

Maulana Azad Memorial Lecture

on

**Inter-Generational and Inter-Regional Differentials
in Higher Level of Education in India**

by

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Inter-Generational and Inter-Regional Differentials in Higher Level of Education in India*

Abusaleh Shariff#

Abstract

I am privileged to deliver the 12th Maulana Abul Kalam Azad Memorial Lecture today on 11 November 2021, which is also his 133rd birth anniversary. He has been an epitome of Freedom (Azad) while being a Maulana. True to his name he was a Free Maulana, free from religious romanticism and symbolism, and at the helm of perfect nationalism. Azad, one of the closest confidants of Mahatma Gandhi, organised the Dharasana Satyagraha in 1931, and he believed in the cause of Hindu-Muslim unity while espousing secularism and diversity. In 1956, he presided the 1956 UNESCO General Conference held in Delhi. He catalysed the vision of Pandit Jawaharlal Nehru of 'building modern temples of India' – the largest and apex level educational institutions such as the IIT

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US-India Policy Institute, Washington D. C., Centre for Research and Debates in Development Policy, New Delhi and Bengaluru.

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(Kharagpur) and many universities. It is important to contemplate on many facts of History linked with the ideas and philosophy of Azad which has high relevance and impactful to the formative maturity of democracy in India.

On this solemn occasion I wish to dedicate my analysis and thoughts on 'inter-generational resource transfers,' as reflected by empirical measures of differentials in higher levels of education between the young and the older generation. Data from the National Sample Survey (71st round) of the Government of India are utilised to assess the prospects of reaping the youthful demographic dividends in India. Social inclusivity is found to be affected by the combined effects of base-level differences and interactive effects of geographic regions, gender and place of residence.

Although India is at the verge of getting recognised as a leading global economic powerhouse, its teaming millions of youth and children are at the risk of missing the reap of the benefits of growth and development. Notwithstanding the reservation quota systems, public policies aiming to create equal opportunity in higher level education are essential and so is the dispensing of knowledge in languages which have international recognition, including English and technology.

First, it is essential to put on record the especially circumstantial situation that Indian is currently facing due to the sudden emergence of the COVID-19 pandemic and its disastrous direct consequences affecting employment, manufacturing and production, trade, agriculture and even self-employment. This essay does not claim to have addressed the full and true impact of the pandemic on the economy as a whole and on higher-level education in particular.

As a new school year gets under way in many countries, the harm caused by the months of closures due to COVID-19 is becoming ever clearer. In the United States of America, primary-age pupils are, on an average, five months behind where they would usually be in mathematics, and four months in reading, according to McKinsey, a premier consultancy company. The damage is almost certainly worse in places such as India and Mexico where the disruption to schooling has been greater (*The Economist*).

Given that the data used in this essay have the reference year of 2014, it is fair to say that this analytical report is valid for the pre-pandemic period and possibly for the

future period after the end of the pandemic impact.

Note a major change in the public policy environment due to the emergence of BJP as the ruling party, with a long stint of administration so far. This paper does not attempt to evaluate its policy impact on higher level of education and associated equity due to want of credible data. Hearsay, government supplied departmental (often manufactured) and only inputs based (budgetary allocations) data are not sufficient to assess the nation's educational, economic, and social policy.

Introduction

India's future accelerated economic development is largely dependent upon the value added by the current and future generations of youthful labour force; and this is termed as the 'demographic dividend (DD)'. The dividend gets generated only if appropriate human development investments are made to enhance the per capita value added by the individual labourer. Given an opportunity, a larger share of working age population (15-64 years) as compared to its non-working

population have a potential for a greater economic achievement. Yet, having a favourable demographic age structure does not necessarily guarantee an economic boost for a country, and, as the UNFPA (2018) said, historically there are possibilities of missing this chance. To reap this demographic dividend requires strategic investment decision making in the areas of human development, especially for the high quality education, for creating an access to modern science and technology enabled education, and for creating economic opportunities to employ them. The 'dividend' will be lost if a country's young population is not appropriately educated, healthy and properly skilled. Investing in the youth takes rather a long-term understanding of sustainability of the labour force and economy. Demographic dividend doesn't happen on its own; a well-planned investment strategy is a precondition for tapping the potential of its new technology aligned-youth through the higher levels of education. The Economic Survey 2016-17 forecast that India is likely to experience a peak in demographic dividend during the 2020s. In a scenario when the world is ageing, the number of young Indians are

rising. And yet the question arises: Is India ready to reap this demographic dividend? Is the young population equipped with the required education, health, skills and employment that are essential to benefit from the demographic dividends? According to John Bluedorn, a senior IMF economist, there are new reports about the redundancy of the youth labour in India (Youth Inactivity Highest in India among Emerging Markets, 2019) and about the increasing unemployment rates to levels hitherto not recorded in Independent India.

The Catalytic Agent: Achieving a higher-level of education (HLE) degree, especially one that is technical in nature, is desired and cherished by all youth and revelled by parents and community. The rates of both market returns (rupee wage) and non-market returns (life-enriching human development) increase with the increasing levels of education, made possible due to growing Indian economy and demands of the globalising world. The sectors of the economy showing vibrancy and recording near-double digit growth (notwithstanding a fall during 2012-13 and 2019-21) can perform mainly through the support of two important

inputs, i.e., higher levels of human (educated) resource, and better adaptation and assimilation of technology through physical capital investment. It is critical, therefore, that HLE becomes accessible to all citizens across India, irrespective of the economic, social, linguistic and regional differentiations. This context is appropriate to invoke the constitutional provisions enshrined in Article 15 which direct the governments to create equal opportunity and equity in access to all levels of education, including the higher-level modern education.

Importance of Higher Levels of Education (HLE) in Modern Sector Employment:

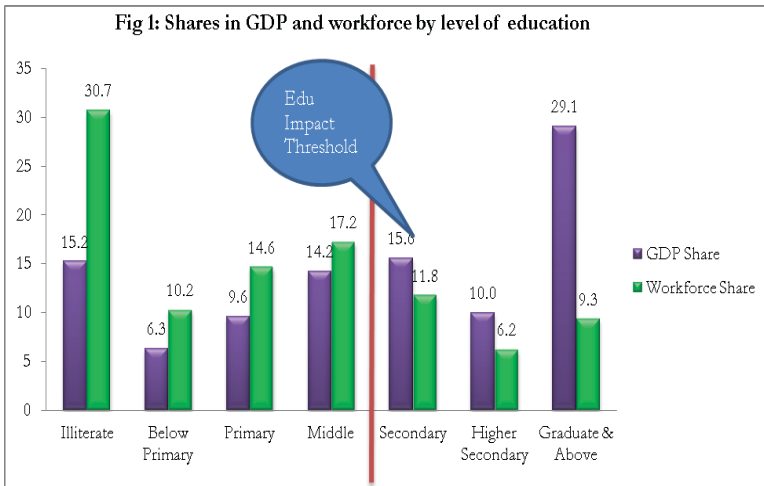
Decades of research across the world has established the fact that education is the foremost driving force for economic and social development. The economic development of an individual (Becker, 1964; Mincer, 1974) as well as a nation (Schultz, 1961; Barro, 1991; Barro and Sala-i-Martin, 1995; Lucas, 1998) is highly correlated with the levels of education. Generally, the mean years of schooling of adults, an indicator of the pool of education in a country, is as high as 13.3 years in the USA, (<http://hdrstats.undp.org/en/countries/profiles/USA.html>)

and just 4.4 years in India (<http://hdrstats.undp.org/en/countries/profiles/IND.html>). Further, the proportion of age-specific population having enrolled into a college would be substantially high in the developed countries. In 2009, over 28 per cent population reported having obtained a bachelor's degree or higher in the USA. Among people in the age group 25 to 34 years, a higher percentage of women (about 35 per cent) reported having a bachelor's degree or higher in comparison with 27 per cent of men (Ryan et al, 2012).

India and China are large and the fastest growing economies in the world, and one finds substantial growth in HLE in both countries (Altbach, 2009). The HLE enrolment in India is about 10 per cent of university-age population while China enrolls about 22 per cent. In absolute numbers China enrolls a record 27 million post-higher secondary level students and India's 13 million enrolment ranks third. Since the early 1990s, China's post-secondary enrolments have grown from 5 million to 27 million, while India has expanded from 5 million to only 13 million. The growth of HLE in India

is partly dependent upon the private sector and expansion of distant education although the quality of higher education will be driven by enhanced financial support and effective quality-assurance system, both of which are currently missing in India (Altbach, 2009).

This broad association between the higher levels of education and development status of a nation should essentially get reflected into the education and skills which impact on the contribution of specified economic sectors and to the national GDP. In case of India, my recent analysis highlights these associations between the share of labour force according to levels of education and their collective contribution to the GDP (See Figure 1.)



