

# Investment in South Asia's Human Capital: Ensuring the 2 Qs for a Demographic Dividend

*“Investing in people is investing in inclusive growth”*

World Bank (2018)

Anjali Taneja

Research Scholar pursuing her doctorate at Jawaharlal Nehru University (CSAS, SIS), Delhi, India

Corresponding author: eco84anj@gmail.com

## ABSTRACT

South Asia region is experiencing rapid demographic transition with growing population, rising inverse dependency ratios and improved human development indicators. While the growing reserve of youth population - termed as 'human capital' is a good indicator for economic progression, it has not been capitalized effectively in order to realize a qualitative demographic dividend. Neither has the region utilized its manpower in spearheading its growth and development. On the basis of emerging theoretical underpinnings, this paper aims to examine existing challenges and suggest measures for progressive development of human capital - qualitatively and quantitatively. It emphasizes enhanced investments in South Asia's young demographics and working age population to realise a favourable demographic dividend that in turn enables all round development of the region. The views are supported by current data and studies on the subject.

**Keywords:** demographic dividend, quality, quantity, education, health, human capital, human capital development, investment, skills development, South Asia

Human capital is a significant contributor to the wealth of nations. According to World Bank (2018), human capital measured as the earnings over a person's lifetime, accounts for two-thirds of global wealth. In high income economies, this form of capital accounts for nearly 70 per cent of the total wealth. Therefore, its development is vital for industrialization and modernization of economies worldwide.

New growth theories confirm that accumulation of 'skilled' human capital helps to promote economic growth in the long run (Lucas (1988), Romer (1990), Benhabib and Spiegel (1994)). Lately, international institutions have also reinforced the growing contributions of knowledge driven human capital in economic contributions. According to World Economic Forum (2017), human capital can be interpreted as the knowledge and skills that people

possess and which enables them to create value in the global economic system.

In the context of South Asia, latest statistics reinforces the growing contributions of human capital in socio-economic development and growth of the region. While at the global level, according to World Bank (2018), human capital (measured as the value of earnings over a person's lifetime) accounts for two - thirds of the total wealth, this form of capital has accounted for nearly 51 per cent of the total wealth in South Asia - the highest proportion, followed by produced and natural capital at 26 per cent and 25 per cent, respectively. According to ADB (2017), the estimates of growth accounting between 1981 and 2010 suggest that human capital contributed directly as a productive input of nearly 22 per cent of annual growth in GDP per capita per

worker in India, around 21 per cent in Bangladesh and 16 per cent in Sri Lanka. It can be implied then that this form of capital has the potential to play an extremely important role in shaping the region's economic development in future.

Infact, South Asia has also witnessed the highest rate of growth in human capital per capita globally, at 4 per cent between 1995 and 2014. It is also projected that this region's share of working - age will continue to rise until 2040, it is expected to have more working - age people than any other sub-region in the world, and that the majority surge would be contributed by India (UNDP, 2017).

Therefore, the demographic transition of the region has created a favourable demographic window of opportunity in the region, which has not been capitalized effectively. As Bloom (2011) rightly pointed that changes in the age structure of the population or rising proportions of working age population create a potential for faster economic growth - a phenomenon referred to as the demographic dividend. In the context of South Asia, there has emerged a gradual need to not only enhance the quantitative share of human capital, but also improve its quality (the 2 Qs as it may be referred to - 'quality' and 'quantity') through education, skills development and improved standard of living.

This paper shall examine and explore the possibility of expanding quantitative as well as the qualitative investments in South Asia's human capital so as to utilize its emerging potential and realise a sizeable demographic dividend from its development and advancement.

### **Investment in Human Capital: Literature Review**

The idea of human capital as an embodiment of knowledge and skills was first advocated by Theodore W. Schultz in his theory of human capital. Schultz (1961) argued that the rise in national output in the western countries was a result of the 'deliberate investment' in human capital, which in turn also led to the rise of the earnings of the work force. The investment input was particularly considered in the form of education, generation of knowledge, skills development and improvement in the standard of living.

While there have been some early critics of education (such as Arrow (1973), Wiles (1974), Stiglitz (1975)) as an instrument of enhancing economic performance of a country<sup>1</sup>; literature on this subject has largely established a positive role of skills development and training in the development of human capital and its impact on growth and development (Barro (1991), Mankiw *et al.* (1992), Bloom and Williamson (1998), Krueger and Lindahl (2001), Barro and Sala-i-Martin (2004), Temple and Woessmann (2006), Hanushek and Woessman (2008a) and (2008b), Bloom (2011) and Dutz and O'Connell (2013)).

