depressing but not necessarily surprising since the country was a conflict zone for over 25 years and full normalcy is yet to return. However, several countries of southeast and South Asia also have incidence of undernourishment of around 15% of the population or more. These include Indonesia, Philippines, Cambodia, Myanmar, Lao PDR, in Southeast Asia and Bangladesh, India and Pakistan, apart from Afghanistan, in South Asia. The incidence of stunting is even more surprising. In Southeast Asia it is still around 30% on average and in South Asia 39% of the population are still reported to be stunted today (2014).[17]

3.1. The Development of Healthcare: Challenges and Responses

The quantitative picture presented above is supplemented by brief country notes in Appendix 2 on the specific contexts and key features of the best performing countries, the weak performers and the largest countries in the region. Based on the quantitative data and country notes the following stylised facts can be culled out.

The improvement in health conditions throughout Asia during the past fifty years has been remarkable. In most countries life expectancy is close to or more than 70 years and has increased to more than 80 years in a few cases. Even in the few countries where life expectancy has lagged behind, especially in South Asia, it has nevertheless gone up by over 20 years during this period. Similar improvements have been registered in IMR & MMR. The incidence of undernutrition, stunting and wasting remains high, but here too, there have been impressive improvements during the past few decades.

15) For instance, the IMR or MMR cannot decline below zero. Longevity is also bounded by the present state of medical knowledge even under optimal living conditions.
16) See Sen (1990).
17) The persisting high proportions of stunting cannot be explained by undernourishment alone, since the incidence of undernourishment is much lower than that of stunting. This puzzle needs careful scrutiny.

Table 3: Health Indicators

	Population (millions)	Per capita GNI (at current prices in US dollars)	Life expectancy at birth, total (years)				Gender parity index (GPI) of life expectancy at birth (years)				Infant mortality rate (per 1,000 live births)				Maternal mortality rate (modelled estimate, per 100,000 live births)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	2016	2014	1970	1985	2000	2015	1970	1985	2000	2015	1970	1985	2000	2015	1990	2000	2014
East Asia	**1,559.9**	**10,827**	**60.21**	**69.18**	**72.84**	**76.93**	**1.07**	**1.05**	**1.05**	**1.05**	**74.13**	**38.78**	**27.18**	**8.42**	**87.92**	**52.91**	**25.72**
Japan	127.0	39,195	72.0	77.7	81.1	83.8	1.08	1.08	1.09	1.08	13.4	5.5	3.3	2.0	14	10	6
Korea, Rep.	51.2	28,099	62.0	68.5	75.8	82.2	1.12	1.13	1.10	1.08	48.0	20.7	6.4	3.0	21	16	12
China	1,378.7	7,588	59.1	68.5	72.0	76.1	1.06	1.05	1.05	1.04	80.6	42.4	30.1	9.2	97	58	28
Mongolia	3.0	3,842	55.3	58.4	62.9	69.1	1.09	1.08	1.10	1.13	119[a]	94.6	48.6	16.1	186	161	46
Southeast Asia	**638.2**	**4,034**	**56.73**	**63.38**	**67.68**	**70.84**	**1.08**	**1.07**	**1.08**	**1.08**	**88.72**	**60.34**	**35.94**	**21.67**	**307.87**	**189.21**	**107.19**
Singapore	5.6	55,107	68.3	73.9	78.0	82.6	1.10	1.07	1.05	1.06	22	8.8	3.0	2.1	12	18	10
Vietnam	92.7	1,916	59.7	68.9	73.1	75.9	1.19	1.14	1.14	1.13	54.3	42.3	23.6	17.6	139	81	54
Malaysia	31.2	10,814	64.5	69.5	72.8	75.2	1.04	1.05	1.06	1.06	42.2	18.7	8.7	7.0	79	58	41
Thailand	68.9	5,633	59.4	67.9	70.6	75.1	1.09	1.09	1.11	1.11	71.6	38.7	19.6	10.8	40	25	21
Indonesia	261.1	3,484	54.5	61.5	66.2	69.0	1.04	1.04	1.05	1.06	112.7	73.6	41.1	22.9	446	265	133
Philippines	103.3	3,445	60.8	63.8	67.2	69.0	1.06	1.08	1.10	1.10	55.5	49.8	30.0	22.1	152	124	117
Cambodia	15.8	1,032	41.6	50.4	58.4	68.5	1.12	1.09	1.08	1.06	177.4[a]	86.6	79.6	27.5	1,020	484	167
Myanmar	52.9	1,272	51.0	56.9	62.1	66.4	1.10	1.08	1.07	1.07	119.3	89.4	65.6	41.4	453	308	184
Lao PDR	6.8	1,929	46.2	51.0	58.9	66.3	1.06	1.05	1.05	1.05	141.0[a]	123.0	82.5	50.4	905	546	213
South Asia	**1,765.2**	**1,500**	**48.13**	**55.99**	**62.82**	**68.48**	**0.98**	**1.01**	**1.03**	**1.04**	**144.11**	**103.93**	**68.45**	**38.75**	**558.80**	**382.17**	**186.51**
Sri Lanka	21.2	3,760	64.3	69.2	71.1	75.0	1.06	1.09	1.11	1.09	54.4	25.2	14.1	8.3	75	57	31
Bangladesh	163.0	1,158	47.5	55.6	65.3	72.2	1.00	1.01	1.01	1.05	149.2	117.9	64.0	29.7	569	399	188
Nepal	29.0	709	40.5	50.1	62.3	69.9	1.01	1.02	1.04	1.05	176.8	119.5	60.3	29.6	901	548	275
India	1,324.2	1,557	47.7	55.8	62.6	68.3	0.98	1.01	1.03	1.05	142.6	100.5	66.6	36.2	556	374	181
Pakistan	193.2	1,418	52.9	58.6	62.8	66.3	1.00	1.02	1.03	1.03	144.2	115.3	88.1	65.7	431	306	184
Afghanistan	34.7	657	36.7	45.6	55.5	63.3	1.04	1.04	1.04	1.04	204.8	141.3	90.8	54.9	1,340	1,100	425

Notes: data are sorted with respect to life expectancy at birth in 2015.

[a] Mortality rate, infant: figures for some countries are other than 1970. Cambodia: 1975, Lao PDR: 1978, Mongolia: 1978.

Source: author, based on the World Development Indicators.

