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Estimation Of Additional Resource Requirement For Financing Human Development

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Abstract

It is widely acknowledged that the underutilisation of public resources in India has often been a major hurdle in the effective provisioning of better quality public services, such as health and education. While both institutional as well as political factors contribute to the underutilisation of public funds, the budgetary allocations for such services are also fairly low as compared to the corresponding allocations in some similar types of economies. Thus, the resources in flow for public services always fall far short of their actual requirements. The present paper attempts to estimate the additional requirements of government resources for education and health sectors for Meghalaya and West Bengal. The total resource requirements are estimated with respect to national norms and standards as prescribed under respective acts/frameworks to provide universal education and health. The additional resource requirements are computed as the difference of these estimated total requirements from the actual government expenditures incurred on these two services.

Key Words: Resource, Requirement, Financing, Human Development.

Introduction

In order to foster the process of human development and to ease pressure on governments' budgets, many basic functions and responsibilities of the Government, including social services like health and education are increasingly provided and financed by private sector around the world, and India is no exception in this respect. Despite active and growing private participation in the delivery of various types of public utility services, a large part of India's population still depends on Government for availing these services. This is partly due to the fact that basic social services such as health and education, which are meant for all, are quite expensive in the private sector, thus making these services unaffordable for economically weaker sections, especially in the rural areas. Another argument, that is equally valid, and which preserves the crucial role of the government in the provision of basic social services is the strong belief that public sector has well-defined regulatory frameworks in place for different types of services which safeguard the public interest at large. However, services provided through public sector are often inferior in terms of quality and lack efficient and effective delivery systems. Among several factors responsible for these problems, low budgetary allocations and mismanagement/underutilisation of funds released are generally cited as important determinants of poor quality and inadequate supply of social services. Underutilisation of public money is mainly the result of weak institutions lacking absorptive capacity and, of course, ineffective governance. The ultimate outcome is a significant gap between the funds available for the provision of social services and their actual requirements. The purpose of the present paper is, therefore, to estimate the additional resource

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requirement for financing human development in two sample states, Viz., Meghalaya and West Bengal. For estimating resource requirement, two most important areas of human development, namely, education and health are considered. Here it is to be noted that the two states considered for this study come from different category states, Viz., Meghalaya from special category (SC) as well belonging entirely to the Sixth Schedule in North-Eastern Region (NER) States and West Bengal from general category (GC) states. However, what is worth recording is the fact that Both are less developed states officially declared as having area under hills (more of Meghalaya than that of West Bengal), thus facing the issue of cost disabilities (more by Meghalaya than West Bengal) in the provision of public services (Dasgupta, 2014). Furthermore, Both states share the history of non-viable nature of state finances. Though Meghalaya enacted Fiscal Responsibility Legislation (FRL) much earlier than West Bengal, yet over the years, the fiscal position along with other indicators of human development of these states has not been very different from each other (Dixit, 2018). In view of the cost disability faced by both states (albeit in different magnitudes), their estimated total resource requirements for education and health will first be scaled up by the state-specific cost mark-ups for respective services. These cost mark-ups have been computed in Dasgupta (2014) under certain assumptions, and, therefore, their application in the present paper also carries forward limitations associated with their calculations.

This paper is organised into five sections. With an introductory background in this section, Section 2 attempts to estimate the total and additional resource requirements for education for the selected states. In Section 3, the total and additional resource requirements for rural health sector are estimated. Section 4 explores various possibilities for financing the additional resource requirements observed in sections 2 and 3 and Section 5 concludes the work.