It is clear from Figure 1 that at the all-India level, the share of illiterate workforce is 30.7 per cent which is twice their share of 15.2 per cent contribution to the GDP. On the other extreme, only about 9 per cent of the HLE (graduates and above) contribute over 29 per cent of the GDP. This adequately demonstrates the power of education which enhances productivity and economic value, both at the individual level and when aggregated at the level of a nation. Note that up to middle class level of education, the shares in workforce are higher than the respective shares in GDP. Once this *threshold of education level* is crossed, the per cent share in GDP supersedes the per cent share in workforce and this difference increases sharply with the increases in the level of education. Estimates of the efficiency quotients – that is, the ratio of share in GDP and the share in workforce – suggest that the impact of education on GDP is prominent, and they are highly correlated. But the cause of concern is the fact that over 45 per cent of all labour force's efficiency is less than even due to lack of appropriate higher levels of education and associated skills.

The growth in household income or income per capita occurs due to a consistent growth in labour productivity and the number of able-bodied workers within the household. An average of this labour productivity at the level of the nation gives national-level per capita income. Although the growth in other Asian economies has occurred due to a growth in the capital per worker and total factor productivity (GOI, 2013), given a high population base, a balanced growth in India demands a considerable contribution through human capital formation which, as this paper argues, is a function of HLE.

Inclusive HLE Promotes Equity: Ensuring equity and reducing inequality in the Indian society is an important objective of the democratic policy and constitutional resolve. India is a highly diverse society in terms of caste, religion, language, geographic region, place of residence (such as rural and urban areas) and so on, and most of the deprivations such as poverty, illiteracy, ill-health and low productivity register high correlations with these attributes. It is but natural that any study of diversity and development must identify the economic

disadvantages associated with such attributes and also assess the role education system plays in contributing to India's inclusive economic growth (GOI, 2006). Further, providing education to the young has come to be known as the best *mechanism of inter-generational resource transfer*. Education has evolved as a new type of asset as opposed to the conventional assets such as land, cash, gold and so on. Thus, the new types of bequeaths are providing children and the young with high-quality education, skills and socio-political empowerment.

Given the importance of HLE in improving human lives, both at the level of individual and household as well as at the aggregate level of state or nation, the author intends to highlight the differentials in achievements as well as opportunities amongst various regions and SRCs. The paper provides an empirical base to draw lessons for promoting inclusive development in HLE provisioning according to regions in India.

Data and Methods

This is an empirical analysis intended to facilitate and propagate the tradition of 'evidence-based policy making.' The analysis

uses the National Sample Survey data which provide information for a number of household-level economic, social and educational parameters. The NSSO surveys are undertaken frequently, most often on an annual basis. On certain occasions, there are specially focussed surveys such as on migration, health and education.

Data from the 71st round of NSSO (2014) survey, which had a focus on 'Social Consumption namely Education and Health,' is used to highlight the levels and differentials in higher levels of education in this analysis. Data from a similar survey - 64th round of NSSO for an earlier reference year of 2007-08, have also been used for highlighting the changes over time wherever possible. NSSO surveys used large and robust state and national level sample sizes, and the estimates and statistics presented below are valid for the reference years associated with them.

For the purposes of this paper, two distinct types of age categories were created so as to estimate the achievements at higher levels of education. These are the achievement levels amongst the 22 to 35 years old and those who are 36 years and

older: with the first representing the current generation pursuing education and the latter, a generation earlier. An aggregation of these two is considered as current stock for the purposes of this analysis. While this analysis intends to highlight the differentials at the higher levels of education between rural and urban areas and between men and women, another noteworthy differentiation investigated is according to socio-religious community (SRC) categories. Research and analysis based on caste and religion is not very popular in India, excepting a focus on the estimates for the SCs and STs. The SRC categorisation used in the 2004-06 by the PMO's High Level Committee on social, economic and educational situation of the Muslim community of India (also known as Sachar Committee) is used in this analysis (GOI, 2006). Given the distribution and spread of various communities across India and its many states, as well as keeping the statistical fact of sample size and robustness of the estimates in mind, exclusive SRC groupings are created. The categorisation was based on a combination of the commonly recognised social identities and empirical measurability that yields robust

estimates. Note also that all SRC identification is based on self-reported information during the NSSO surveys, with the exception that no SC category was feasible for those reporting Muslim or Christian as their religious affiliation. Once the declared religion was Muslim or Christian, the subsequent question as to whether the respondent was also a SC became 'not applicable' by design.

The *socio-religious categories* used in this analysis were as below:

- Hindu - SCs/STs together
- Hindu - Other Backward Classes
(OBCs)
- Hindu- Upper Castes/ Hindu Others /
Hindu General
- Muslim - (all Muslims)
- All Others/Other Minorities

Broader education profile of the youth in India

A large body of research establishes the wide-ranging social and economic benefits of literacy and education that accrue to individuals, households, and the larger society (Caldwell, 1976; Birdsall, 2001; Schultz, 1988). The benefits of expanding

literacy and educational opportunities for girls and women through increase in both market returns (money income) and non-market returns (gains in human development) are also well established since long (Psacharopoulos, 1994).

But in India, the social group differences in enrolment are striking (Sachar Report, 2006). SCs, STs and Muslim children are far less likely to enrol in school and are slightly more likely to drop out than others. It is particularly worrisome to note that Muslim children are as disadvantaged as Dalit and Adivasi children who are documented to be at the margins for centuries. Note that little attention in India has been paid to religious background as a source of educational disadvantage. There is wide divergence in the three R's (reading, writing, and arithmetic) by social and religious background - children from all above cited communities falling behind. Not surprisingly, this educational deficiency is reflected in lower access to salaried jobs among these communities (Shariff, 2016; Desai, *et al*, 2010; Basant and Sen, 2010; Basant and Sen, 2014).

It is startling to find that compared to the respective share in 15-29-year population (see total of the last two columns), the SCs/STs and Muslims have proportionately higher illiteracy. Forty per cent of SC/ST labour is illiterate compared with their share in population on only 28 per cent. Similar, almost one-fifth all illiterate labour force is Muslims while their share in the workforce is 14.5 per cent.

TABLE 1
Education Profile of Youth (15-29 Years) Population by Socio-Religious Groups

Social Group	Illiterate		Below Secondary		Secondary		Higher Secondary		Above Higher Secondary		Total	
	2011	2014	2011	2014	2011	2014	2011	2014	2011	2014	2011	2014
SCs/STs	40.1	40	32.6	35.9	22.4	28.4	19.7	19	14.2	15.1	27.8	27.1
OBCs	33.6	31.3	34.9	29.2	39.9	33.9	37.6	36.7	36.1	34.9	36.2	33.9
Muslim	19.8	20.2	16.9	23.1	12.6	15.3	9.8	9.8	7.5	8.2	14.5	14.6
All Others	6.5	8.5	15.6	11.8	25.1	22.4	32.9	34.5	42.3	41.7	21.5	24.4
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Author's calculations using NSS 68th round (2011) and 71st round (2014) data.

Note: All others also include 'Hindu Others.'

Let us compare their respective shares in the educational category 'above higher secondary'. Only 14/15 per cent of SC/ST and 7.5/8.2 per cent of Muslims labour force is educated above higher secondary level; compared to 42 per cent of 'all others' which is disproportionately larger than their share of 22 per cent in labour force.

It is such a large disproportionate representation in higher level education and associated skill formation which is hurting the excluded SRCs, namely the SC/STs and the Muslims. There is a parity in education for the OBC category. Such a puzzling disparity also affects the ability of the Indian economy to reap the benefits of demographic dividends and cause a huge social inequity and disparity in the income levels.

Inter-Generational Differentials in High-Level Education

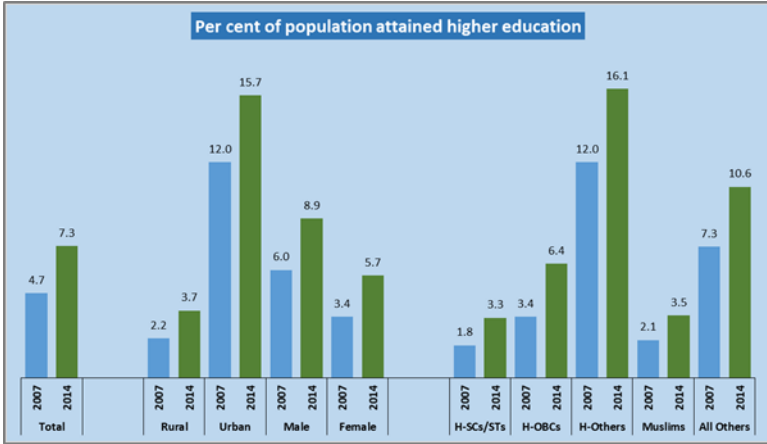
Current Stock: Overall, 7.3 per cent of all population (all ages) completed post-higher secondary education in 2014; this was only 4.7 per cent in 2007. But there is a large gap in the attainment levels in higher-level education between rural and urban areas, which has increased over time. Just above

2 per cent of the rural population was educated up to a level higher than secondary as compared with 12 per cent in the urban parts of India in 2007; and these levels are 3.7 and 15.7 percent in 2014 (**Figure 2**). There clearly is an urban bias in access to higher-level education; it is also that education-linked jobs are concentrated in urban areas.