Table 4: Nutrition indicators

	Population (millions)	Per capita GNI (at current prices in US dollars)	Prevalence of undernourishment (percentage of population)				Prevalence of stunting, height for age (percentage of children under five)				Prevalence of stunting, height for age, female percentage of children under five)	Prevalence of wasting, weight for height (percentage of children under five)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	2016	2014	1991	2000	2014	2015	1971	1985	2000	2014	2014	1971	1985	1995	2014
East Asia	**1,559.9**	**10,827**	**23.24**	**14.76**	**9.07**	**9.17**		**35.77**	**17.28**	**8.99**	**8.51**		**4.50**	**4.99**	**2.25**
Japan	127.0	39,195	–	2.5	2.5[a]	–		8.3[c]	–	7.1[e]	6.5[f]		1.2[h]	–	2.3[j]
Korea, Rep.	51.2	28,099	5	5	5	5			2.5[d]	2.5[e]	2.7[f]		–	–	0.9[j]
China	1,378.7	7,588	23.9	16.2	9.8	9.3		38.3[c]	17.8	9.4[e]	8.9[f]		4.8[h]	5.0	2.3[j]
Mongolia	3.0	3,842	29.9	38.2	21.5	20.5			29.8	10.8[e]	14.7[f]		–	2.3[i]	1.0[j]
Southeast Asia	**638.2**	**4,034**	**29.62**	**22.61**	**10.06**	**9.74**	**57.7**	**47.9**	**38.0**	**30.2**	**30.1**	**9.8**	**8.5**	**8.4**	**9.7**
Singapore	5.6	55,107					10.7[b]		4.4			7.7[g]	–	3.6	–
Vietnam	92.7	1,916	45.6	28.1	11.8	11		64.1[c]	43.4	23.3[e]	23.2[f]		11.1[h]	13.5[i]	4.4
Malaysia	31.2	10,814	5.1	5	5	5			20.7[d]	17.2[e]			–	15.3[i]	–
Thailand	68.9	5,633	34.6	19	7.9	7.4		25.3[c]	18.1[d]	16.3[e]	16.3[f]		6.0[h]	6.7	6.7[j]
Indonesia	261.1	3,484	19.7	17.2	7.6	7.6			42.4	36.4[e]	35.5[f]		–	5.5	13.5[j]
Philippines	103.3	3,445	26.3	21.3	13.9	13.5	60.2[b]	44.7[c]	38.3[d]	30.3[e]	29.1[f]	9.9[g]	5.7[h]	9.1[i]	7.9[j]
Cambodia	15.8	1,032	32.1	32	15	14.2			49.2	33.5	32.6		–	13.4[i]	9.2
Myanmar	52.9	1,272	62.6	52.4	14.9	14.2		55.1[c]	40.8	35.1[e]	33.4[f]		12.9[h]	9.4[i]	7.9[j]
Lao PDR	6.8	1,929	42.8	39.2	18.9	18.5			48.2	43.8[e]	42.1[f]		–	12.3[i]	6.4[j]
South Asia	**1,765.2**	**1,500**	**24.88**	**18.95**	**16.36**	**16.24**	**74.2**	**65.8**	**49.7**	**39.3**	**37.9**	**19.5**	**21.1**	**18.5**	**14.5**
Sri Lanka	21.2	3,760	30.6	29.9	22.9	22	50.4[b]	31.2[c]	18.4	14.7[e]	14.6[f]	15.9[g]	13.3[h]	15.3	21.4[j]
Bangladesh	163.0	1,158	32.8	23.1	16.9	16.4		70.9[c]	50.8	36.4	35.9		17.3[h]	15.7	14.3
Nepal	29.0	709	22.8	22.2	7.7	7.8	75.0[b]	–	57.1[d]	37.4	39.5[f]	15.2[g]	–	7.5	11.3
India	1,324.2	1,557	23.7	17	15.3	15.2	75.1[b]	66.2[c]	51.0[d]	38.7	37.9	20.3[g]	21.3[h]	19.3[i]	15.1
Pakistan	193.2	1,418	25.1	22.4	22	22	70.5[b]	62.5[c]	41.5[d]	45.0[e]	41.7[f]	15.2[g]	24.0[h]	17.2[i]	10.5[j]
Afghanistan	34.7	657	29.5	45.2	26	26.8		–	53.2[d]	59.3[e]	–		–	18.2[i]	–

Notes: data are sorted with respect to life expectancy at birth in 2015.

a: Prevalence of undernourishment, 2014: figure for Japan is from https://knoema.com/atlas/Japan/topics/Health/Nutrition/Prevalence-of-undernourishment.

Prevalence of stunting, height for age

[b] Figures for some countries are other than 1971: India 1977; Nepal 1975; Pakistan 1977; Philippines 1973; Singapore 1974; Sri Lanka 1978.

[c] Figures for some countries are other than 1985: Bangladesh 1986, China 1987, India 1989, Japan 1980, Myanmar 1984, Pakistan 1986, Philippines 1987, Sri Lanka 1987, Thailand 1987, Vietnam 1984.

[d] Figures for some countries are other than 2000: Afghanistan 1997; India 1999; Korea, Rep. 2003; Malaysia 1999; Nepal 2001; Pakistan 2001;

Philippines 1998; Thailand 1995.

[e] Figures for some countries are other than 2014: Afghanistan 2004; China 2010; Indonesia 2013; Japan 2010; Korea, Rep. 2010; Lao PDR 2011; Malaysia 2006; Mongolia 2013; Myanmar 2009; Pakistan 2012; Philippines 2013; Sri Lanka 2012; Thailand 2012; Vietnam 2010.

Prevalence of stunting, height for age, female

[f] Figures for some countries are other than 2014: China 2010; Indonesia 2013; Japan 2010; Korea, Rep. 2010; Lao PDR 2011; Mongolia 2010; Myanmar 2009; Nepal 2011; Pakistan 2012; Philippines 2013; Sri Lanka 2012; Thailand 2012; Vietnam 2010.

Prevalence of wasting, weight for height

g Figures for some countries are other than 1971: India 1977; Nepal 1975; Pakistan 1977; Philippines 1973; Singapore 1974; Sri Lanka 1978.

h Figures for some countries are other than 1985: Bangladesh 1986; China 1987; India 1989; Japan 1980; Myanmar 1984; Pakistan 1986; Philippines 1987; Sri Lanka 1987; Thailand 1987; Vietnam 1988.

i Figures for some countries are other than 2000: Afghanistan 1997; Cambodia 1996; India 1997; Lao PDR 1994; Malaysia 1999; Mongolia 1992; Myanmar 1994; Pakistan 1994; Philippines 1993; Vietnam 1994.

j Figures for some countries are other than 2014: China 2010; Indonesia 2013; Japan 2010; Korea; Rep. 2010; Lao PDR 2011; Mongolia 2013; Myanmar 2009; Pakistan 2012; Philippines 2013; Sri Lanka 2012; Thailand 2012.

Source: author, based on the World Development Indicators.

The development of healthcare has been led by the postcolonial states that came to power around the middle of the 20th century.[18] Rapid improvement in health standards was an important part of all their developmental agendas. Though health outcomes depend on a whole host of factors ranging from income and education to the quality of infrastructure and governance, the quality of health services are an important determinant of health outcomes. The new governments recognised that a collective good like health services could not be left to the market. But the public provision of health services was constrained by the availability of public resources. The challenge was compounded by a changing epidemiological pattern. With rising income and lifestyle changes, the incidence of non-communicable diseases (NCDs), requiring more expensive treatment, started rising even before the incidence of communicable diseases (CDs) declined. Public resource constraints compelled most governments to turn to private provision of health services. But that in turn was constrained by household budgets and their capacity to meet out-of-pocket (OOP) expenses.

This tension between the goal of expanding healthcare provision, the limited resources of governments and the budget constraints of households is the main determinant of the paths of healthcare development since the end of the 1960s, the reference period of this paper. But there is a fourth element that has to be factored in, i.e., the contingent nature of demand for healthcare, contingent on the occurrence of illness or accident, the asymmetry of information between patient and physician about the required volume and composition of treatment, and the possibly catastrophic financial impact of such treatment if paid out of pocket (Arrow, 1963). Hence, the need for *ex ante* pooling of risk in the purchase of health services or health insurance. The problem of profit-driven adverse selection of clients by private insurers raises the need for universal health insurance provided by the state.

The combination of these factors led to the emergence of a variety of health systems in Asia:

i. publicly funded and publicly provided healthcare
ii. publicly funded but privately provided healthcare
iii. privately funded and privately provided healthcare
iv. publicly insured but privately provided healthcare
v. privately insured and privately provided healthcare

Health systems in most Asian countries evolved from one health system to another driven by the interaction of the factors listed above, and usually involving some combination of two or more of these systems. The variety of health systems followed by different Asian countries in different periods range from maximum dependence on public funding and public provision as in Singapore and in China and Vietnam in their pre-market reform period to maximum dependence on OOP private spending and private provision as in most of the South Asian countries. This is also the path adopted by China

18) Though in some post conflict countries the development of healthcare services started much later.

and Vietnam in their post market reform periods. Some of the observed patterns and issues that have emerged from this experience are summarised below.

The rising burden of NCDs while the burden of CDs is yet to be eliminated is a major challenge in many countries. Unfortunately, public health measures such as immunisation that are the most equitable, effective, and cost efficient in dealing with CDs have been neglected in the region, their share of public health expenditure typically being less than 10%. Consequently the benefit incidence of public healthcare spending has been regressive in most countries (O'Donnell O. et al., 2007).

In all except the most advanced Asian countries the focus on curative care and neglect of preventive public health measures that could cost effectively contain the increasing burden of disease has put intolerable pressure on public resources. It has also strained the delivery capacity of public health systems based on a foundation of poorly trained village health workers managed by local governments at the district level. The poor quality of service at the local level has undermined public confidence in the public health system and encouraged by-passing of referral systems. This has in turn led to overcrowding and poor service even at the secondary and tertiary hospitals. Though free in principal, public health services actually entail costs of excluded services and tests, unavailable drugs, informal payments on top of long waits that entail wage losses at work. In most Asian countries, patients have, therefore, opted for paid private services when they can afford it.