New growth theories have also promoted the idea of 'skilled' human capital<sup>2</sup> contributing to economic growth over the long run (Lucas (1988), Romer (1990), Benhabib and Spiegel (1994) Hanushek *et al.* (2015)). Lucas (1988), for instance, in his model has underlined the positive externalities emerging out of the accumulation of human capital viz. knowledge. He has reinforced the fact that 'educated and skilled' human capital contributes towards increasing total factor productivity and labour earnings. It also increases labor force's capacity to absorb and adapt existing technologies; thereby, improving the ability of a country to innovate, improve productivity and develop new technologies, products and processes which in turn drives economic growth. (Klenow and Rodriguez-Clares (1997), Borensztein *et al.* (1998), Bosworth and Collins (2003)).

Borensztein *et al.* (1998) argue that the stock of human capital is interlinked with inflows of foreign direct investment (FDI) and contributes to technology growth in developing countries. Their study concludes that FDI contributes significantly to growth in productivity when the economy satisfies a minimum threshold stock of educated workers.

A growing body of literature has also established the positive impact of education and knowledge on the development of technology driven sectors. For instance, Lee (2001) found out that the stock of human capital that possesses higher levels of education and training, especially in the developing countries helps in the development of Information and Communication Technology (ICT).

Some of the country case studies confirm such findings. Collins (2007) proved that the growth in output per worker was nearly 2.4 per cent in South Asian economies (Bangladesh, India and

Sri Lanka) over the time period 1960 - 2003. Off this output, education has accounted for over 0.3 percentage points in India and Sri Lanka and 0.2 percentage points in Bangladesh. It has been noted that the increase in educational attainment of about 0.3 percentage points per year can make sizable differences in the living standards. According to ADB (2017), such an increase could lead to about a 10 per cent rise in GDP per worker or a per capita income of about 10 per cent after a generation as well as the growth in total factor productivity (TFP).

In Sri Lanka, Dutz and O'Connell (2013) concluded that workforce's skills had a strong positive relationship with productivity and innovation within and across companies. They found out that output per 'trained' worker was three times higher within a cluster of firms than otherwise.

Empirical estimates (of cross country data from 1970 to 2007) undertaken by Park (2012) confirm that a 1 year increase in average years of schooling leads to an increase in growth in total factor productivity by about 0.3 percentage points per year. According to ADB (2017), in order to promote technological progress, quantity and quality of education must be improved and investments in technology imports and innovation should be encouraged.

Konings and Vanormelingen (2015) empirically deduced that the marginal product of a trained worker in Belgium was on an average 23 per cent higher than that of an untrained, across various firms.

Fleisher *et al.* (2010) observed that the regional growth patterns in People's Republic of China were related to regional differences in human capital, among other things. They found out that human capital positively impacts output and growth in productivity across provinces through direct and indirect process. Direct process being innovation activities undertaken within the country and indirect process could be the spillover impact on total factor productivity. Moreover, they also found out that while investment in infrastructure generates higher returns in developed regions, human capital investment contributes in significant returns especially in the less developed regions.

Similarly, studies reveal that evaluation indicators on education and skills development such as international test scores and assessments<sup>3</sup> could play

an instrumental role in growth and development (Hanushek and Kimko (2000), Hanushek and Woessman (2008), and Hanushek and Woessman, (2012)). For instance, empirical estimates undertaken by Hanushek and Kimko (2000) reveal that a 1 standard deviation increase in student's test scores on international assessments of literacy and mathematics is associated with a 2 per cent increase in annual growth of GDP per capita.

In a study conducted by ADB (2017) using PIAAC data for the Republic of Korea, it was inferred that schooling and on-the-job training are primary factors of labour productivity and wages earnings. According to ADB, on top of formal schooling, on-the-job training and prior work experience improves skills of workers entering the labor markets. Point estimates conducted by the multilateral institution concluded that 1-year experience has the direct effect on skills of work force of nearly 5-10 per cent which is equivalent to the impact of 1 year's formal schooling.

The latest report of Bill and Melinda Gates Foundation (2018) has reiterated the need for investment in health and education for human capital development. It reinforces investment in human capital as a significant contributor to growth in per capita GDP between countries. Infact, human capital has been defined in the report as the sum total of the health, knowledge and skills of the population.