2. Estimation of Resource Requirement for Education

The total resource requirement for education in Meghalaya and West Bengal is estimated at elementary level of education considering two types of schools by management, Viz., government schools and government aided schools. The consideration of elementary schools in this exercise is simply because of the fact that the Right to Education (RTE) Act of 2009 and Sarva Shiksha Abhiyan (SSA) Framework prescribe norms for universalising elementary education. The procedure adopted for estimation broadly follows the methodology of (Bose et al., 2017). It is interesting to note that Meghalaya and West Bengal, the two sample states of this study, were not considered among 12 states in Bose et al. (2017). The methodology and other relevant details along with the unit cost structure for the provision of different education facilities may thus be found in the work cited above and are not reproduced in this paper to conserve the space. However, here a few observations necessary to begin the estimation are worth mentioning.

The total resource requirement is the sum of capital/nonrecurring cost and recurring cost of providing various facilities in schools. It should be noted that government does not incur capital cost for government aided schools. Nonrecurring costs are associated with the building up of new classrooms (including head-teacher's room), repair of existing classrooms and provision of other types of infrastructures such as drinking water, toilets, library, playground, kitchen-shed for preparation of mid day meal (MDM), boundary wall, ramp, etc. along with some one time costs like those incurred for computers, furnitures, etc. According to the norms under Right to Education (RTE) Act of 2009, there

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should be at least one classroom for one teacher and an office-cum-store-cum-head teacher's room in every school.

The required recurring cost is incurred by the government for government-owned schools as well as government-aided schools. This type of cost includes payment of teachers' salary, money spent on their professional development, entitlements for students (such as MDM, uniform and textbooks), expenses on administration, operation and maintenance, mainstreaming of out-of-school children (OOSC) and imparting of inclusive education taking care of children with special needs (CWSN). RTE Act of 2009 also prescribed norms for teachers considering the needs at primary and upper primary levels separately. On an average, the pupil-teacher ratio (PTR) should be around 30 at primary level and around 35 at upper primary level. These norms have been carefully considered while estimating the resource requirements. Apart from recurring costs that are incurred by the government at school level, some expenditures are also incurred for providing academic support to the entire system of elementary education under government's jurisdiction through Block Resource Centres (BRCs), Cluster Resource Centres (CRCs) and District Institute of Education and Training (DIET). Some expenses are categorised as management costs for smooth operation of the entire system.

Finally, it should be noted that the publications of the District Information System of Education (DISE) are largely utilised for gathering relevant variables. The estimation exercise conducted in this study, however, suffers from a couple of limitations which may yield under-estimated resource requirements for some categories and over-estimated resource requirements for others. To mention these limitations, it may be noted that while the access to the school-wise unit level data was granted to the author by DISE, however, due to regular technical issues in the login process on the website concerned (www.schoolreportcards.in) (under Raw Data Section), the website failing W3C accessibility criteria and given the lack of time and resources to complete this study, the author had to rely upon raw data at the aggregate level. Using raw data at a somewhat aggregate level carries its own limitations as stated in Bose et al. (2017). The aggregate raw data at the state level is available for the latest year 2015-16. But this information was complemented by another publication of DISE for the year 2016-17 so as to estimate the resource requirement at the end of the financial year 2016-17. Given these limitations, information on all the desired variables could not be obtained and some of the missing information had to be estimated through other methods. In order to proceed for the estimation of resource requirement, the details of the shortfall in school facilities are summarised in Table 1.

Table 1.

Shortfall in School Facilities at Elementary Level in Meghalaya and West Bengal (End-March 2017)

	Existing as per cent of Required	Existing as per cent of Required
	Meghalaya	West Bengal
New Classrooms	*	72.54
Classrooms requiring minor repair	28.03	13.19
Classrooms requiring major repair	19.78	18.24
Schools with Boundary wall	34	76.79