The shift to private health provision, mostly financed by household OOP spending has led to several challenges. Typically private providers push over-treatment, expensive diagnostic tests and medication apart from high doctors' fees, leading to huge escalation in treatment costs. The worst consequence of such cost escalation is the catastrophic impact of high OOP spending on household incomes, driving them to impoverishment. Three Asian countries, Sri Lanka, Malaysia and Thailand have tried to contain the dependence on OOP spending in contrast to Afghanistan, Bangladesh, China, India, Nepal, Pakistan, Vietnam and others where the share of OOP spending is very high and rising. Comparisons show that the incidence of catastrophic health episodes has been lower in the first group of countries (Doorslaer E.V. et al., 2006, Tangcharoensathien V. et al., 2011)

In low and middle income countries better off households spend a larger share of household expenditure on medical care compared to poorer households who cannot afford to cut back spending on necessities. The latter have been forced to progressively withdraw from seeking medical care as treatment costs have risen. This has resulted in increasing inequality in access to medical care across different socio-economic classes. There is also rising inequality in the access to healthcare between more and less prosperous provinces within a country and between urban and rural areas within a province.

In response to the rising inequality of access to curative health care most countries in the region have adopted the goal of social insurance (SI), *i.e.*, universal health insurance with public financing of insurance premiums. Government employees, retirees, etc., have

typically been the first group to be covered by comprehensive public health insurance, followed by the formal private sector employees and later the non-poor in the informal sector. Poor households have been separately covered through special safety net programs. Laos PDR and Cambodia, two of the poorest countries in the region, have mostly depended on donor funding for their SI systems. Thailand, Philippines, Indonesia and Vietnam have depended on payroll taxes to finance the system for the formal sector. For the informal sector household contributions or tax financing has been used with mixed results in universalising coverage.

Social Insurance (SI) by itself has not been able to address the problem of private providers driving up costs. This has led to thinning out of services covered by SI, copayments and coverage caps resulting in continuing heavy reliance on OOP spending. In India, for instance, SI schemes are limited to inpatient care whereas most of the OOP spending is on outpatient care, especially among the lower income quintiles. Such SI schemes fail to address the challenge of rising inequality in access to healthcare. A WHO assessment pointed out that for SI to be viable a country should have a separate dedicated safety net program for vulnerable households and allocate at least 4%-5% of GDP to health expenditure, of which OOP spending should not exceed 30%-40% (WHO, 2009). In comparison, OOP in most Asian countries ranges from 60% to as much as 80%. Barring the few countries that have tried to curb the dependence on OOP spending, it would appear that rising inequality in access to healthcare will not be curbed any time soon.

4. Social Development, Disparity and the State

The foregoing account of social development in Asia, the spread of education and healthcare, points to some central features that stand out quite clearly. The outstanding feature is the remarkable transformation of the education and health profile of the entire region. Some countries, and regions within countries, have lagged behind. Others have surged ahead. But there were impressive gains in social development in all countries compared to their own initial conditions. Second, there are large variations across countries in their levels of social development. However, as the leading countries approach the feasible limits of such development the lagging countries are gradually catching up, a process of convergence is underway.[19] There are of course variations in the pace at which the different lagging countries are catching up with the leading countries. Finally, within most countries there are large disparities in multiple dimension of access to education and healthcare: disparities between more and less prosperous regions, between rural and urban areas and between rich and poor households. These disparities appear to be increasing at present with the increasing shift from public to private provision of education and healthcare in most countries. However, these disparities too are likely to decrease over the long term with continuing social development like the variations across countries, and for the same reasons.

But what accounts for these large variations across countries?

19) See footnotes 12 and 15 above.

One part of the answer is differences in initial conditions. That includes not just the initial differences in indicators of education and healthcare reported above in tables 1 to 4 but also differences in resource endowments, incomes and initial political conditions, such as a legacy of conflict in some countries or differences in colonial legacies.[20] Another critical element in the process of cumulative causation that has determined the pace of social development in Asia is the nature of the State. As pointed out at the outset and in the country notes, the development of education and healthcare in Asia has been led by post-colonial developmental states as integral components of their development agendas. Hence, apart from the other elements in Myrdal's social system, the spread of education and healthcare was also very much a function of the priorities and capacities that reflected the nature of the State.

Myrdal's work preceded Jonhson's introduction of the concept of a developmental state (Johnson 1982). But Myrdal (1968) introduced the concept of the 'soft' state, a state that lacks the capacity or the will to enforce its agenda of State led development in the face of many constraints and competing claims for the resources of the State. By inference, a hard state is one that has the capacity and will to enforce its agenda. Several scholars have since grappled with the same idea and attempted to refine the basic concept of hard and soft states. Evans has introduced the concept of 'embedded autonomy' (Evans 1995, Evans & Heller 2018), Khan (2018) has written about 'enforcement capacity' as a function of 'the political settlement' (Khan 2018), and Bardhan (2016) has sought to define a measure of state strength in terms of 'commitment ability', centralisation and state capacity, which is further parsed into technical, organisational and political capacities.

In their much acclaimed work, Acemoglu & Robinson (2012) have used the binary concepts of extractive versus inclusive institutions and political vis-a-vis economic institutions, among other important conceptual innovations, to explain why most nations fail to develop. A modification of the Acemoglu-Robinson (AR) framework can be usefully employed to distinguish between different types of developmental states, including hard and soft states. Such a taxonomy can help explain the differing impacts of different types of developmental states on the development of education and health. AR maintained that except in transitional conditions extractive or inclusive economic institutions match with the corresponding political institutions. They argued that most nations have failed to develop because predatory states have drained them of resources and enterprise through extractive political and economic institutions. The few developed nations are the exceptions where states have maintained inclusive political and economic institutions that *enabled* development. In this conception of inclusive political institutions, the role of the ideal State is somewhat passive, limited to ensuring the protection of property rights, maintenance of law & order, etc. to enable the unrestricted play of market forces. This is similar to the conceptions of good governance in North & Weingast (2000) and Besley & Persson (2011) among others.

20) The very different legacies of European colonialism in South and Southeast Asia and Japanese colonialism in East Asia and their differentiated impact on agrarian transformation in these sub-regions had been initially pointed out by Breman & Mundle (1991). This idea has now been reiterated and further developed by Duara (2018) and Wade (2018).

Johnson's conception of the developmental State which did not just enable but actually led the process of development is the very antithesis of this rather passive 'night watchman' conception of the inclusive State. However, if we admit the possibility of stable political-economic systems where exclusive[21] political institutions are combined with inclusive economic institutions or, conversely, inclusive political institutions can be combined with exclusive economic institutions this yields a taxonomy of different types of developmental states.

1. The hard developmental state where political institutions are exclusive but economic institutions are inclusive.
2. The soft developmental state where political institutions are inclusive but economic institutions are exclusive.
3. The inclusive developmental state where political and economic institutions are both inclusive.
4. The predatory state which is not developmental at all and where political and economic institutions are both exclusive.[22]

The states in Asia can now be classified according to this taxonomy, which should enable us to explain their differing impacts on the pace of social development in different Asian countries.[23]

Hard developmental states: China, Thailand, Vietnam, (also Korea and Taiwan in their pre-democratic period)
Inclusive Developmental states: Japan, Korea, Malaysia, Singapore, Sri Lanka, Taiwan
Soft developmental states: Afghanistan, Bangladesh, India, Indonesia, Lao PDR, Mongolia, Nepal, Philippines
Predatory state: Cambodia, Myanmar, Pakistan (also presumably North Korea, but we have not analyzed this country in this paper).

This classification is based on my reading of the literature cited earlier, the data and country notes presented in the paper and my earlier research on these questions (Mundle 2017, Mundle 2018). But ultimately, these are judgments about the nature of the state in each country. Can these judgments stand up to scrutiny against some objective criteria? The nature of the state is a complex notion not easily measurable by any simple metric. However, expanding the public provision of education and healthcare inevitably collided with the resource constraints of governments, which had many demands on their limited fiscal space. Barring Singapore, and to a lesser extent Sri Lanka, all the states in the region conceded this collective goods space to private providers in greater or lesser degree.