Fleisher *et al.* (2010) observed that the regional growth patterns in People's Republic of China were related to regional differences in human capital, among other things. They found out that human capital positively impacts output and growth in productivity across provinces through direct and indirect process. Direct process being innovation activities undertaken within the country and indirect process could be the spillover impact on total factor productivity. Moreover, they also found out that while investment in infrastructure generates higher returns in developed regions, human capital investment contributes in significant returns especially in the less developed regions. Investment in human capital can also have a significant impact on multidimensional poverty reduction, especially in the developing countries. In South Asian countries, for instance, it has been witnessed that the growth in labor income in

Bangladesh during the period 2000-2010 and Nepal (during 1996-2003) for instance, accounted for over half of the reduction in their respective levels of poverty. In Sri Lanka, during the period 2002-2009, human capital investment led to over two-fifths reduction in the country's poverty levels (ADB, 2017). Therefore, an extensive body of literature has emphasized over the need for qualitative investment in human capital as a vital ingredient for economic growth and development.

### **Missing Quality Links in Human Capital Development**

South Asia's demographic transition has been vital in its transformation and development. A comparison of human development indicators over the years, indicate South Asia has fared well on some of the parameters significantly. For instance, Life Expectancy at Birth (LEB) - a measure of the health component of human capital has improved from 65 years in 2010 to nearly 70 years by 2017. Similarly, Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS) have also been rising consistently from 4.6 years and 10 years (in 2010) to 6.4 years and nearly 12 years (in 2017), respectively.

At the global level, HDI values have been rising for all regions and human development groups. Interestingly, South Asia was the fastest growing region over the period 1990-2017. It has been reported that the growth in HDI value has been a little over 45 per cent - registering the highest growth over the period - followed by East Asia and the Pacific (at 41.8 per cent) and Sub-Saharan Africa (at 34.9 per cent). However, South Asia does not portray an impressive picture when it comes to qualitative indicators such as Inequality - adjusted HDI (IHDI)<sup>4</sup>, Gender Development Index (GDI)<sup>5</sup>, Gender Inequality Index (GII)<sup>6</sup> or Multidimensional Poverty Index (MPI)<sup>7</sup>.

A comparison of the various composite indices (values) from South Asia *viz-a-viz* other global regions is given in Table 1.

As reflected in the table, South Asia region has not fared quite well on various qualitative indices of human development. For instance, while the region has displayed impressive improvement in the HDI values over the period 1990 to 2017, it has

a lower value, when adjusted for inequality. Infact, off the various indicators of IHDI, inequality in life expectancy (at 21.4 per cent) and inequality in education (at 37.7 per cent) are among the highest in the region *viz-a-viz* globally.

Moreover, the gender disparities in the South Asia region are miserably large. Sadly, among the developing regions, gender gap is the widest in South Asia (16.3 per cent - UNDP, 2018). As a result, GDI value is the lowest in the region in comparison to other global regions. Women empowerment (empowerment barriers belong to health and family planning, violence against girls and women and socio-economic empowerment) - which is a critical aspect of gender equality is lacking in the region. As a result, the GII value is among the highest in South Asia.

Similarly, while instances of multidimensional poverty are prevailing in all developing regions of the world, they are particularly acute in South Asia besides Sub Saharan Africa. Nearly 41 per cent of the world's poor live in the South Asia region, 39 per cent of them being children which are considered as multidimensionally poor (OPHI, 2018).

Literature has emphasized over the increasingly important role played by education, skills development and training in ensuring human capital development. According to ADB (2017), raising the quality of education and skills in its workforce can play a critical role in catching up to the level of human and economic development of the People's Republic of China, the Republic of Korea, and more successful Southeast Asian economies.

In case of South Asia, quality of human capital development has not been given the due attention it deserves. Table 2 captures South Asia's relevant quality indicators on human development *viz-a-viz* other global regions.

As can be observed from the table, South Asia reflects a dismal picture on various input and output indicators measuring quality of human development. For instance, quality of health measured by access to physicians and hospital beds - both are lowest in the region in comparison to other global regions. As a result, the lost health expectancy is the highest for the region. So, though life expectancy at birth (which is a reflection of quantity of development in

**Table 1:** Human Development Indices of South Asia vis-a-vis other Global Regions

Regions/ Countries	HDI Value			Inequality -adjusted HDI value	GDI value	GII value	MPI value
	1990	2000	2017	2017	2017	2017	2017
Arab States	0.557	0.613	0.675	0.523	0.855	0.531	0.098
East Asia & Pacific	0.517	0.597	0.692	0.619	0.957	0.312	0.025
Europe & Central Asia	0.653	0.668	0.733	0.681	0.956	0.270	0.009
Latin America & Caribbean	0.626	0.686	0.731	0.593	0.977	0.386	0.042
South Asia	0.439	0.503	0.584	0.471	0.837	0.515	0.143
Sub-Saharan Arica	0.398	0.421	0.498	0.372	0.893	0.569	0.317

Source: UNDP and OPHI (2018).