There is also a huge gender gap in attainment of higher-level education which is not narrowing over time. While the achievement levels were 6 per cent for male population it was just 3.4 per cent of the female population in 2007; but differentials persists even when these levels have improved for both at 8.9 for male and 5.7 per cent for female respectively. India must aggressively find ways to eliminated gender bias in providing higher level education to female and equal opportunity to excel both in education and wage employment.

FIGURE 2

Percentage of Population Which Attained Higher Education



Source: Author's estimates using NSS 64th round (2007-08) and 71st round (2014) survey data

The socio-religious groups display extremely high variation in attainment of HLE, with a low of just about 2 per cent or less for Muslims and H-SCs/STs, through to 12 per cent for Hindu-General, or upper castes. These levels have only marginally improved for SCs/STs and Muslims at 3.3 and 3.5 percent respectively; but it has increased substantially to 16.1 per cent for Hindu upper castes; thus the SRCs differentials are persistently widening. Elsewhere in this paper I confirm this analytical conclusion using a multivariate econometric analysis.

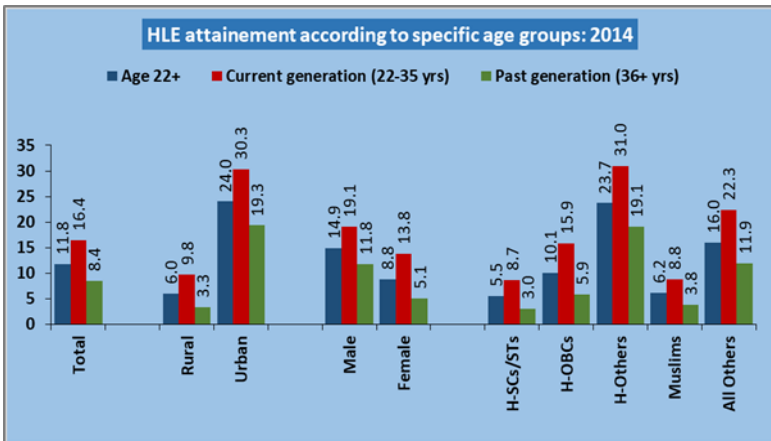
Inter-Generational Differentials: There is a minimum age at which most of the population finishes education and receives a higher-level education degree. The general graduation courses are three years long after the post-higher secondary level class, while the professional graduations such as engineering, law, medicine, architecture, take four years or more to finish. Therefore, the minimum age threshold, considering all types of technical and general courses together, for the purposes of this paper is 22 years. Thus, for a more appropriate understanding of the share of population in higher education, all those below the age of 22 years are excluded from the analysis presented below.

The population of 22 years or above is further split into two sub-groups: (1) current generation, defined as those who are aged 22 to 35 years, and (2) a generation before (older generation) – all those who are 36 years and older (**Figure 3**). A look at these two age-based analytical categories provides robust comparisons in achievements in higher-level education between generations. *One would find in this analysis that while access to HLE is considerably better for the current generation compared with the past, the inter-group variation*

has increased immensely, which points to growing disparities and inequity.

All measures in following analysis are per cent having achieved HLE within the respective population sub-group. For example, 6.0 per cent in **Figure 3** represents that 6.0 per cent of rural population in the age group 22 years and above which has attained higher education. At all India level, only 11.8 per cent of the total 22 years and above population have attained any degree higher than the higher secondary class as on reference year 2014.

FIGURE 3
HLE Attainment according to Specific Age Groups -2014



Source: Author's estimates using NSS 71st round (2014) survey data

A better understanding of the differentials can be achieved when the HLE levels are evaluated for the current generation. The younger generation has evolved to be more aware of the value of higher education, and the shares of respective populations in higher education in each socio-religious group as well as in rural, urban, male and female groups have significantly increased over the past generation. **Figure 3** indicates a sharp distinction between the current and past generations with respect to participation in higher education. *At the all-India aggregated level, slightly lower than 12 per cent of 22 and above-aged population has attained HLE.* One can, however, notice that there has been a strong generational impact. For example, the past generation which recorded only 8.4 per cent HLE has doubled to 16.4 per cent of HLE penetration among the current generation. Past generations of rural India had a share of only 6.0 per cent of its population in higher education while the current generation's share is just under 10.0 per cent. In contrast with rural India, higher educational attainment in urban parts of India was high in both the past (19.3 per cent) and current (30.3 per cent) generations.

The shares of respective populations by gender and by socio-religious groups in HLE and changes in the current generation compared to the past generation are also presented here. A close look at the per cent change in shares in higher education over the two generations reveals that current generation females have shown a large growth in their share in higher education (from 5.1 per cent to 13.8 per cent) over the past generation compared with the current generation males (from 11.8 per cent to only 19.1 per cent). *The positive features are that the access and achievements in HLE are inclusive so far as the gender and rural-urban place of residence criteria are evaluated. Yet large differentials persist, thus stressing equity and equality goals of the nation.*

HLE Achievements According to Socio-Religious Communities: A study of the social differentials in access and achievements in HLE is rare in India. Such an analysis was undertaken for the first time at the instance of the Prime Minister of India by the Sachar Committee in 2006. The following analysis by socio-religious communities (SRC) follows the categorisation used by this committee (GOI, 2006). The generational difference in

prevalence of HLE varies greatly by the SRCs. The generational change is as high as 190 for the H-SCs/STs (from 3 to 8.7 per cent), 169 for the H-OBCs and 132 per cent for Muslims. Note that all these groups have relatively lower levels of HLE achievement. However, it is 62 per cent and 87 per cent for all other minorities excluding the Muslims. Note that both the high caste Hindus and other minorities have considerably large levels of HLE achievements to begin with. Hence, apart from observing the per cent growth in individual groups, what is also needed is to look at the absolute change in terms of per cent points in shares in higher education for a clearer and more propitiously descriptive picture of the issue under discussion.

It must be pointed out that although large differentials persist between the SRCs, there is a directional change towards equality, as reflected by these data, and in so far as the levels are concerned, although one has to analyse the qualitative differentials to reach robust conclusions about equity.

Inter-Regional Analysis of Achievements in HLE: Given India's vastness and diverse population distribution across its length and breadth, one can understand the gravity of inequity and differentiation in HLE better at the geographically disaggregated units. In the following pages, we analyse the HLE among different sub-groups of the population at regional level. Undertaking a state-level analysis was not statistically feasible due to many insufficient state-level sample sizes. In view of sample sufficiency, this author created six geographical regions, namely Southern India (SI), Northern India (NI), Western India (WI), Central India (CI), North-Central India (NCI) and North-Eastern India (NEI), clubbing the contiguous states as below. The regional categorisation is presented in **Table 2** as well as identified in the map with geographical representation.

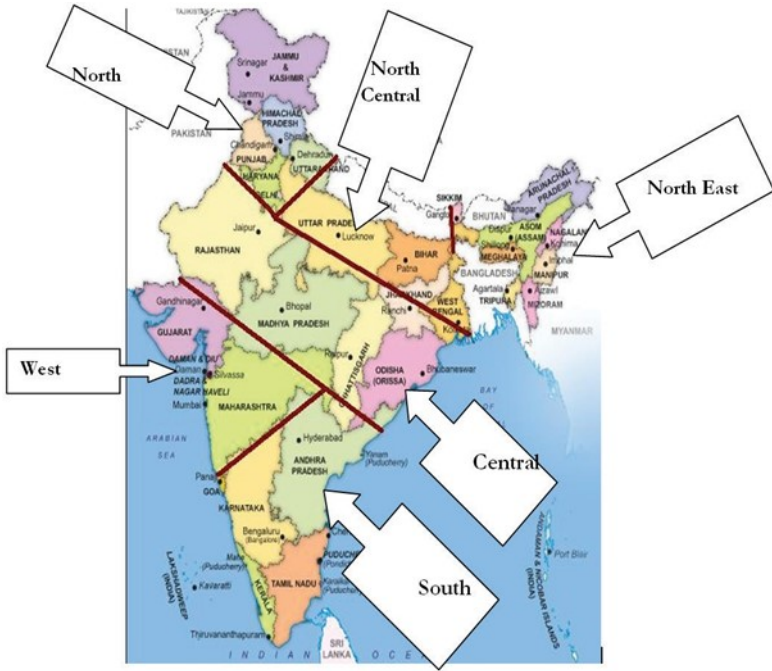
TABLE 2**Regional Categorisation: The State Agglomerations**