21) I am here replacing ARs term 'extractive' with the term 'exclusive', which I find more appropriate as the opposite of 'inclusive'.
22) For a more detailed discussion and application of this approach to classify and assess the prospects of the 25 most promising developing economies of Asia, Africa and Latin America, see Mundle (2018b).
23) Evans concept of embedded autonomy, Khan's concepts of enforcement capacity and the political bargain and, especially, Bardhan's concepts of 'commitment ability, centralization and state capacity can be very useful for making this classification.

Hence, the allocation of public resources for social expenditure is a possible indicator, admittedly crude, of the inclusiveness of the state.

Figure 1 presents a scatter diagram of the education share of government spending against mean years of schooling, taken as a representative measure of education development. Figure 2 presents a scatter diagram of the share of health care in government spending against life expectancy, taken as a representative measure of health standards in a country. It will be noted that most of the countries classified as soft developmental states, and Myanmar as the lone predatory state, spend less than or close to the median share of public expenditure on education and health services. For the least inclusive countries clustered in the lower left quadrant of both diagrams this has happened even when the achieved standards of education and health are below the regional median. The exceptions are Afghanistan & Nepal, and Indonesia in the case of education. Conversely most of the countries classified as inclusive or hard developmental states allocate more than the median share of public expenditure on education and health services. The exception is Japan in the case of education.

Afghanistan & Nepal are the poorest countries in the region and heavily aid dependent. The high allocation to education and health services in these two countries is a reflection of donor priorities rather than the character of the state. The high allocation for education in Indonesia started with policy reforms in 1975, during the Suharto regime, when Indonesia was a hard developmental state, not the soft state it is today. Japan has already reached the ceiling at over 12 years of schooling per child, and it is also the second richest country in the region at nearly $40,000 per capita income, way above other Asian countries barring Singapore. At this high level of income, and government revenue, the relatively low share of public expenditure allocated to education is evidently adequate to maintain the high education standard it has already achieved. Thus, the empirical indicators reported here seem to confirm that the classification of state character suggested above is not entirely arbitrary. It would be interesting to verify the robustness of the classification against other quantitative indicators of state character if possible.

The increasing dependence on private provision of education and health services has led to increasing disparity in multiple dimensions of the access to education and health services in most countries as has been described above. However, the dominant long-term trend is the rapid spread of these services and rising standards of education and health in all the countries of the region. Also there is convergence. The leading countries Japan, Singapore and Korea have already reached or are approaching the best feasible standards of education and health. The lagging countries are gradually catching up. There are, however, large variations among them both in existing standards and in the pace at which they are catching up. An important determinant of these variations, apart from initial conditions and income levels, is the nature of the state in each country. If the classification suggested here is correct, it is likely that countries led by the inclusive and hard developmental states, i.e, China, Malaysia, Thailand, Sri Lanka and Vietnam, will catch up over the next decade or so. They will be followed by the countries led by soft developmental states.

Figure 1: Association between Education Shares of Govt. Spending and Education Status (Mean Years of Schooling)

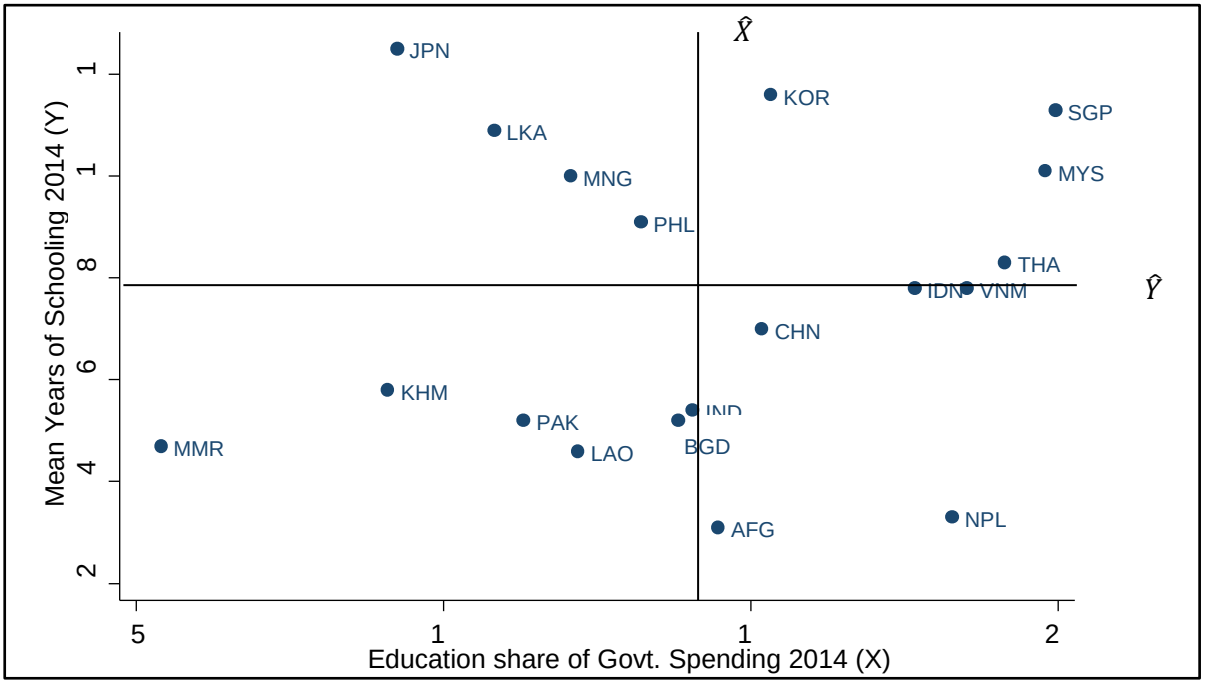
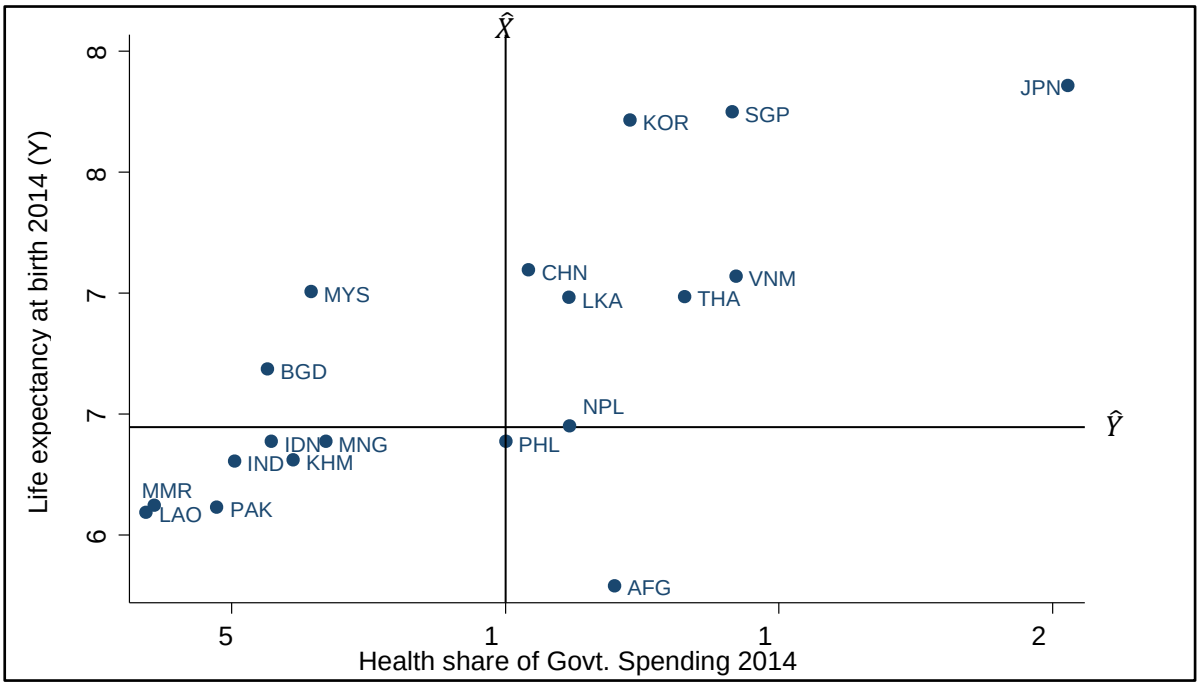


Figure 2: Association between Health share of Govt. Spending and Health Status (Life Expectancy at Birth)



***Country Code*:** AFG: Afghanistan; BGD: Bangladesh; KHM: Cambodia; CHN: China; IND: India; IDN: Indonesia; JPN: Japan; KOR: Korea, Rep.; LAO: Lao People's Democratic Republic; MYS: Malaysia; MNG: Mongolia; MMR: Myanmar; NPL: Nepal; PAK: Pakistan; PHL: Philippines; SGP: Singapore; LKA: Sri Lanka; THA: Thailand and VNM: Viet Nam.