**Table 2:** Quality of Human Development in South Asia viz-a-viz Other Regions (indicators)

Regions	Quality of health			Quality of education		Quality of standard of living			
	Lost health expectancy <sup>1</sup>	Physicians	Hospital beds	Pupil-teacher ratio, primary school	Primary school teachers trained to teach	Vulnerable employment	Rural population with access to electricity	Population using improved drinking-water sources	Population using improved sanitation facilities
	(%)	(per 10,000 people)	(pupils per teacher)	(%)	(% of total emp.)	(%)	(%)	(%)	(%)
	2016	2007-2017	2007-2014	2012-2017	2009-2017	2017	2016	2015	2015
Arab States	13.6	13.5	12	20	89	26.3	78.9	87.1	81.2
East Asia and the Pacific	10.5	27.5	31	17	n.a.	37.9	94.0	93.5	74.6
Europe and Central Asia	12.0	24.7	51	18	n.a.	26.8	100.0	95.0	95.8
Latin America and the Caribbean	11.6	20.4	20	22	n.a.	32.3	90.5	96.2	85.6
South Asia	13.7	7.8	8	35	71	72.1	79.8	88.4	48.3
Sub-Saharan Africa	12.0	1.9	15	39	79	72.2	23.2	57.7	28.1

Source: UNDP (2018).

human capital) might have improved for the region as whole over the years, quality of health needs significant improvement in South Asia.

Similarly, as far as education and skills development is concerned, the quality of human capital development in South Asia is not quite satisfactory. Education and skills remain the binding constraint in South Asia (ADB (2017)). While, the region has made significant improvements in literacy levels, mean years of schooling and expected years of schooling over the years, the countries in the region need to ensure that the quality of schooling is up to the mark. The time spent by a student in school should necessarily translates into improved capabilities and greater skills.

Taking a specific case of school completion rates. Many students who enroll in schools drop out for one reason or the other. Figures reveal that the survival ratio of students in schools in South Asian countries is poor. For instance, Sabharwal (2013) has reported India's case that 7 in every 20 students who started school did not reach grade 10. Moreover, off the 26 million who took grade 10 exist examinations, nearly 10 million failed to clear them. Additionally, half of the 16 million who took the grade 12 examination, did not pass. Only 5 of the 8 million who successfully cleared grade 12 examinations were able to enroll for tertiary education. Similarly, in Bangladesh, only 66 out of 100 students survived to the last grade of primary education. (ADB, 2017).

Moreover, the schooling infrastructure is scarce. For instance, there are almost three times more primary school pupils per teacher in South Asia than in East Asia and Pacific and Europe and Central Asia (35 versus 17 and 18 respectively). Off the developing regions, South Asia has the lowest percentage of trained teachers averaging at 71 per cent, compared to Sub-Saharan Africa and the Arab world. This reflects the paucity in the percentage of teachers available for providing education and training services.

Bhagwati and Paragariya (2013) have also underlined the poor quality of education across various levels as hindrance to the long-term growth process of the South Asian countries. While the availability of competitive labor is an advantage for any country, the quality of education and training especially at higher level of education is vital for economies which are moving up the value chain and striving to generate sophisticated high - end products and services. Besides the lack of suitable infrastructure, the teachers employed for rendering education and training services are not suitably qualified to teach, particularly in rural areas. Reasons for such a dismal picture range from non-existence of a regulatory mechanism to oversee the entire recruitment process, lack of adequate facilities for training of the trainers and teachers, missing quantitative incentives (such as compensatory advantages) to enable best practices in teaching and lack of supervision and scrutiny over the teaching performance of trainers and teachers.

Public investments in education have also been exorbitantly low in the region. During the period 2000 to 2009, the share of education in total government expenditure declined by at least 1.5 percentage points in Nepal and 5 percentage points in India (ADB (2017)). In fact the share of government expenditures on education and health in India and Bangladesh, as a percentage of GDP, have been hovering between 2 to 4 per cent since 1991 (World Bank (2018)).

While the instances of unemployment have reduced in the region with rising levels of economic growth and gradual generation of employment opportunities, the wage structure of the workforce is poor and levels of working poverty are rampant in the region. For instance, in the background of the fact that agriculture sector continues to remain

the largest employer among the three broad sectors – agriculture, industry, and services in most of South Asia, it is observed that a huge proportion of work-force is engaged in low-skilled jobs and earning low wages.

As a result, it is not surprising the at 24 per cent of the working population in South Asia earns less than \$1.25 per day. Nearly 61 per cent earns less than \$2 a day. In countries like Afghanistan, Bangladesh, Nepal, and Pakistan, over 80 per cent of the working people earn less than \$4 daily. While the size of middle class earning between \$4 and \$13 a day is rising in India, Bhutan, Maldives and Sri Lanka, it is still small in other parts of the region (UNDP, 2016).