<i>Region</i>	<i>States Constituting the Region</i>
Southern India (SI)	Andhra Pradesh, Karnataka, Lakshadweep, Kerala, Tamil Nadu, Pondicherry, Andaman & Nicobar
Northern India (NI)	Jammu & Kashmir, Himachal Pradesh, Punjab, Chandigarh, Uttaranchal, Haryana, Delhi
Western India (WI)	Gujarat, Maharashtra, Goa, Dadra & Nagar Haveli, Daman & Diu
Central India (CI)	Chhattisgarh, Madhya Pradesh, Rajasthan, Jharkhand, Orissa
Northern Central India (Gangetic Central Plain) (NCI)	Uttar Pradesh, Bihar, West Bengal
North Eastern India (NEI)	Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Assam

Differentials according to Regions, Rural/Urban and Gender

Shares representing in higher-level education for all 22+ year old population as well as for current and past generation according to region, place of residence (rural/urban) and gender are presented in **Figure 4** and **Figure 5**. It is clear that at the

regional level, the percentage share of urban total population in higher-level education is higher than that of rural population for both the generations and for the population of 22+ years of age, suggesting a strong urban bias.



Comparison of prevalence in higher education in different regions (Figure 4) over the two generations shows that urban population in Northern India was at the top in both the generations while in the past generation it had second highest prevalence for its rural counterpart which, in current generation, has also made it to the top.

Southern India's urban population has improved at the fastest pace, leading the region to showcase the most promising growth in higher level education in comparison with urban parts of all other regions. The inter-generation growth in HLE is fastest in Southern India both for females and males; and the growth has been 270 per cent for females as compared with the previous generation.

Further, both male and female sections of Northern Indian population have shown the highest participation in HLE, bagging the top position for both the generations (Figure 5). Note that the National Capital Territory of Delhi is part of this region and much of the respective estimates are influenced by its dominant pattern. North-Eastern India, on the other hand, has the least share in higher education as per cent of its population for both the generations and for both the genders. Deep regional differentiation is found when both the levels and inter-generational improvements are assessed for the North-East, Central Region and Northern Central regions of India. These regions where over 60 per cent of youth population resides are lagging; by not providing opportunities

for HLE as well as in motivation and security to enhance the female participation in higher level education.

FIGURE 4

Region-Wise HLE Attainment according to Specific Age Groups - 2014

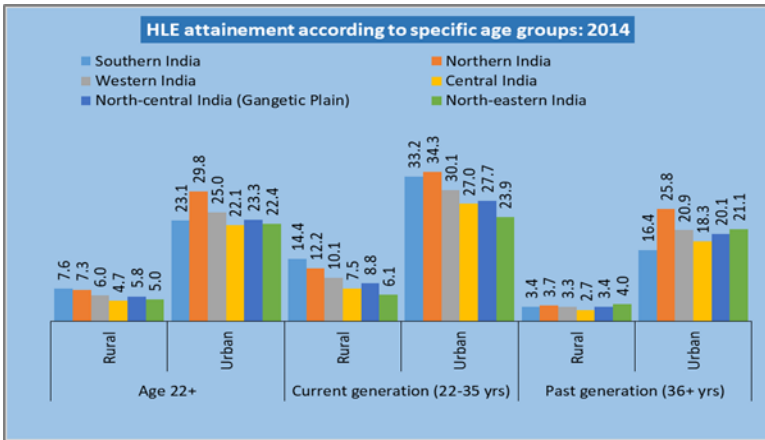
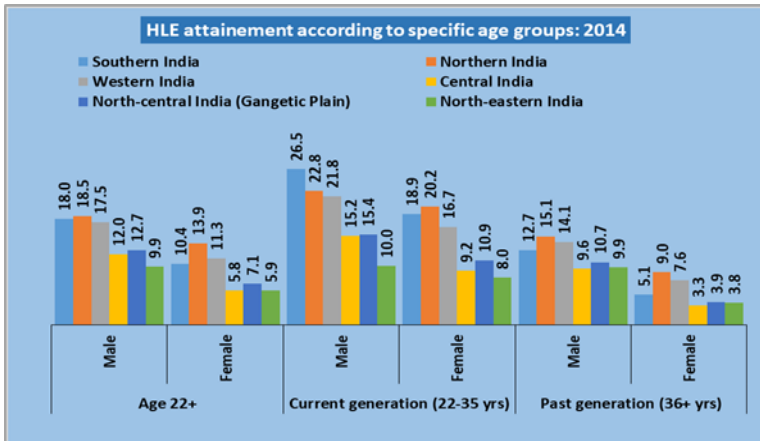


FIGURE 5

Gender-Wise HLE Attainment according to Specific Age Groups - 2014



Size of Technical Education

Technical education is generally considered as an add-on or additional dimension of higher level education; often it is received after having achieved a certain level of regular education in the first place. Normally, technical education is preferred to regular educational courses due to higher probability of the technically educated persons getting employed in the modern industrial and services sectors. A person reporting to have secured a degree or diploma in technical education is considered as having achieved HLE for the purposes of this analysis.

From a range of categories of education found in the survey, the author created and redefined higher education categories into technical and non-technical types as given in **Table 3** below.

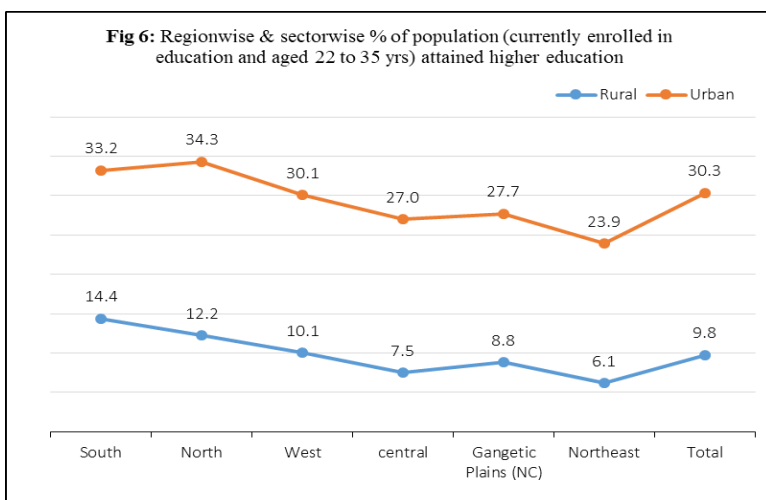
TABLE 3
Higher Education Categories Used in This Address
and Their Concordance with the NSSO Categories

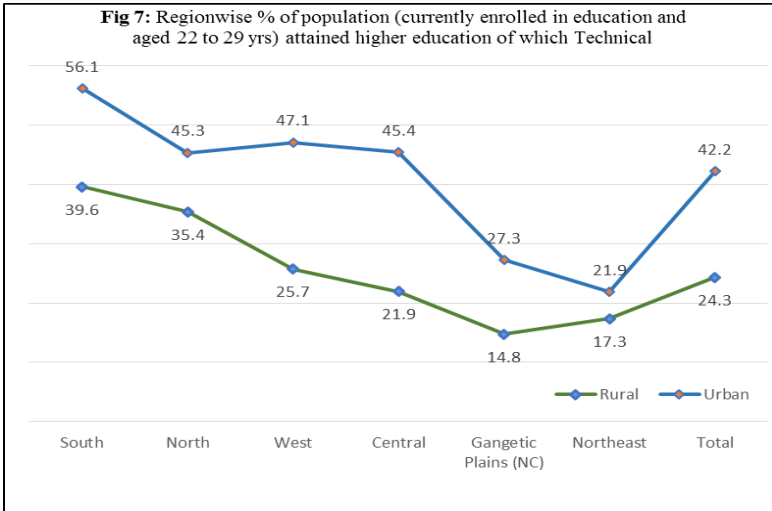
<i>NSSO's 71st round survey's higher education category</i>		<i>Higher education category used in this paper</i>
<i>Degree</i>	<i>Subject</i>	
Diploma or certificate (below graduate level)	Agriculture, Medicine, Engineering / Technology or Crafts	Higher Education (Technical)
Diploma or certificate (graduate and above level)		
Graduation level degree courses		
Post-graduation and above level degree courses		
Diploma or certificate (below graduate level)	All Other Subjects	Higher Education (Non-Technical)
Diploma or certificate (graduate and above level)		
Graduation level degree courses		
Post-graduation and above level degree courses		

The following figures (**Figures 6 and 7**) present the levels of HLE followed by the proportion of those currently enrolled in higher technical education (HTE) as a percentage of total persons enrolled in specified age groups. The share of persons attending technical education is 24 and