Within this large group, countries with less political fractionalisation, stronger commitment ability and greater state capacity will catch up faster than the others.[24] Myanmar, the sole remaining Asian country led by a predatory state,[25] is unfortunately likely to catch up at last.

24) See Bardhan (2016), Mundle (2017, 2018b), Evans & Heller (2018) and Khan (2018) on these questions.

25) Though the military dictatorship in Myanmar now shares power with an elected government, it is still too early to tell whether this has significantly altered the predatory nature of the State.

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Appendix 1. The Spread of Education: Selected Country Notes

A1.1 The Best Performers

Korea & Singapore: Based on the record of enrolment and completion rates at different levels, the average years of schooling and education quality indicators where available Korea and Singapore are undoubtedly the top performers.[26] In both countries the spread of education has been led by their governments which recognised that, apart from its intrinsic value, education was crucial for developing a workforce to meet the requirements of rapid industrialisation. Education policy was therefore closely aligned with their development strategies in both countries.

In Korea an interesting feature is how priority was gradually shifted from an initial focus on primary education to secondary and then tertiary education as the requirements of the development strategy changed over time. Another feature is its cost efficiency. The cost per student is lower compared to other OECD countries thanks to higher pupil: teacher ratios, lower teacher pay, etc. The Korean system has also been egalitarian, with free primary education, but that is changing. Korea's expenditure on education relative to GDP is the highest among OECD countries. Despite this, resource constraints have forced the government to gradually turn to private provision, especially at the tertiary level, on a fee for service basis, though the government maintains strong regulatory and quality control. With rising costs, increasing recourse to private provision & costly private tuition in a very competitive environment, access to higher secondary & higher education is now becoming more unequal. The special needs of underachieving students and a growing body of students from multicultural backgrounds is another emerging challenge.

The special features of the Singapore education system is its bilingual approach that requires competence in both English and a vernacular language. More important, it is one of only two Asian countries where the government finances and provides education as a 'merit good', all the way up to tertiary education. Hence, access to education is highly egalitarian. However, on clearing the primary school leaving exam students are streamed into the academic track or the technical & vocational education (TVE) track depending on their capability. To nuance the meritocratic inequality embedded in such streaming, policy has focused on raising the status of TVE through generous grants to upgrade facilities and teacher quality. Singapore is possibly the only country where teacher salaries are comparable to those of lawyers, doctors, engineers and managers. On the academic track the emphasis is on mathematics, science and engineering.

Vietnam: Though the development of education could not proceed till the end of the Indo-China war in 1975, Vietnam stands out for the very rapid spread of education since then led by the State. It is already recording above average performance in PISA tests

26) We leave aside Japan which was clearly a top performer because it was already an advanced country at the outset of our reference period. The account here is based on Mingat (1998), Gwang-Jo Kim (2001), Goh C.B. & Gopinathan S (2006), Lee, Lee & Jang (2010), Hye-Won Lee (2014) & OECD (2016).

despite its low per capita income.[27] Students are streamed into TVET or academic stream on completion of basic education. The emphasis in the academic stream is on mathematics and science rather than the liberal arts. Though the goal of universal secondary education is yet to be achieved, there is compulsory free education up to basic level, making the system egalitarian. However, despite its high growth public education expenditure has not managed to keep pace with the spread of education. It is being increasingly supplemented by private spending through formal and informal methods, and this has led to growing disparity in both access to education and its quality between regions, between urban and rural areas, and between rich and poor households.

Sri Lanka: Despite its relatively low per capita income, some of Sri Lanka's education indicators are comparable to the best in Asia. These achievements are quite remarkable and stand out in sharp contrast to the other countries of South Asia. Underlying these achievements is a long tradition of state led education development, with education being financed as a merit good from the primary level all the way to university education as in Singapore (World Bank 2005, Ganegodage K.R. & A.R. Rambaldi 2011). The rationality of these policies has been questioned because of the estimated low returns to education. However, Sri Lanka has suffered 25 years of ethnic civil war that ended only in 2009, taking a huge toll in human lives, and entailing massive social and economic costs.[28] The value of education in Sri Lanka has to be reckoned not just in economic terms but in terms of its contribution to restoring social cohesion when the functioning of the social system had broken down (Colenso, P., 2006).

A1.2 The Weak Performers

Afghanistan and Pakistan from South Asia are among the weakest performers along with Cambodia, Lao PDR and Myanmar in Southeast Asia. These are the poorest countries in the Asian region.[29] Several of them are also post-conflict countries where the spread of education was arrested or even reversed for many years.

Afghanistan: It is the weakest performer. There was significant expansion of education during the 1950s, 1960s & 1970s. Then the whole system fell apart due to internal strife that continues to this day, exacerbated by geopolitical rivalries among external powers (Samady S.R. 2001). The worst period was during 1996-2001 when girls and women were barred from education under fundamentalist Taleban rule. Since then enrolment has been rising (Tables 1 & 2) and the government has been struggling to re-establish a regular education system with 8 years of free, compulsory primary education (Nuffic 2015b). Though private schools exist, the system is largely based on government schools. The formal school system is supplemented by madrasas and other informal schools. The misogyny enforced by the Taleban is still evident in the gender disparity that persists (Tables 1& 2). Another special feature of education system in Afghanistan is the

27) This account is based on Hungi (2008), Nguyen Q.K. & Nguyen Q. C. (2008), London J.D.(2011), Mai & Yang (2013) & NUFFIC (2015a).
28) One study estimates just the cumulative economic cost at twice the Sri Lanka GDP of 1996 (Arunatilake N, Jayasuriya S & Kelegama S, 2001).
29) But there are other countries at comparable levels of per capita income such as Nepal & Bangladesh where education outcomes are better.

large numbers of disabled persons who need to be included in the education system (Bakshi P. & Trani J.F. 2006).

Cambodia & Lao PDR: The spread of education in these two countries was prevented by the long Indo-China war that followed, in the case of Cambodia, by the brutal Khemr Rouge regime that specifically targeted teachers for torture and mass murder. Hence the building of a modern education system has been underway in these two countries only since the 1980s and has made good progress.[30] Both countries have now achieved near universal enrolment for primary education which is free. One major challenge is the high dropout rate, partly reflecting the high opportunity cost of attending school in a predominantly agrarian societies, where children are required to work during the peak agricultural season. The poor quality of teachers, who reportedly extract informal fees sometimes, is another challenge. But the overarching problem is the scarcity of resources. Though education is mainly provided by the governments in both countries, the scarcity of public resources has led to a compromise on quality in the quest for rapid expansion. It has also made both governments heavily dependent on donors who often drive the policy agenda, some of them insisting on limiting public provision to basic education. As a consequence there is increasing paid private provision at higher secondary and tertiary levels, with consequent adverse effects on the equity of access to education at these higher levels.

Myanmar: The country has been ruled for over half a century by an authoritarian military dictatorship which now shares power with the elected NLD party led by Aung San Su Kyi. It is not a post conflict society like Cambodia & Lao PDR. Despite this its education performance is similar to these two countries, with similar problems (Tin H. 2007). A peculiar distortion of the Myanmar education system is the premature establishment of a large number of tertiary training institutions set up by different ministries for which there is little demand. Basically, the military regime had the option and the means to rapidly develop education but it lacked the commitment that spurred the authoritarian regimes in East Asia to do that.