Moreover, instances of vulnerable employment (as a percentage of total employment)<sup>8</sup>, though have reduced in the region (from nearly 80 per cent in 1991 to 73 per cent in 2017), they still continue to be among the highest in South Asia, compared to other regions globally. Moreover, estimates suggest that 72 per cent of workers in South Asia, 46 per cent in South-East Asia and the Pacific and 31 per cent in East Asia are expected to have vulnerable employment by 2019 (ILO (2018)). One of the primary causes of such high levels of vulnerability is the prevalence of a large informal sector in the region.

Therefore, rendering qualitative education and skills development services still remain a challenge. Addressing these challenges in South Asia can have widespread positive spillovers in terms of regional productivity and growth.

### **Shaping the Future**

The age structure transition in South Asia has created a ‘window of opportunity’ for realizing potential demographic dividend. Naveenatham and Dharmalingam (2012) have emphasized the three ways to reap such dividends, namely by (i) making the available labor force productively employed to raise Gross Domestic Product (GDP); (ii) directing accumulated wealth and savings of households into productive investments as a result of the decline in fertility ratios, and (iii) generating high-quality human capital by greater public spending on education and health. Taking a clue from such theoretical underpinnings, it is imperative that the South Asian region takes adequate measures

for enhancing investments in its emerging human capital by diverting resources towards improving the quality of human capital rather quantity, more clearly termed as the 'quantity-quality trade-offs'.

The first step towards realizing a demographic dividend is to ensure that the economic growth in the region is able to create skill-oriented jobs. For instance, considering the agrarian set-up of the South Asian economies, agriculture sector still absorbs nearly half of the labor force in the region. Therefore, it is imperative to reach out to the bottom of the pyramid and establish skills development linkages at the grass-roots level.

One way could be to encourage farmers to participate in self-employment activities and projects-based learning and the children could be motivated to educate themselves through distance learning program with the help of ICT. In this context, useful lessons could be drawn from skills development initiatives undertaken in some of the Southeast Asian agrarian economies such as Thailand (through Agriculture Education for Life Program) and Cambodia (through Giving Online Access to Learning – GOAL).

At the same time, there is a need to improve the quality of skills development systems to meet the standards of industry and job market. This not only requires a market demand-oriented training system but also appropriate synergies between the academia and industry. According to ADB (2017), encouraging greater partnership between educators and employers to facilitate joint development of curriculum standards, internships, workforce exchange as well as financing, is a promising way toward narrowing the gap between supply and demand for skills.

Moreover, the internship programs of the employers can be integrated with the curriculum followed at secondary and tertiary levels of education to enable greater number of youth graduating with employable skills. On-the-job competency based training and vocational qualification frameworks are useful instruments to establish appropriate quality standards in the workplace.

Lessons can be drawn from developed countries across the globe such as Germany and the United Kingdom, where education and training has improved the quality and quantity of youth

employment particularly. For instance, Germany has introduced a 'Skills Initiative' to bring together German businesses and education and training providing institutions of the country, with the aim of developing training programs best suited to businesses' needs. There is an active involvement of employers in the education process of the country by running Experiential Learning Courses (ELC) for the youth which involve a mix of classroom and practical learnings. Such initiatives ensure that the trainings of youth and labor force are highly attuned to the needs of the job market. Moreover, the youth are encouraged to participate in such programs by offering them incentives in the form of education scholarships, monthly stipend, etc.

Such a model could be considered as a useful benchmark to boost the quality of training and skills development systems in South Asia so as to mitigate the demand - supply skills mismatches. Simultaneously, the South Asian countries could explore joint partnerships with such developed countries in specialized projects to enable technology transfer in the field. For instance, India has signed Memorandums of Understanding (MoUs) with various stakeholder agencies from the government, industry and civil society of the developed countries such as the UK, Germany, Australia, etc. to partner and adapt their best practices in skills development – skills training, training of the trainers, and establishment of centers of excellence across the country.

The delivery of good quality education and training also requires upgrading of infrastructure and facilities to improve learning outcomes in South Asia. According to ADB (2017), this region needs a transparent standard of recruitment and deployment of well-trained and qualified teachers who are able to help students develop cognitive and non-cognitive competencies. Simultaneously, periodic evaluation of the teachers' teaching capacity and students' performance could help promote accountability and devise mechanisms to overcome the shortcomings.