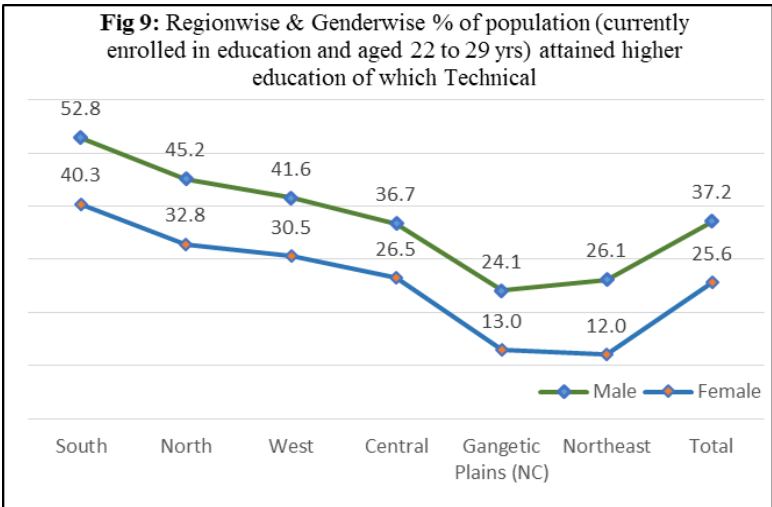
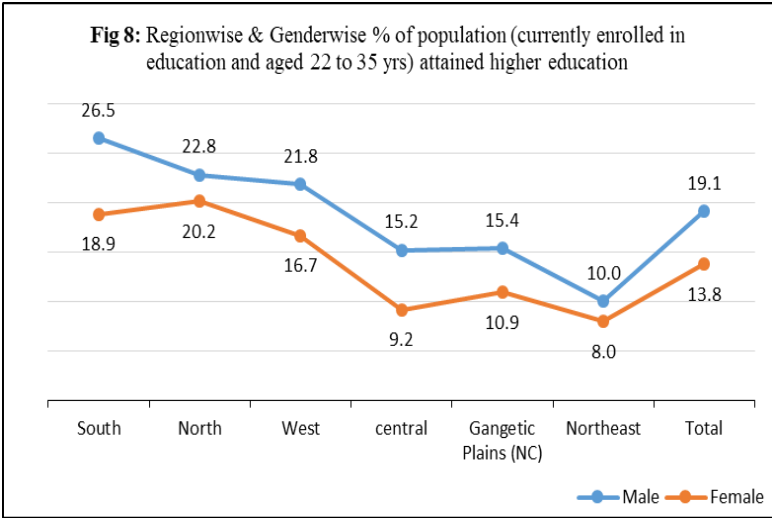
42 per cent respectively in rural and urban areas.

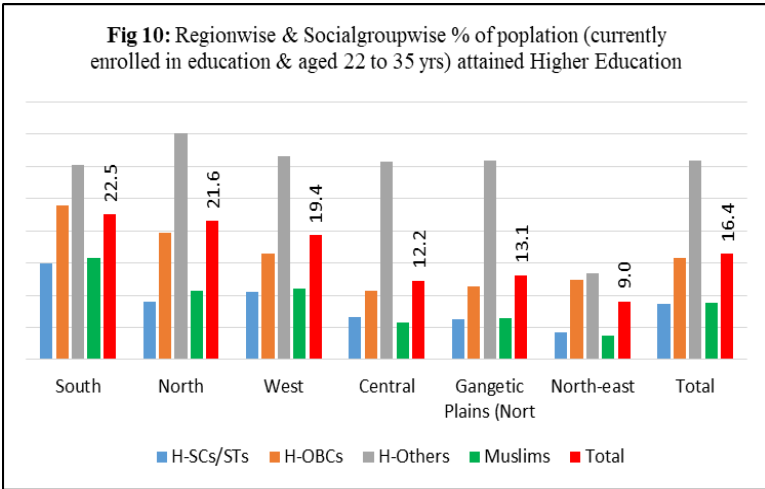
These shares are considerably high at 40 and 56 per cent respectively in Southern India, and least and very low in Northeast and the states in the Gangetic Plain. However, the gap between the rural and urban areas is steep in Central region (22 and 45 per cent) followed by the Western regions (26 and 47 per cent). Overall, while 24 per cent of all those in HLE are studying HTE in rural areas, this percentage is 42 per cent in urban India.





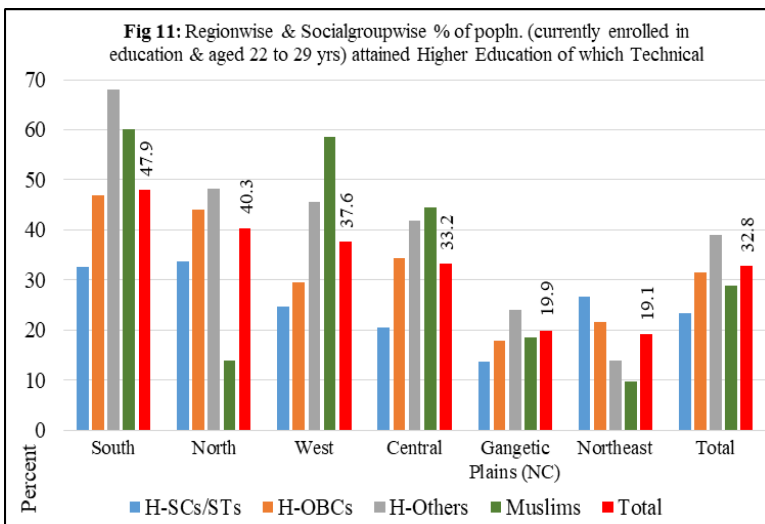
Similar data are presented, by gender, in **Figure 8** and **Figure 9**. The share of persons attaining technical education is 37 per cent for males (out of total males enrolled in higher education) and 26 per cent for females at the level of India. In South India these proportions are (at top) the best at 40 and 53 per cent followed by North and West. The least proportions are found in North-Eastern India and Gangetic Plains. Note also that even regions such as the North and West (unexpectedly) and North Central (expectedly) have shown low penetration of HTE. However, one notices a substantial improvement in HTE penetration in urban-Central region, but this appears to be about non-English based degrees or diplomas.





A closer look at the HTE participation according to SRCs suggests that the highest proportions are found amongst the Other (General category) Hindus, especially in South and North. They have lower levels of HTE only in North East. The other category which has higher levels in HTE are the Muslims but only in South, West and Central regions. Their participation in North is the least, and at very low levels, and in Gangetic plain and North East. Note that in the states in South, West and in part of Central regions Muslims appear to have benefited from the technical institutions created through the minority educational systems which is a provision under the constitution. Hindu OBCs have reasonable levels of HTE

participation in all regions, compatible with the level of HLEs



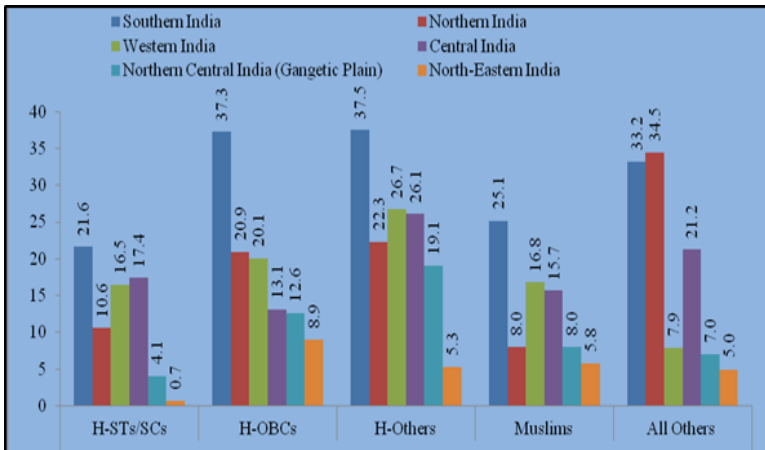
Cost of Technical Education

As is the case of English-medium education, relatively speaking, the cost of higher technical education is considerably high compared with the non-technical degrees. Recent data on the cost of education were available from the 64th NSSO round; according to these, HLE is on an average three times more expensive than non-technical education. The burden of cost of technical education is observed to be slightly lower for the SCs/STs, Muslims, and in rural areas; but this relative cost difference appears

more due to the quality of education differential rather than any equity cost concerns. Broadly speaking, the cost of technical education is relatively low in North-Central and North-Eastern regions. This may again reflect the qualitative differentials in education suggesting poor quality HTE in these regions compared to the other regions of India.