Pakistan:[31] The country has been ruled for many years by military dictators and the military remains very powerful, but Pakistan has also had long periods of rule by elected civilian governments as at present. It is also not a post-conflict country. Despite that its education performance is worse than any other country in Asia barring Afghanistan. An unusual feature of Pakistan is the very rapid spread of private education, not elite education but low cost private education even at the primary level. There are a large number of studies that have attempted to analyse and interpret the Pakistan experience. The country suffers from large deficits in both the quantity and quality of basic education.

30) For useful studies on the development of education in Cambodia see Chhinh S. & Dy S.S. (2009), Tan C. (2006), Chansopheak K.(2009) & Marshall J.H. et. al. (2009). For Lao PDR see, among others, Phetsiriseng I. (2009).

31) This account draws on Behrman, Khan, Ross & Sabot (1997), Arif & Saqib (2003), Aslam (2003), Alderman, Kim & Orazem (2003), Hathaway (2005), Khan & Kiefer (2007), Lloyd, Mete & Grant (2008) Naseer et al. (2010) & Barrera-Osorio & Raju (2015). These are only an small sample of the large body of literature on education in Pakistan.

These deficits cannot be eliminated without radical reform of Pakistan's education system. But so far there is no indication that any such bold initiative is on the way.

A1.3 The Largest Countries: China, India & Indonesia

China, India & Indonesia are important for the Asian education narrative not because they are either the best performers or the weakest performers but simply because of their large economic and demographic weight in the Asian region.

China:[32] From 1949 till 1977 education policy in China was buffeted by two political lines of equity and efficiency in inner party struggles till Deng's consolidation of power in 1977. Since then education policy has followed a consistent path of reforms with a focus on the developing an effective modern education system to meet the requirements of rapid industrialisation and growth. But this has been combined with a basic egalitarian goal of universalising access to education. The three strategic pillars of education policy since 1977 are decentralisation, market orientation and mass higher education. But these are mounted on a two track foundation established since 1949. Urban primary education has always been prioritised for producing the workforce for rapid industrialisation and financed by the central government. Rural primary education is the responsibility of the village government paid for by the people themselves. This rural-urban divide, reified by the *hukou* registration system, has led to different consequences of decentralisation in rural and urban areas. Decentralisation combined with the 'private responsibility' system in agriculture, meant village governments could no longer count on commune incomes to finance primary education. As a consequence the primary education system in rural areas virtually collapsed. Hence, the retrogression in primary enrolment and completion rates noted earlier (Table 1). The government has tried to correct for this distortion by shifting the responsibility for primary education back to county governments since 2001. Decentralisation has also meant increasing inequality between more and less prosperous provinces since the latter have less resources.

Another dimension of inequality in access to education has been arisen due to privatisation, the emergence of private educational institutions at all levels. This second pillar was a consequence of public resource constraints. Though government spending on education kept increasing it could not keep pace with the expansion of education. By 2005 there were more than 86,000 private institutions or '*minibans*' at different levels, though they continue to be regulated by the government. Another dimension of rising inequality is between different socio-economic groups in urban areas. At one end there are the 'key schools' with special facilities and quality teachers established to nurture gifted merit students. However, children of rich parents can get admitted to these schools or 'choice schools', expensive private schools, on payment of heavy fees. At the other end of the socio-economic spectrum urban China has 'migrant' schools, of indifferent quality, mainly for children with rural *hukou.*

32) There is a vast lierature on education in China. The account presented here is based on Tsang (2000), Wu & Zang (2010), Fu Teng Margaret (2005), Ngok (2007), Li et. al. (2014), Guirong et al. (2015), Mo et al. (2013) & British Council (2014),

The third pillar of China's education policy is the mass expansion and modernisation of China's higher education system. To enable China to remain competitive in an emerging knowledge based global economy a massive higher education expansion program in 1999. However, global competitiveness requires not just scale but also quality. To meet this goal, the government has picked up a subset of 100 higher education institutions (Project 211) and subsequently a few universities to be promoted as world class universities starting with Beijing and Tsinghua Universities (Project 985). This has created a fourth dimension of education inequality between these institutions of excellence and the rest.

India: An important aspect of education policy in India is its elitist bias. The demand for free, compulsory primary education has a long history in India, going back to the Gokhale Bill of 1911 (Sikdar 2016). Similar goals have continued to be pronounced in various policy documents since independence. But these largely remained as unfunded mandates until recently. Actual resource allocation gave high priority to tertiary education at the cost of primary education (Mundle 2017). The situation has improved significantly following the Right to Education Act (RTE) of 2009 which guarantees free basic education for all children in the 6-14 age group. Another major challenge is the poor quality of education. After its very poor performance in the one PISA test in which India participated, the country has stayed away from PISA tests. However, domestic reputed surveys like ASER have pointed out that learning outcomes are abysmally poor and have deteriorated over time (ASER 2017 and 2018). The poor quality of vocational training and skilling for TVE track students is a third major deficit. ASER 2017 found that less than 6% of the 14-18 age cohort enrol for vocational training, presumably because such training does not suitably skill them for employment (ASER 2017). The India Skills Report for 2017 points out that only 40% of those seeking work have employable skills (CII 2018).

Thus, India has achieved the goal of near universal basic education, making access to education more equitable than before. But the quality of education remains poor and is not making job seekers employable. A great deal of policy research is now directed at addressing this problem, including the private schools option.[33] The evidence is compelling that reform of pedagogic approaches and school governance are key to improving learning outcomes. But it is not clear that policy makers have absorbed these lessons.

Indonesia: In Indonesia the emergence of the post-colonial state was followed by internal strife and it was only in 1970s that the government began to focus on the development of education as a priority in its agenda of national development. There was a massive expansion in the delivery of education services, especially at the primary level, from 1975 to 1987 to provide universal access to primary education. This was followed by a second wave of decentralisation reforms since 2000. Two major constraints faced by these education reforms were the inadequate supply of high quality teachers and the weak capacity of the local bureaucracy mandated to administer basic education. Massive expansion despite resource constraints resulted in erosion of teacher pay relative other professions and a general deterioration in the quality of teachers. The new cadre of poor

33) See, among others, Inamdar (2004, Chin (2005), Banerjee et al. (2007), Linden 2008 Desai et al., 2008, and Muralidharan and Sudararaman (2011).

quality teachers were not able to cope with new curricula which progressively became more complex and required teaching of more content in less time (Chang et al., 2014). The inevitable consequence was poor learning outcomes.

Following the Dakar World Education Forum in 2000, attention started shifting in many countries, including Indonesia, to education quality and learning outcomes. Also, Indonesia's poor performance in international learning tests like TIMMS and PISA cited earlier served as a wakeup call. In a very significant policy move the government amended the constitution in 2002 to earmark 20% of government spending for education. Benefit incidence analyses show that the unprecedented increase in public spending on education, along with other reforms, has been very effective in improving the access to education, especially for the poorest children (Lanjouw et al., 2001, World Bank, 2013). The government also enacted a new Teacher Law in 2005 aimed at improving teacher compensation and quality, a major determinant of learning outcomes (Chang et al., 2014). The other major constraint that has impacted the effectiveness of education reforms is bureaucratic capacity. With decentralisation local governments, especially district administrations, have become central players in the delivery of basic education services. Differences in bureaucratic capacity is one of the factors that accounts the large variations in education performance across districts (World Bank, 2013).

There has been a massive increase in access to basic education, particularly since the allocation of a high share of governments spending for education from 2002. But inequality in access to higher secondary and tertiary education remains a challenge (World Bank 2014). Such unequal access is accentuated but by differences of gender, ethnicity and location. To address this challenge, the government enacted the Higher Education Law in 2012. The impact of this law remains to be assessed. Also, there is no firm evidence yet that the reforms aimed at improving teacher quality and bureaucratic capacity is resulting in improved learning outcomes.