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Schools having drinking water facility	62.02	98.78
Schools with toilets for boys	97.43	98.4
Schools with toilets for girls	94.73	99.54
Schools with library facility	9.55	75.2
Schools with playground facility	32.74	37.89
Schools with ramp	36.99	8.08
Schools with computer in working condition	29.9	88.43
Teachers	*	83.24
Professionally qualified teachers	50.4	*
Percentage Enrolment in GPSs	61.01	83.03
Percentage Enrolment in GUPSs	34.34	71.78
Percentage Enrolment in GAPSs	32.19	0.29
Percentage Enrolment in GAUPSs	31.46	0.24
Percentage Enrolment of CWSN in PSs	0.67	0.90
Percentage Enrolment of CWSN in UPSs	0.29	0.58
Percentage of OoSC	2.44	2.53
Textbooks	87.25	92.36
Uniform	78.82	84.16
Mid day meal	95.36	98.26

*: Surplus of facility, PSs: primary schools, GPSs: government primary schools, GAPSs: government-aided primary schools, UPSS: upper primary schools, GUPSs: government upper primary schools, GAUPSs: government-aided upper primary schools. The percentages of enrolments in primary schools under different categories refer to the percentages of the projected population during 2016-17 in the age group 6-10 years. Similarly, the percentages enrolments in upper primary schools under different categories refer to the percentage of the projected population during 2016-17 in the age group 11-13 years. The percentage of out-of-school children is computed in the total projected population during 2016-17 in the age group 6-13 years.

Source: District Information System of Education (DISE) and National University of Education and Planning (NEUPA).

The total annual financial resource requirement for elementary education is estimated by multiplying the shortfall in education facilities with their respective unit costs (gathered from Bose et al., 2017). The estimated total financial requirements are scaled up by the respective states' cost mark-ups of education so as to account for differences in elevations in areas across states. The estimation results are given in Table 2.

Table 2.

Total Resource Requirement for Education of Meghalaya and West Bengal (End-March 2017)

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	Annual Resource Requirement (in Rs. Crores)	
	Meghalaya	West Bengal
1) Recurring Cost	281.34	5103.78
Of which A) Existing Teachers (PSs)	89.56	1218.66
B) Existing Teachers (UPSs)	0.34	3.61
C) New Teachers	0	515.37
D) Head Teacher	3.84	730.94
E) Part Time Teachers	1.44	12.02
F) Professional Development of Teachers	3.98	35.1
G) MDM	79.28	1536.73
H) Uniform	18.43	358.24
I) Textbooks	8.95	185.89
J) OAM	8.37	55.72
K) School Grants	7.82	42.11
L) AGAS (CRCs, BRCs & DIETs)	59.32	409.4
M) Management Cost	11.25	204.15
2) Nonrecurring Cost	1771.81	29268.99
Of which A) New Classrooms	0	24250.04
B) Existing Classrooms (Minor repair)	3.28	19.15
C) Existing Classrooms (major repair)	13.9	158.95
D) Library	1570.73	4136.4
E) Toilets	38.12	96.26
F) Drinking Water	15.83	4.87
G) Boundary Wall	113.9	384.75
H) Ramp	15.56	218.07
I) Computers and Computer Labs	0.66	0.85
3) Total Cost (1+2)	2064.4	34576.92
Cost Mark-ups of Education Sector	0.785	0.195
3-) Total Cost Scaled Up by Mark-up	3684.95	41319.42
3-.1) As Percentage of GSDP	12.95	4.5
3-.2) Real Recurring Cost $	395.01	4888.3
3-.3) Recurring Cost Per head of Population (6-13 years) (in Rs.) $	7632.54	4823.08
3-.4) Real Recurring Cost Per head of Population (6-13 years) (in Rs.) $	5772.75	3716.97
4) Actual Government Expenditure on Elementary Education	901.82	8564.55
4.1) As Percentage of GSDP	3.17	0.93
5) Additional Resource Requirement (3- -4)	2783.13	32754.87

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5.1) As Percentage of GSDP	9.78	3.57

Notes: $: Inclusive of management cost; PSs: primary schools; UPSs: upper primary schools; MDM: mid day meal; OAM: operation, administration and maintenance; and AGAS: annual grant for academic support through Cluster Resource Centres (CRCs), Block Resource Centres (BRCs) and District Institutes of Education and Training (DIETs). Values in real terms have been obtained by deflating the nominal values using state-specific average annual consumer price index for the year 2016-17 (2011=100). Age wise population data for Census 2001 and 2011 have been used to project the population in the age group 6-13 years for 2016-17. State-specific cost mark-ups for elementary education are the average of cost mark-ups of primary and secondary education for each state computed by Dasgupta (2014).