FIGURE 12

Enrolment in Higher Level Technical Courses according to Regions and SRCs



Source: Author’s estimates using NSS 64th round (2007-08) survey data

Of all the regions considered in this analysis, Southern India stands out for providing opportunities to all types of SRCs to seek HTE. The North-Eastern is on the

other side of the spectrum, at the bottom. Even the Hindu-SCs/STs share in technical education (out of total enrolled SCs/STs) in South India, which is 21.6 per cent --- the lowest among the other SRCs in South India, but is higher than the shares for H-OBCs in all other regions and even higher than H-General for North-eastern (5.3 per cent) and North-Central (19.1 per cent) India. Similarly, Muslims of Southern India show a higher proportion of technical education (25.1 per cent) in their total current higher education flow than any other SRC of any other region except for other minorities of Northern India (34.5 per cent), Hindu-Others of Central India (26 per cent) and Western India (26.7 per cent) as shown in Figure 10. In a relative perspective, however, Muslims are in league with the SCs/STs in many regions and they are at the bottom in Central and North-Eastern regions where they live in substantial proportions.

Prevalence of English Medium in Higher Level Education

One of the most crucial issues with respect to higher level education in particular and the overall education policy in general is with respect to the medium of instruction.

Since providing education is the responsibility of states in India, there is a wide diversity in the medium of instruction policy. There are issues relating to mother tongue, regional languages, Hindi as the language of the nation, and English as a foreign language, without which Indians cannot make it to the higher levels of learning and higher levels of earning. The complication has emerged since India is a nation of multiple languages and dialects and the very foundation for the formulation of the states was based on language.

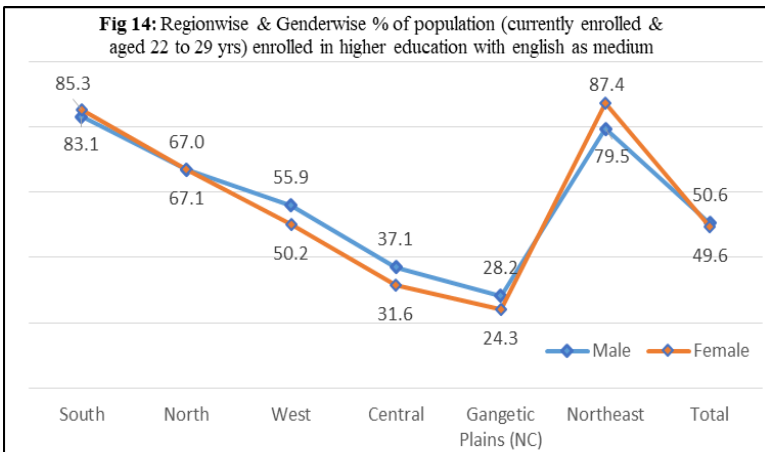
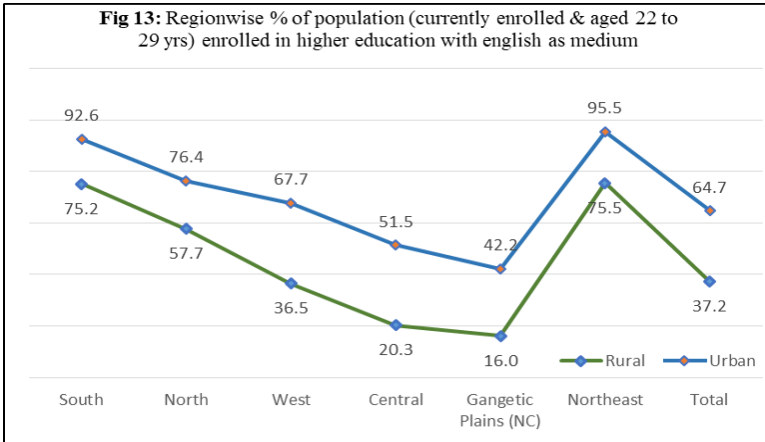
There is no country on this planet which has such a large diversity of languages and associated culture, literature and social value systems. However, it may not entirely be the legacy of the British Raj that now education of children in English is a mechanism to overcome serious socially motivated differentials, and also that contemporary globalising economic system is anchored in English language. As one such example: Today's internet revolution, supported by technological innovation, is entirely dependent upon the English language. In India, therefore, if we intend to discuss and debate HLE, it essentially means education in English language.

Some useful highlight regarding access to English education from the 71st round 2014 data are presented below.

Let us note that detailed and indepth data on language (medium) of instruction were available only in the 64th NSSO round and are being presented below. To capture the prevalence of English-medium higher education in India, the author has estimated the percentage of those currently enrolled with English as a medium of instruction out of all those currently enrolled according to place of residence (rural/urban), gender and SRC for each of the regions identified for this analysis. There are considerable cost differentials between English-medium and other types of HLE.

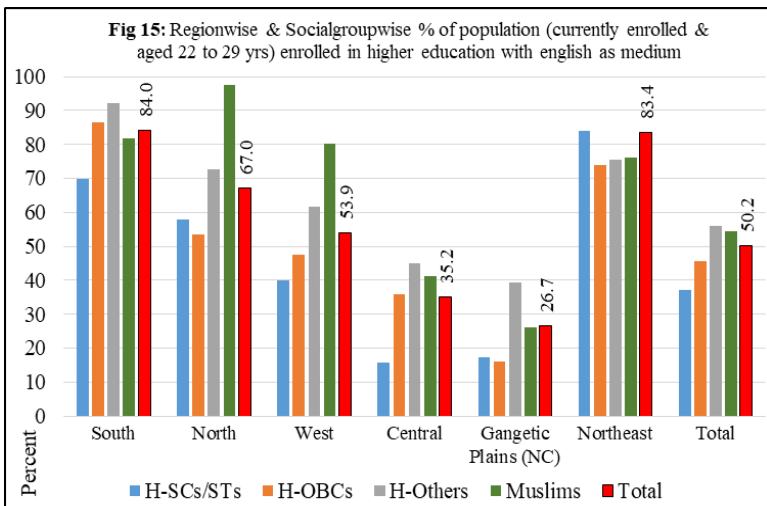
Difference in prevalence of English-medium HLE according to place of residence is extremely large in all regions except for Southern India, where the difference is relatively low (**Figure 13**). As much as 93 per cent of the HLE students, who are residing in urban Southern India are studying in institutions where the medium of instruction is English. This proportion in the rural counterpart is also quite high (75 per cent) which is almost equal to the share of English-

medium higher education in Northern India, but higher than even the urban sector in Western India and Central India (68 and 52 per cent respectively).



Since the English-medium higher education is qualitatively better and brings higher returns (Azam *et al*, 2013) and is also essential for cultivating global competence

amongst the current and next generations of India, the situation is much worse in rural areas of all the regions, except for Southern India. The penetration of English HLE is least in Northern India where only about one quarter of HLE students pursue in English whereas in South India it is 50 percentage point higher at about 85 per cent. North-Central states collectively are at the bottom in terms of offering English-medium education in both rural and urban areas. Southern states seem outliers (while compared with other regions) by showing a higher preference for English language in HLE across both rural and urban areas. Further, English-medium education is more accessible to both the genders in Southern India.



The difference between Southern India and the rest of regions in terms of English-medium educational accessibility is very huge for both genders. As the case of rural and urban areas, North-Central and Gangetic Plain regions are at the bottom for both the genders while Southern India is at the top with a huge margin. For those who pursue higher education, the difference in proportion of English-medium education for the two genders within each region is not as high as the difference in rural and urban sectors.

Cost of English-Medium HLE: Higher education in English is provided for a premium in India and, as expected, there is a vast cost differential with education imparted in other mediums of instruction (data not presented). English medium HLE costs 6-8 times higher per student per annum than HLE in Indian languages, and this cost is the highest in the western region. Note also that the cost of even regional-language HLE is the highest in the North and, therefore, the cost difference with English-medium HLE appears low in the northern region. It is expected that English-medium education is often offered by the private sector --- not only with the aim of cost

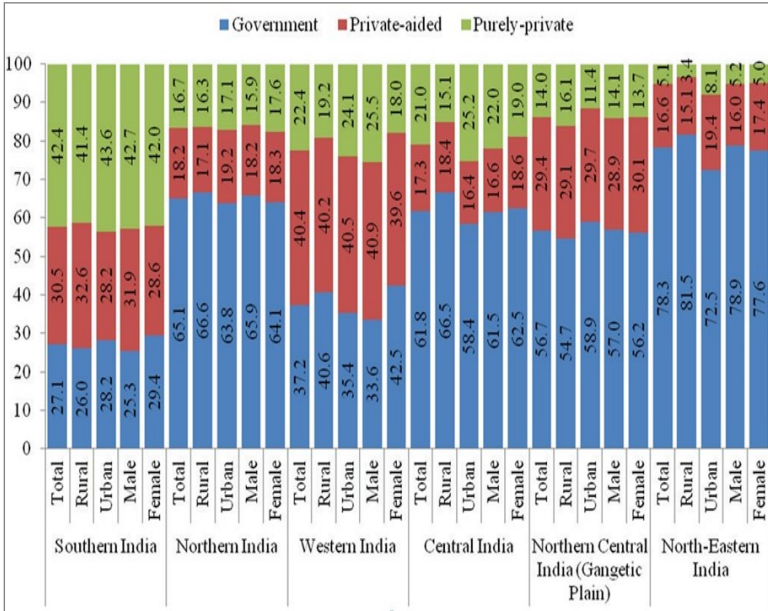
recovery but also with a profit motive. Overall, the respective cost of HLE is high in urban areas and the Hindu-Others (General) and other Minorities show higher expenditures. This cost difference appears partly due to relative differentials in quality of education, but the available data and evidence are not sufficient to substantiate this assertion. There is a need to collect more comprehensive information on cost of HLE in India.