In this respect, international assessment mechanisms introduced by OECD could be useful means to evaluate the progress of students and teachers. Teaching and Learning International Survey (TALIS) for instance, regularly assesses teachers' effectiveness in contributing towards education

and skills development. Similarly, Trends in International Mathematics and Science Study (TIMSS) - is a global assessment test to evaluate the knowledge of students in the fields of Mathematics and Science. While India has been participating in such international assessment tests, other South Asia countries have not been taking part in such global evaluation systems. Therefore, investment in teachers' continuous professional development, periodic assessment of their capacity and student performance could help address the quality challenge.

All such efforts towards developing a skilled human capital resource in South Asia require an enabling policy framework and regular streams of funding. On one hand, the governments of South Asian countries should strengthen their role and capacity for regulation, they should also actively encourage private sector participation in skills development in the region. Within a favourable regulatory environment, private training providers may be allowed to set their own fee levels and fields of concentration (ADB, 2017). Where private solutions are unviable to implement, governments and NGOs should cover up for the missing by encouraging public private partnerships in skills and training.

Parallely, the social spending on education and health could be effectively managed in the region and strategic investments in such sectors should be encouraged, for instance, by reallocating funds from one stream of projects to another depending upon the requirement and stage of development. In the mid-1960s, the Government of the Republic of Korea invested funds in higher education and skills development, which were released due to falling school enrolment rates (on account of country's declining birth rate), in order to equip the growing working-age population with marketable skills.

Apart from reallocation of the existing resources, public and the private sectors should be encouraged to leverage their own resources for greater financing and implementing cost-sharing mechanisms to support higher education and training. Affordable and effective mechanisms for financing quality improvements, such as competitive financing, training vouchers, a training fund and training levies, are essential for upgrading and expanding training and skills development (ADB, 2017).

It is imperative that the countries of South Asia should formulate suitable regulatory mechanisms governing mandatory implementation of skills development programs, as followed in some of the East Asian countries. For instance in People's Republic of China, vocational education forms an integral part of the educational programs of China which mandates, through the Education Law (1986), nine years of compulsory education including three years of vocational training. The law underlines the roles and responsibilities of the local government, industry/private participation and the vocational training institutes offering skill development programs in the country. Similarly, Republic of Korea also has in place a specialised Vocational Training Law.

It is interesting to note that India has, off late, started exploring the possibility of formulating such a law. Other South Asian countries can follow on similar lines.

Finally, the policy makers of South Asia should also implement sound national policies which are directed towards ensuring reverse brain drain. According to UNDP (2017), one of the ways to prevent brain drain is for countries in the region to diversify their economies through cultivation of new domestic businesses which involve local skills. For instance, the regional countries could explore the possibility of leveraging local skills through deepening of sector specific value chains. Such coordinated networks do not necessitate the need to produce finished goods to promote foreign trade value and volumes. Instead, production of intermediate goods or semi-finished goods or parts are encouraged in some countries for assembly into complete products in others. In this regard, leveraging local expertise based on domestic labor market skills and available technology could further deepen production networks regionally within South Asia and with the global world.

## CONCLUSION

The demographic transition in South Asia over the last decade has finally brought policy options to crossroads. It is remarkable that region has witnessed rapid human capital development - such as the rapid fall in infant mortality rates, improving total fertility rate, growing life expectancies at birth, increasing working age population and thereby

rising inverse dependency ratios. It can be infact be easily subsumed that demographics of the region is building up a sizeable proportion of human capital that is contributing significantly to South Asia's wealth.

As Harbison (1973) once pointed that, "Human resources constitute the ultimate basis for the wealth of nations. Capital and natural resources are passive factors of production; human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organization, and carry forward national development. Clearly, a country which is unable to develop the skills and knowledge of its people and utilize them effectively in the national economy will be unable to develop anything else".

South Asia's capability to maximize a demographic dividend would largely depend on its ability to cultivate and develop the skills of its emerging human resource in order to mitigate the demand and supply mismatches of the job market, ensure well being of its youth and invest actively in the provision of qualitative skill development initiatives. Bloom (2011) in their study argue that existing skills levels are far from adequate in South Asia. "If the governments are to capitalize on the high share of working-age people in the population, they will have to ensure that those people are healthy, well educated, and well trained in the skills demanded by the labour market". Furthermore, they add, " the demographic dividend has not been enjoyed to an appreciable extent, because it has been choked off by a non-enabling policy environment". Therefore a suitable policy framework combined with various institutional mechanisms should be developed to enable the realization of a qualitative human capital dividend in the region.

All this requires bold commitments and active coordination among all relevant stakeholders from governments, businesses, civil society and non-government institutions in South Asia. Effective and appropriate engagement of media in the region would play an equally vital role in promotion and dissemination of regional policies and institutional practices governing human capital development. At the same time it will help in reducing the existing trust deficit among the countries of the region.