Source: Author's calculation using information from Table 5.1, unit cost structure given in Bose et al. (2017), Ministry of Statistics and Programme Implementation, Government of India, Census Statistics and Finance Accounts of respective state governments for the year 2016-17.

The above table reveals large additional resource requirements resulting mainly from huge investment needs in school infrastructure at elementary level in both Meghhalaya and West Bengal. In case of Meghalaya, the significant components of nonrecurring cost are library, boundary walls and toilets, while for West Bengal, construction of new classrooms, library, boundary walls and ramps are the major components. The larger resource requirements under recurring cost for Meghalaya are due to the payment for existing teachers at primary level, expenditures on Midday Meal (MDM) scheme and annual grant for academic support through CRCs, BRCs and DIETs. Like Meghalaya, West Bengal too, requires large amount for smooth implementation of MDM scheme. Some other areas, which seem to require larger resources under recurring cost for West Bengal are payment for existing primary teachers, head teachers, recruitment of new teachers and annual grant for academic support through CRCs, BRCs and DIETs. When adjusted for price changes and school-going population, the burden of total resource requirement seems to be more on Meghalaya as compared to West Bengal. Meghalaya also suffers from significant cost disabilities as compared to West Bengal, as can be observed from the scaled up costs. Both states, however, need to increase their expenditures on elementary education relative to GSDP to a significant extent so as to meet the growing demand for it. Next, we estimate the resource requirement for education for next three years, i.e., for 2017-18, 2018-19 and 2019-20. This estimation procedure assumes that the total nonrecurring cost is equally spread over three year-period so as to phase out completely by the end of 2019-20, and the total recurring cost has to be incurred every year for smooth operation of the entire system of elementary education. Furthermore, an additional recurring cost would be incurred to take care of the educational needs of the growing population in the age group 6-13 years. The population over this age group is projected using the decadal growth rate of the same age group of population as per census 2011 for the two sample states. The total resource requirements for elementary education for the next three years, so estimated for Meghalaya and West Bengal will then be scaled up by their respective cost mark-ups of education to account for differences in costs due to hilly/terrain areas. These are reported in Table 3.

Table 3.

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Total Resource Requirement for Elementary Education of Meghalaya and West Bengal Over 2017 to 2020

Year	Resource Requirement (in Rs. Crores)	
	Meghalaya	West Bengal
End-March 2017	3684.95 (12.95)	41319.42 (4.5)
2017-18	1576.98 (5.19)	17944.16 (1.76)
2018-19	1576.96 (4.86)	17944.68 (1.58)
2019-20	1576.98 (4.55)	17945.21 (1.42)

Figures in parentheses are the percentage shares in GSDP.

Source: Author's calculations using Table 5.2 and its sources.

3. Estimation of Resource Requirement for Health Sector

In this section, an attempt is made to estimate the total and additional resource requirements for health sector, focusing only on rural healthcare system. The estimation of resource requirement For government regulated urban healthcare system is almost impossible due to lack of well-defined norms and standards along with associated unit cost structure as well as non-availability of state wise comparable data on various health parameters for urban areas. The National Urban Health Mission (NUHM) Framework for Implementation mentions some norms, but they are in their infancy stage and lack objectivity in the measurement. Thus, even if we manage to extract the unit costs for providing different health services in urban areas from state-specific Programme Implementation Plans (PIPs), the lack of objective norms and standards prevent us to estimate the resource requirement for urban healthcare segment systematically. The total and additional resource requirements are estimated systematically for rural healthcare system depending upon the available norms and standards, unit cost structure of various health facilities and state-specific comparable data on different health indicators.