Public and Private Shares in Higher Level Education

Given the large base of the Indian youth and their consistent distribution across the nation, providing educational infrastructure is a challenge for India. Since India's is a growing population, the infrastructural need is growing by the day. People's aspirations are changing fast, which is also boosting the demand for education at levels including the HLE and HTE. Although the government has promised compulsory primary and elementary level schooling for the children of all citizens in India and the Sarva Shiksha Abhiyan is now an over 30-year-old programme, a large number of children are still out of school, mostly due to

high dropouts caused by a combination of supply and demand factors. Further, educational provision in India is based on a kind of loose pyramidal structure which links elementary level schooling to successively higher levels such as matric, pre-university, university and technical education. While during the early period after Independence the state governments established the HLE infrastructure, the facilities could not sustain and failed to ensure access to all eligible citizens due to demand pressure caused both by an increase in youth population and also increasing higher level educational aspirations.

FIGURE 16
HLE Shares according to Types of Institution,
Place of Living and Gender



Source: Author's estimates using NSS 64th round (2007-08) survey data

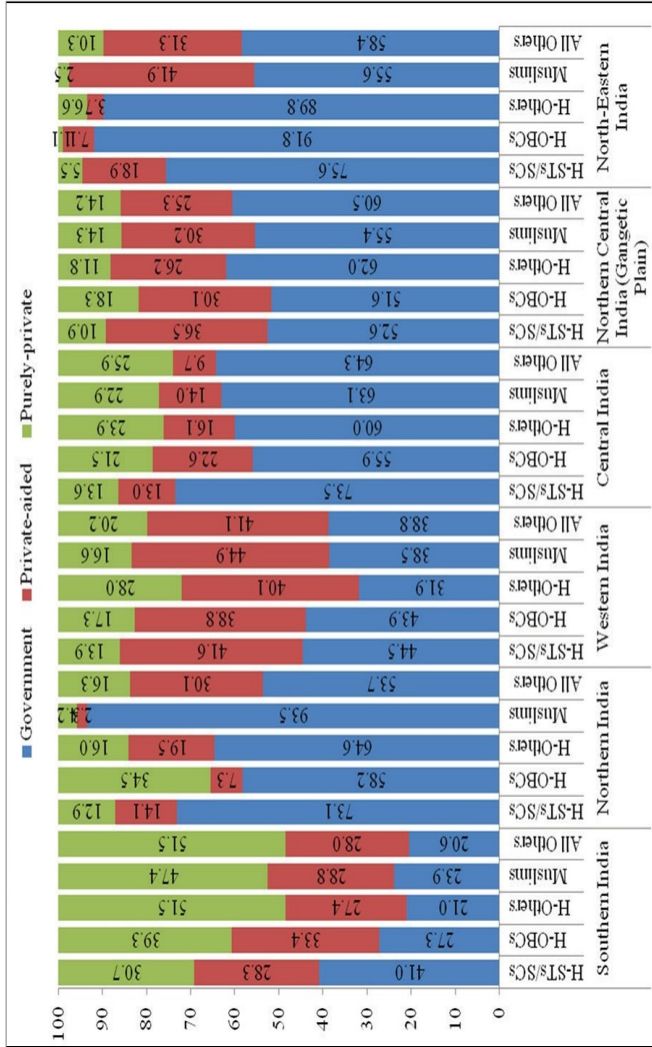
There has, therefore, been a proliferation of private educational infrastructure at the higher level across India. But while being costly they often seem to be imparting low-quality education compared with the standard government-run institutions. Private institutions thus exploit to profit from the demand-supply gap in higher education industry. However, one advantage of private HLE institutions has

been that they offer a variety of skill-promoting courses as per the demands of the market economy, which are not usually included in the curriculum offered by government-run institutions. Therefore, the private institutions imparting higher education needs to be supported by creating enabling and promotional role of government with a strong regulatory mechanism to set the standard of education (Mahajan, 2012; Basant and Mukhopadhyay, 2010). In the following lines, we present the public and private shares of HLE across regions and other characteristics. Often private education is chosen in the hope that it provides qualitatively better education and often such education is imparted in English language. However, in this analysis, it was not possible to address the quality of HLE issue according to type of institutions.

The NSSO data were classified by the type of educational institutions based on a combination of funding and management criteria into five categories, namely, government, local body, private-aided, private un-aided, and not known. The author recoded them into three broad categories,

FIGURE 17

HLE Shares by Types of Institutions and SRCs



viz., government (government and local body institutions together), private-aided and purely private institutions which include private un-aided and not known together and the shares of those institutions in higher education have been carried out. These shares by region and for sector, gender and SRCs are presented in **Figures 16 and 17**.

The proportion of males and females across both rural and urban parts of Southern states, which are receiving HLE from government institutions, is the least, followed by the Western region and then by other regions in India. Further, while the relative share of purely private HLE is high in the South, the Western region reports of relatively higher private-aided model of HLE. All other regions, including Northern, North Central, Central and North-Eastern depend dominantly on government-provided HLE infrastructure.

Surprisingly, however, one finds little variation based on the place of living and gender in the type of HLE institutions within each region, which indicates the fact that pursuing higher education from a government, private-aided or purely private institution is entirely a regional

phenomenon. Almost an equal percentage share of males and females in total males and females enrolled in higher education is observed in each type of institution, which suggests that no discrimination exists between males and females on choice of institutions.

The presence of government institutions providing higher education is much lower in South and West as compared with other regions while private-aided institutions in Western India and purely private institutions in Southern India dominate with their highest shares in higher education. Purely private institutions' presence is very low in higher education across all the regions except for Southern India (**Figure 17**).

Cost of HLE according to type of educational institution: As a matter of routine, the cost of education indeed differs according to the type of institution. Government-run institutions are relatively low-cost, excepting in North and South India where the cost is double the national average. It is expected that private-aided facilities should be costing less than the purely private institutions; and broadly this appears to be true. Yet in many

situations this broad logic does not stand. In a number of situations the cost of education is higher in private-aided institutions compared with the purely private ones. Such cost differences reflect highly complex structure of the cost of HLE in India.

There is what is known as capitation fees and a hoard of other types of costs associated with HLE in India. But suffice it to state that India is facing a sort of a crisis in the wake of multiple types of dual pricing: English education costs are very high compared with education in local language; technical education costs are very high compared with regular degrees, and private and private-aided education costs are high. *Given such cost differentials and associated differentials in quality of education, it appears that the relatively poor and deprived people are trapped in a web of low-quality education.* Without reforms in educational system there is no hope for the deprived communities in India. Although free education is provided at school level by government, at the levels above the school, free or low-cost education is almost non-existent. NSSO data have not yielded any cost of education differentials according to consumption expenditure

quartiles, thus even the poorest households (Bhattacharya, 2012) incur the same absolute expenditure which amount to a highly differentiated expenditure as proportion of household income.

Conclusions and Discussion

In India, research and analysis of HLE is rather rare and far between, mostly due to want of data. However, the NSSO, in its 71st round survey, collected useful data on education including that on higher levels, with 2014 as the reference year. In this paper some rare data relating to HLE from 64th round, namely 'Participation and Expenditure in Education,' were also used wherever necessary.

These data provide an opportunity to estimate, for example, the prevalence of HLE among the people of different age groups so as to trace the improvements over time. Two broad age groups were created reflecting different generations, one aged 22-35 years (current generation) and another group of 36 years and older identified as the past generation. Structurally, it is possible from these data to find out what proportion of all higher-level educated are technically educated, such as those having a diploma or

degree in engineering, medical and so on. In India, there is an association between the medium of instruction and quality of education. Any HLE imparted in English language is likely to be relatively better in quality terms, and also expected to yield higher wages in the employment market, often over thirty times higher. For the first time in India, through these data, it was possible to estimate the penetration of English-medium HLE across the many regions. Another unique structural issue is the growing privatisation of HLE. Estimates of HLE infrastructure according to management type and funding model in terms of government, private-aided and purely private are also presented in this analysis.