In a nutshell, the need of the hour is the expansion,

investment and upgrading of South Asia's human capital so as to ensure that the region is able to generate a sizeable demographic dividend, that ensures the growth in employment, productivity and incomes of its people. After-all, if we want a better region - one that is integrated, equitable, flourishing and stable, where the potential of human capital is fulfilled - South Asia needs to start investing effectively in its people.

## ENDNOTES

<sup>1</sup>Arrow (1973), for instance, argued that education - especially higher education - has no inherent social and cognitive value; it rather serves as a screening device in that it sorts out individuals with differing abilities and that professional schools impart real skills valued in the market.

<sup>2</sup>In one such study Hanushek *et al.* (2015) inferred from their analysis that cognitive skills have a strong positive impact on the earnings of an individual.

<sup>3</sup>Such as the Third International Mathematics and Science Study and the Programme for International Student Assessment (PISA), International Adult Literacy Survey (IALS), the Adult Literacy and Life Skills Survey, Programme for the International Assessment of Adult Competencies (PIAAC).

<sup>4</sup>IHDI has been defined by the UNDP as the HDI value adjusted for inequalities in the three basic dimensions of human development - longevity, education and income per capita. In other words, it measures HDI according to the extent of inequality. The IHDI value can be interpreted as the level of human development accounted for the inequality.

<sup>5</sup>GDI measures disparities on the HDI by gender. The closer the ratio is to 1, the smaller the gap between women and men.

<sup>6</sup>GII measures gender inequality using three dimensions: reproductive health, empowerment and the labour market. A low value of GII indicates low level of inequality between women and men, and vice-versa.

<sup>7</sup>MPI measures the extent of deprivations that people in developing countries face in their health, education and living standards.

<sup>8</sup>Percentage of employed people engaged as unpaid family workers and own account workers. In other words, those employed people that have a lower likelihood of having formal work arrangements.

## REFERENCES

- Arrow, K. 1973. "Higher Education as a Filter", *Journal of Public Economics*, 2: 193-216
- Asian Development Bank 2017. *Human Capital Development in South Asia: Achievements, Prospects, and Policy*