Appendix 2. The Delivery of Health Services: Selected Country Notes

A2.1 The Best Performers: Singapore & Korea [34]

Singapore: The health system in Singapore is considered one of the best in the world because it has not only delivered health outcomes comparable to the best in the world, but has also done so at much lower cost. In 2002 it amounted to under 4% of GDP compared to 9% OECD average (Gauld R. et al., 2006). Moreover, the share of government in total health spending was also low at 33% compared to 45% in USA and around 72% in Europe (Gauld et al., 2012). Set up by a government that came to power only in 1965, the health system is closely regulated and managed by the government. The public sector is dominant, with public hospital beds accounting for 72% of all hospital admissions. These hospitals are run like private companies, though 75% of these public hospital beds are heavily subsidised. All these public hospitals also have their own pharmacies that supply drugs at reasonable prices.

The most interesting aspect of Singapore's health system is its unique financing system which embeds market incentives within a publicly controlled system so typical of Singapore (Gertler 1998, Asher & Nandy 2006, Bai et al., 2012, Gauld et al., 2006, Haseltine 2013, Lim 2017). The heart of this system consists of the Medical Savings Accounts (MSAs) that are carved out of Singapore's compulsory provident fund system. The main account is the Medisave account which account holders can use to make copayments and other medical expenses they are required to make for themselves and their families. The co-sharing of expenses, minimises moral hazard since patients have an incentive to keep costs low. But there is no risk pooling beyond the family so Medisave cannot cover the treatment for catastrophic medical episodes. For this there is a separate medical insurance system called Medshield, where costs are kept in control by competition among private providers. The premiums for Medishield can be paid out of Medisave. There is also an insurance scheme for the elderly called Eldershield. Finally, for the small proportion of poor families who are unable to make copayments or pay insurance premiums there is a separate safety net called Medifund. MSA accounts for just about 10% of total medical expenditure in the country, but its incentive structure ensures that overall costs are kept low. The government covers another 25% of total medical expenditure, a very low share compared to most advanced countries or other countries in Asia. The rest is covered by employee benefits, private insurance and OOP payments at point of service.

Korea: The country has gone through an epidemiological transition with chronic NCDs like cardiovascular diseases, cancer, hypertension, etc. replacing CDs as the main source of disease, with a corresponding change in the pattern of demand for healthcare (Gertler 1998, WHO 2015). Unfortunately, the allocation of resources for preventive public health measures is very low and the bulk of healthcare spending is on curative healthcare. Health expenditure in Korea is about 6.9% of GDP, compared to the OECD average of 9.5% (Hyoung-Sun and Jeong-Woo 2012). Of this about 58% is financed by the

34) Korea and Singapore are the two recently developed Asian countries that have achieved the best health standards in the world not just Asia. Japan had already reached that status by the end of the 1960s, but is not discussed further here because it was already a developed country by the beginning of our reference period.

public sector (OECD average of 72%), while private financing accounts for the balance 42%. Public financing is mainly National Health Insurance (NHI) reimbursements to private providers while private financing mainly consists of OOP expenses. A small component is from private insurance and voluntary agencies.

The most significant feature of the health sector in Korea is the achievement of universal health coverage thorough compulsory social insurance (SI). SI started in Korea in 1977 with less than 9% population coverage. By 1989, the whole population had been covered except the poorest 4% of the population who are separately covered by the Medical Aid Program. SI coverage started with government employees, was then extended to cover the private organised sector, then small businesses and finally the self-employed. Initially insurance cover was being provided by some 370 separate insurance companies operating in different regions or sectors. In 2000 all these were integrated into a single National Health Insurance (NHI) system with uniform coverage for all participants (WHO 2009, 2015). The NHI is funded by contributions amounting to 5.08% of salary or income, the salary component being shared by employers and employees.

Private providers account for 90% of hospital beds, which had reached half a million by 2007 (WHO2009), with 6.8 acute care beds per 1000 population (OECD average 3.9). The number of health workers relative to population has also been growing rapidly. There is a disproportionate concentration of services in metropolitan and urban areas with a service deficit in rural areas. Inpatient care being the most expensive, with co-payments and exclusions requiring OOP, low income patients are deterred from seeking inpatient treatment, biasing the benefit incidence of the NHI in favour of the rich. Also, providers push for uncovered services, drugs and diagnostic tests, greatly pushing up costs and OOPs. This has resulted in rising inequality in access to health services, and hence inequality in mortality, morbidity and acute illness across occupational, educational and income classes (Khang et al., 2004, Khang & Lee, 2012). There has been some effort in recent years to address this challenge (WHO, 2012). Another serious challenge facing the Korean health system is its financial sustainability with an ageing population, their higher cost of care per individual, the rising share of chronic diseases that require more expensive treatment, and the shrinking proportion of contributors to the NHI (Mundle 1998, Gertler 1998).

A2.2 The Weak Performers: Afghanistan & Pakistan[35]

Afghanistan: Though considered a post-conflict society following the end of Taliban rule in 2001, the country is still a very violent place. The conduct of normal life and delivery of public services in this fraught environment is a great challenge. Despite this the civilian government has established with donor support a rudimentary system for delivery of basic health services as evidenced in successive policy documents (Ministry of Public Health 2012, 2015, 2016). A Basic Package of Health Services (BPHS) is being delivered across the country through NGOs and other contract service providers. Also, an

35) Afghanistan and Pakistan come out the lowest in terms of health and undernutrition indicators (Tables 3 & 4), but Cambodia, Myanmar and Lao PDR are not much better off. Of course these are the poorest countries of the region. However, Vietnam, Bangladesh and Nepal which are as poor or even poorer have fared better in health and nutrition outcomes.

Essential Package of Hospital Services (EPHS), is being provided through hospitals, mostly established with donor support and mainly located in Kabul. BPHS is supposedly covering 59% of the population, which implies that 40% of the population have no health cover. However, there is no robust evidence that BPHS is actually delivering health services even to the 59% (Strong, Wadi & Sundorp 2005). The quality of coverage is also very patchy with severe shortages of health workers and medicines, according to some assessments, and people have very little confidence in the health services being provided through BPHS and EPHS.

Provision of medical services are free as per the law. But in fact patients have to spend large sums on medication and various tests because the BPHS or EPHS facilities do not have the medicine or the required testing equipment. For treatment of serious ailments they have to sell their assets or borrow funds to travel to India or Pakistan. OOP household spending accounts for over 73% of total health expenditure, with donors accounting for another 21% and government and non-profits for the balance 6% (Qarani & Kanji 2015, Zeng et al., 2017). Because of the heavy burden of private OOP spending risk sharing options through universal health insurance have been actively explored. But stakeholders agree that it would be premature (Zeng et al., 2017). Social health insurance can lead to huge cost escalation if prematurely introduced (Gertler, 1998) and Afghanistan does not yet have the capacity to manage such a scheme. It would be better to focus on capacity building of health workers for strengthening BPHS and EPHS.

Pakistan: Pakistan has an elaborate 3-tier structure for delivery of public health services with Basic Health Units, Rural Health Centres and Tehsil Headquarters hospitals at the base, to District Headquarters hospitals and finally tertiary care hospitals in the main cities. However, public health service is weak, especially in rural areas. It is underfunded, not easily accessible, staffed by uncooperative personnel who provide poor service and service centres frequently do not have the required stocks of medicines. More over, following the decentralisation policy of 2001 and other frequent policy announcements, there is some confusion about overlapping jurisdictions (WHO 2007, Qarani & Kanji 2015). Hence, private healthcare providers have become dominant, accounting for about 75% of service provision (Nishtar et al., 2013).

In terms of financing, the government accounts for only 25% of total health spending in the country. The rest is all OOP private spending, of which 80% is estimated to be spent on drugs (WHO 2007). Drugs are very expensive though 80% of it is domestically produced by local manufacturers or multinational companies. The binding constraint for improving delivery of health care, apart from the high OOP burden, is the shortage of medical technicians and nurses. There is no sound training program to build a cadre of such medical workers. Instead, policy seems to be focused on producing more doctors and hospitals.