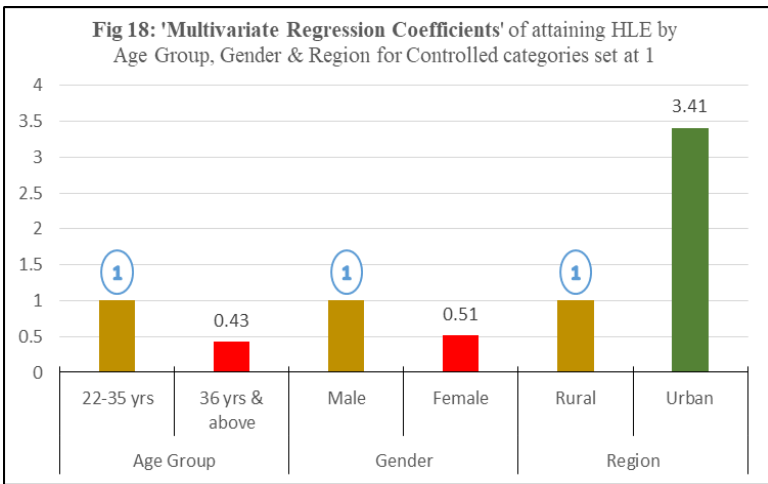
Over all, it is encouraging to note that the stock of HLE amongst the current generation (22-35 years old) and among the genders, rural-urban habitations and SRCs is found to be higher than the stock of HLE in the past generations (36 years and older). Although there is regional differentiation in the levels, generally the current generation has better access to HLE. To be specific, in both the past and current generation, HLE stock for men is higher than that of women,

considerably higher for urban than rural population and favours the high-caste Hindus and minorities other than the Muslims. SCs/STs and Muslims are found to be most disadvantaged although one notices relatively better growth opportunities for the SCs/STs. For example, the per cent difference between the two generations' HLE prevalence is highest for females, SCs/STs and OBCs. This higher difference is because of low prevalence in past generation (low base). However, in case of Muslims while having a low base (low prevalence) in the past generation, the per cent difference or improvement amongst the current generation is the least, suggesting deepening of inequity with respect to the Muslim community of India.

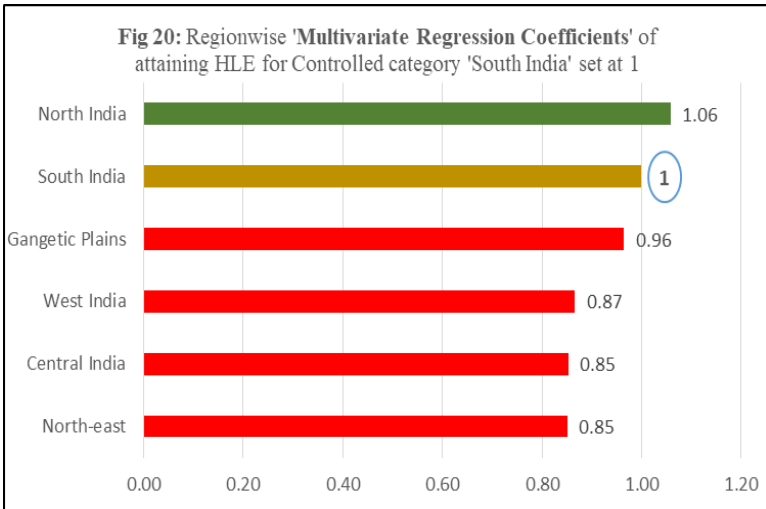
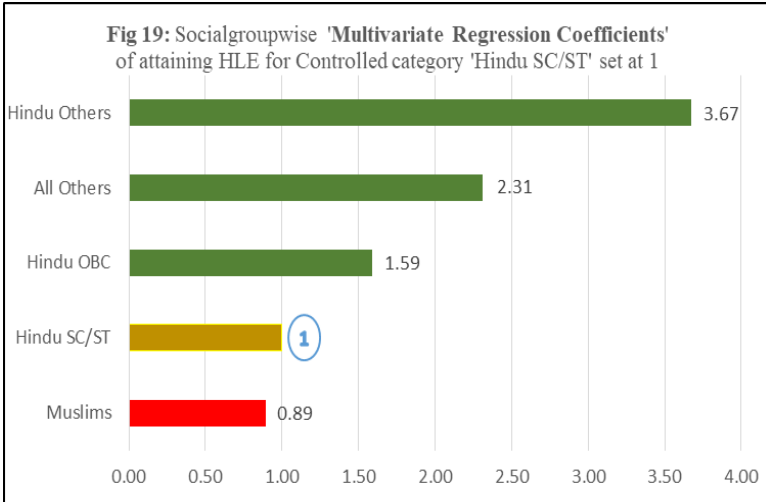
The following graphs highlight various differentials using the 2014 data and present the coefficients computed using the multivariate regression techniques to bring robustness in estimations.

Note that the younger age population the doubled access to HLE than their parental generation which is an excellent feat and evidence of India marching ahead in education (**Figure 18**). Yet the females have

considerably less access to HLE almost one half of the male access suggesting deep disparity in education girls. On the other hand, the urban areas have extremely high access compared to the rural areas which is expected due to concentration of educational institutions in some centralised urban locations.



Considering the levels of the SCs/STs as the standard, the High Case Other Hindus have close to four times advantage, followed by over two times advantage for other minorities other than the Muslims. It is only the Muslims who face more difficulties than the SCs/STs to attain the HLE. See **Figure 19**.



The general trend is that the positive transition and improvements in HLE is favouring the current generation living in urban areas, who are men and belong to high caste Hindu community and other minorities – generally those

who were already at the top end during the past generations. While the trends suggest catching up is happening in case of women, rural areas and the SCs/STs, the Muslim community has remained deprived and shows no signs of catching up with the overall current generation in speed and direction.

One of the most dynamic impacts on levels and achievements of HLE and its structure concerns the geographic location as expressed in the six broad regions created for this analysis. Southern India has shown the greatest improvement in terms of HLE prevalence amongst all the social dimensions analysed – according to gender, place of living and amongst all the SRCs. Western and North India follow as the next better regions where HLE is furthering benefits to the current generation. The North Central, Central and North-Eastern regions show lower levels of improvements in HLE favouring the current generation.

The uniqueness of this address lies in estimating the share of English-medium HLE across regions and other social parameters. Overall, one finds better access to English education for both genders, place of living

and for all SRCs, and most of this positive advantage has been materialising in the South, North and Western regions. South India stands out as the region which provides the highest level of opportunity for English-medium HLE for the current generation. English-medium education is 3-8 times more expensive than HLE in local-medium education. It is expected that the cost differentials are mostly due to differentials in quality of education. The cost ratio (English to local languages) is highest in Southern India for almost all the sub-sections of population.

The desire and demand for English education is growing all over India. In spite of the high costs, one finds that the growth in access to English-medium HLE is broad-based, including for women, in rural areas and amongst all types of SRCs, including the SCs/STs and Muslims. But due to infrastructural and institutional constraints, English-medium education is accessible fairly well in South India, followed by reasonable access in Western and Northern India. Other regions have high demand but poor institutional and infrastructural supply of English HLE.

A technical degree or diploma is much sought after as it is considered employment friendly as well as a provider of higher wages. Southern India offers better opportunities to secure HTE compared to all other regions in India. This region further provides for equal access to women, rural areas and for all SRCs. Once the technical education infrastructure is present, it becomes accessible to all.

However, the cost of technical education is considerably high, when compared with non-technical education. Yet, the high cost is not a deterrent since all sub-sections of population (males, females, all SRCs, rural and urban) are willing to incur high expenditure to seek HTE.

The share of students currently enrolled in purely private institutions is the highest in Southern India and this is more or less so for all sections of society. The cost of private education is also the highest followed by private-aided and government institutes (except for North India and Central India where the costliest education is provided by private-aided, followed by purely private institutions, while the government institutions are the cheapest).

Multivariate analyses reconfirm the major findings enunciated above. The HLE enrolment is higher for males, urban residents, and the Hindu upper castes have the highest chances of getting enrolled in HLE. The Hindu-OBCs are almost as likely to get enrolled in HLE as the SCs/STs, while the Muslims are least likely, less than the SCs/STs, to get enrolled in HLE. As the household MPCE quintile increases, the chances of getting HLE increase sharply. The Southern Indian population has the highest chances of pursuing HLE, followed by North-Central India, Central India, Western India and North-Eastern India, with North India being at the bottom. The presence of any household member with educational attainment higher than matriculation increases the chances of other household members getting HLE to a very high degree.

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