- Challenges, <https://www.adb.org/sites/default/files/publication/385696/hcd-sa.pdf>
- Benhabib, J. and Spiegel, M. 1992. *The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country and Regional U.S. Data*, Starr Center for Applied Economics, Working Paper N 9224.
- Bhagwati, J. and Panagariya, A. 2013. *Why Growth Matters: How Economic Growth in India Reduced Poverty and the Lessons for Other Developing Countries*. New York: Public Affairs.
- Bill and Melinda Gates Foundation 2018. "Goalkeepers: The Stories Behind the Data 2018", <https://www.gatesfoundation.org/goalkeepers/report>
- Bloom, D.E. 2011. *Population Dynamics of India and Implications for Economic Growth*, Harvard Institute for Global Health, Program on the Global Demography of Aging, Working Paper No.65.
- Bloom, D.E. 2011. *Demographic Change and Economic Growth in South Asia*, Harvard School of Public Health, PGDA Working Paper No.67.
- Bloom, D.E and Williamson, J. 1998. "Demographic Transitions and Economic Miracles in Emerging Asia", *World Bank Economic Review*, **12**(3): 419–455.
- Borensztein, E.J. et al. (1998), "How Does Foreign Direct Investment Affect Economic Growth?", *Journal of International Economics*, **45**(1): 115–135.
- Bosworth, B. and Collins, S.M. 2003. "The Empirics of Growth: An Update", *Brookings Papers on Economic Activity*, No. 2 (2003), pp.113–206.
- Collins, S.M. 2007. "Economic Growth in South Asia: A Growth Accounting Perspective". In A. Ahmed and E. Ghani, eds. *South Asia: Growth and Regional Integration*, Washington, DC: World Bank.
- Dutz, M. and O'Connell, S. 2013. "Productivity, Innovation and Growth in Sri Lanka: An Empirical Investigation", *World Bank Policy Research Working Paper*. No. 6354.
- Enterprise Surveys, World Bank 2015. - <http://www.enterprisesurveys.org/data/exploretopics/workforce#--7>
- Fleisher, B. et al. 2010. "Human Capital, Economic Growth, and Regional Inequality in China", *Journal of Development Economics*, **92**(2): 215–31.
- Hanushek, Eric A. and Woessmann, L. 2012a. "Do better schools lead to more growth? Cognitive Skills, Economic Outcomes, and Causation", *Journal of Economic Growth*, **17**: 267–321.
- Hanushek, E.A. and Woessmann, L. 2007. "The Role of Education Quality for Economic Growth", *World Bank Policy Research Working Paper*. No. 4122. Washington, DC: World Bank.
- Hanushek, E.A. and Woessmann, L. 2008a. "Assessing National Achievement Levels in Education", *National Assessments of Educational Attainment*, Vol. 1., Washington, DC: World Bank.
- Hanushek, E.A. and Woessmann, L. 2008b. "The Role of Cognitive Skills in Economic Development", *Journal of Economic Literature*, **46**(3): 607–668.
- Hanushek, E. and Kimko, D. 2000. "Schooling, Labour-Force Quality and the Growth of Nations", *The American Economic Review*, **90**(5): 1184-1208.
- Hanushek, E.A. et al. 2015. "Returns to Skills around the World: Evidence from PIAAC". *European Economic Review*, **73**: 103–130.
- Harbison, F. 1973. *Human Resources as the Wealth of Nations*, Oxford University Press, New York.
- International Labour Organisation 2018. *The World Employment and Social Outlook*, [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---/.../wcms\\_615594.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---/.../wcms_615594.pdf)
- Klenow, P.J. and Rodriguez-Clare, A. 1997. "Economic Growth: A Review Essay", *Journal of Monetary Economics*. **40**(3): 597–617.
- Konings, J. and Vanormelingen, S. 2015. "The Impact of Training on Productivity and Wages: Firm level Evidence.", *Review of Economics and Statistics*, **97**(2): 485–497.
- Lange, G. et al. 2018. *The Changing Wealth of Nations 2018: Building a Sustainable Future*, International Bank for Reconstruction, World Bank Group, <http://documents.worldbank.org/curated/en/727941517825869310/pdf/123137-Replacement-PUBLIC.pdf>
- Lee, 2001. "Education for Technology Readiness: Prospects for Developing Countries", *Journal of Human Development and Capabilities*, **2**(1): 115–51.
- Lucas, R. 1988. "On the Mechanics of Economic Development", *Journal of Monetary Economics*, **22**: 3-42.
- Mankiw, G. et al. 1990. *A Contribution to the Empirics of Economic Growth*, Bureau of Economic Research, Working Paper Series, Working Paper N 3541.
- Navaneetham, K. and Dharmalingam, A. 2012. "A Review of Age Structural Transition and Demographic Dividend in South Asia: Opportunities and Challenges", *Journal of Population Ageing*, **5**: 281-298.
- Oxford Poverty and Human Development Initiative 2018. "Global Multidimensional Poverty Index 2018", <https://ophi.org.uk/multidimensional-poverty-index/global-mpi-2018/>
- Park, J. 2012. "Total Factor Productivity Growth for 12 Asian Economies: The Past and the Future", *Japan and the World Economy*, **24**(2): 114–27.
- Romer, P. 1986. "Growth Based on Increasing Returns Due to Specialization", *Journal of Political Economy*, **77**: 1002–37.
- Romer, P. 1990. "Endogenous Technological Change", *The Journal of Political Economy*, **98**(5): S71-S102.
- Sabharwal, M. 2013. "Education, Employability, Employment, and Entrepreneurship: Meeting the Challenge of the 4Es". In R. Maclean, S. Jagannathan, and J. Sarvi, eds. *Skills Development for Inclusive and Sustainable Growth in Developing Asia-Pacific*. New York: Springer.
- Schultz, T.W. 1961. "Investment in Human Capital", *The American Economic Review*, **51**(1): 1-17.
- Arrow, K. 1973. 'Higher education as a filter', *Journal of Public Economics*, **2**: 193-216.

Stiglitz, J.E. 1975. "The Theory of Screening Education and the Distribution of Income", *American Economic Review*, **65**: 283-300.

United Nations Development Programme 2018. Human Development Indices and Indicators: A Statistical Update, *Human Development Report*, <http://hdr.undp.org/en/2018-update>

United Nations Development Programme 2016. "How Changing Demographics can Power Human Development", *Asia Pacific Human Development Report*, <http://hdr.undp.org/sites/default/files/rhdr2016-full-report-final-version1.pdf>

Wiles, P. 1974. "The Correlation between Education and Earnings: The External – test – not- Content Hypothesis", *Higher Education*, **3**: 43-58.

World Bank 2018. *Data Bank*, <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

World Bank 2018. *DataBank*, <http://databank.worldbank.org/data/reports.aspx?source=education-statistics--all-indicators>

World Bank 2012. *More and Better Jobs in South Asia*, <http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1296680097256/7707437-1316565221185/Joboverview.pdf>