A2.3 The Largest Countries: China, India, Indonesia

China: Health standards in China are not as high as in the leading Asian countries, but it is the best among the rest. Delivery of health services has been buffeted by swings in health policy that reflected changes in the political economy of the country. Following

its rise to power in 1949, the postcolonial communist government established separate 3-tier health care systems for urban and rural China. In urban areas this included street clinics for primary health care, district hospitals for secondary care and city hospitals for tertiary care. This urban system was backed by a socialised financing system consisting of the Government Health Insurance Scheme (GHIS) and the Labour Health Insurance Scheme (LHIS) for current or retired government and state owned enterprise (SOE) workers, veterans, teachers and students. The government covered all costs, including insurance premiums, cost of services and drugs. Dependents of workers were also partly subsidised.

In rural areas, village clinics provided primary care, township hospitals provided secondary care and county hospitals were responsible for tertiary care. Rural communities had to provide for themselves through the Cooperative Medical System (CMS) The urban bias notwithstanding, the rural system was well functioning with appropriately trained staff at village, township and county levels. People were receiving care at primary, secondary and tertiary levels of care with an effective referral system. Pharmacies were also generally part of the 3-tier system. Modest user fees were charged for treatment and drugs. Gaps in recovery were covered by the concerned authority which was also responsible for preventive public healthcare in its jurisdiction including free immunisation. This well-functioning system accounted for the large improvements in health conditions till 1979 (Liu & Yi 2004).

This system was completely disrupted in the wake of market reforms post 1979. The private responsibility system in agriculture and government decentralisation left the village governments with no resources to support the CMS, the backbone of the rural healthcare system, which gradually collapsed. Decentralisation and privatisation also eroded the resources of less prosperous provincial governments and inefficient SOEs. With price deregulation, the cost of drugs soared while user fees were still controlled below costs, resulting in a financial crisis in urban hospitals. Hospitals began charging for some services and expensive drugs, while doctors started charging fees informally to supplement their incomes. Preventive public healthcare and free immunisation also collapsed, resulting in the reemergence of schistosomiasis and malaria. Catastrophic OOP spending soared, reversing gains in poverty reduction among patient households. There was rising inequality between the rich and poor provinces, between rural and urban areas within provinces, and between rich and poor households in both rural and urban areas. China's entire health care system was in dire crisis (Liu & Yi 2004, Zhang & Kanbur 2005, and Yip et al., 2012).

In April 2009, the government announced a new health reform program which marked a major reversal from the market oriented reforms pursued since 1980. But implementation weaknesses remain and the referral system is not working because of low public confidence in primary and tertiary care centres, causing unnecessary congestion in tertiary care hospitals. SI is now near universal, covering 92% of the population and with subsidised enrolment for poor provinces and families. However, the services and drugs covered is quite limited. With deductibles, copayments, reimbursement ceilings, etc., OOP spending still amounts to 50% of inpatient care and 60%-70% of outpatient care. Adulteration and corruption has also compromised the

drugs purchase bidding process and reform and rationalisation of a very complex public hospitals governance system is still work in progress. But the ongoing reforms are on the right track now and China's health standards have been improving again after the disruption of the early market reform period.

India: The improvement in health standards in India over the past fifty years is impressive (Table 3). Nutrition standards have also improved, but less compared to the improvements in health standards (Table 4). Underlying this mixed picture is a peculiar distortion in the financing of health expenditure. Total expenditure at 4.7% of GDP is close to the recommended WHO norm, but 80% of this is OOP spending by households. India has an elaborate 3-tier structure of health administration. But the system is severely underfunded and provides very poor quality of public and primary healthcare services, especially in rural areas. Also, medication is free in public hospitals but often not available and has to be purchased. Further, the referral system is dysfunctional, with overcrowding and long queues in secondary and tertiary care hospitals, with loss of daily earnings for many. Thus, patients get worse treatment without less cost in public sector hospitals (Banerjee et al., 2004). They prefer paid private service if they can afford it because private providers tend to over treat with unnecessary tests, expensive drugs, etc. but provide better treatment (Das et al., 2016).

Consequently there has been a burgeoning growth of private health services, with OOP spending accounting for 80% of total health expenditure. Drugs are the main component of OOP spending but there is a rapidly rising share of diagnostic tests. High OOP spending for treating catastrophic ailments is impoverishing families and there is increasing inequality in access to medical care between rich and poor patients (Gupta and Choudhury 2015, Selvaraj and Karan 2009, Berman P. et al., 2010). This is made worse by the subsidisation of inpatient care in public hospitals which is accessed more by rich rather than poor patients. The latter cannot afford the formal copayments, informal payments to medical staff and high cost of tests and drugs (Mahal et al., 2001).

Responding to the rising inequity in healthcare, the Government of India launched a National Rural Health Mission (NRHM) in 2005, which was later extended to urban areas as a comprehensive National Health Mission. Unfortunately, this has not succeeded in containing the increasing dependence on private health providers, the rising burden of OOP spending, and the consequent increasing inequality in access to health care. Some states have introduced public funded health insurance schemes and a very ambitious National Health Protection Scheme was announced in the 2017-18 budget for which details are still being worked out. Unfortunately, such schemes are designed to cover inpatient care when most of the OOP spending is on outpatient care (Selvaraj and Kanan 20012). Asia's experience is that such SI schemes lead to unsustainable cost escalation and rising inequality without much gain in actual service delivery when introduced at relatively low levels of per capita income (Mundle 1998, 2018b).

Indonesia: The country has registered very significant improvements in its health and nutrition indicators over the past few decades. Against these gains there is the challenge of a rising disease burden. Life style changes and greater longevity have resulted in the increasing incidence of chronic NCDs while the burden of CDs like tuberculosis are

still high. Indonesia's geography is another challenge. It is the world's largest archipelago of 17,504 islands scattered over a vast region, with a population of 261 million persons representing multiple linguistic, religious and ethnic groups. Administering such a country is very difficult, particularly so for managing an integrated system of healthcare delivery.

The country has a long history of combining public and private healthcare services. In the public sector, the *pusekamas* or local health centres are the vital base of a three tier public healthcare system consisting of federal, provincial and district services. The *pusekamas* provide primary care, preventive public health services such as immunisation and a referral system for recommending patients for higher level care. Alongside the public system there are 'for profit' private healthcare providers and 'not for profit' charitable institutions providing health services. Health workers from the public sector also run private health facilities outside their public duty hours (WHO, 2017).

Major change in the system was introduced by the decentralisation reforms of 2001 which gave the district authorities much more autonomy and transferred many administrative and financial responsibilities to them (Sparrow et al., 2017). Then in 2005 the federal government introduced the *Jamkesmas* SI program for the poorest 30% of the population. With *Jamkesmas* and the pre-existing insurance schemes for the formal sector about 55% of the population were now provided some health insurance cover, but about 45% of the population in the middle income quintiles had no insurance cover. So the district political leaders, more empowered with decentralisation, have initiated local '*Jamkheda*' health protection schemes. While the Jamkheda schemes seem to have increased access to outpatient care, their impact on inpatient care or financial protection was limited according to Sparrow et.al. Finally, in 2014 the federal government launched *Jaminan Kesehatan Nasional* (JKN) an integrated national health insurance scheme, subsuming the pre-existing schemes, which aims to accomplish universal SI by 2019.

While the reforms are mostly moving in the right direction, several challenges remain. First, the JKN is mainly directed at curative care while preventive and primary care provided by the *pusekamas* are the most effective to improve health outcomes (Berman and Sakai, 1993). Their benefit incidence is also the most egalitarian (Lonjouw et al., 2001). Further, service coverage under the JKN scheme is quite limited and OOP spending still accounts for 60% of total health expenditure (WHO, 2017). The large dependance on OOP spending inevitably leads to increasing inequality between more and less prosperous provinces, between rural and urban areas and between different socio-economic classes in access to healthcare. This is exacerbated by the remoteness of outlying islands. The referral system with the *pusekamas* as gatekeepers is not working effectively, resulting in overcrowding in secondary and tertiary care hospitals. Indonesia also has to cope with the migration of health workers, especially nurses, to other countries where they earn more. Finally, the JKN system does not have enough checks and balances against regulatory capture by private service providers, and the consequent escalation in costs.

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