The healthcare infrastructure in rural areas has been developed as a three tier system comprising of subcentres (SCs), primary health centres (PHCs) and community health centres (CHCs). The national norms on rural health infrastructure suggest a minimum of one SC for every 5000 population, one PHC for every 30000 population and one CHC for a population of 120000 in plain areas. The corresponding population norms for hilly/tribal/difficult areas are 3000, 20000 and 80000 respectively. These population norms have been used to estimate the physical requirement of SCs, PHCs and CHCs based on the projected population of Meghalaya and West Bengal for the year 2016-17. The total resource requirement for rural healthcare infrastructure is thus the sum of capital/non-recurring and recurring expenditures. The non-recurring expenses are incurred on building up of new health infrastructure such as for building up additional SCs, PHCs and CHCs, construction of staff quarters, purchase of equipments and furnitures. The recurring expenses are incurred largely to pay for manpower along with the provision of drugs and some other expenses. Recurring expenses also include money spent on the provision of additional manpower requirement in existing SCs, PHCs and CHCs as per norms of Indian Public Health Standards (IPHS). The minimum norms of staffing pattern in SCs, PHCs and CHCs, staff quarters, furniture and the unit cost structure (both nonrecurring and recurring, including annual salary

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structure and associated norms) have been sourced from the details given in the National Rural Health Mission (NRHM) Framework for Implementation.

The first step to estimate the requirements for capital and recurring expenditures is to find the physical gaps in rural healthcare infrastructure and staff. Table 4 indicates the gaps in rural health infrastructure and staff for Meghalaya and West Bengal as on end-March 2017.

Table 4.

Shortfall in Rural Health Infrastructure and staff in Meghalaya and West Bengal (end-March 2017)

	Meghalaya	Meghalaya	Meghalaya	West Bengal	West Bengal	West Bengal
Infrastructure	Required	Functioning	Shortfall	Required	Functioning	Shortfall
No. of SCs	1167	436	731	19825	10369	9456
No. of PHCs	175	109	66	3304	914	2390
No. of CHCs	44	27	17	826	349	477
Staff	Required	In Position	Shortfall	Required	In Position	Shortfall
Health Workers (M) at SCs	436	192	244	10369	2174	8195
Health Assistant (F)/LHV at PHCs	109	72	37	914	157	757
Health Assistant (M) at PHCs	109	83	26	914	73	841
Total Specialists at CHCs	108	13	95	1396	117	1279
Radiographers at CHCs	27	21	6	349	135	214
Laboratory Technicians at PHCs and CHCs	136	162	*	1263	803	460

Note: Only those categories of medical staff have been reported in the table for which a shortfall is observed for either of the two states. Thus, if both states report a surplus in any particular staff category, then that category is not reported. * indicates surplus. In Meghalaya, one PHC is without doctor, two PHCs without lab technician and 3 PHCs without pharmacist. In West Bengal, numbers of PHCs functioning without a doctor, a lab technician and a pharmacist are 139, 623 and 143 respectively. These gaps have also been factored in while calculating total requirements. Total specialists at CHC include Surgeons, Obstetricians and Gynaecologists, Physicians and Paediatricians.

Source: Rural Health Statistics 2017, Ministry of Health and Family Welfare, Government of India.

It may be observed from Table 4 that during 2016-17, both Meghalaya and West Bengal required to build up large new facilities to cater to the growing demand for government health services in rural

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areas. alarmingly, both states exhibit the largest shortfall in subcentres, which is the first contact point between patient and the health worker. The situation of West Bengal is more serious in this respect, as the state suffers huge shortfalls in both SCs and PHCs, both of which provide the primary healthcare services to the people in rural areas. Another striking feature, observable from this table is the significant shortage of specialists at CHCs both in Meghalaya and West Bengal, thus lacking better/advanced healthcare services even at the tertiary level. The physical shortfalls in various health facilities/services, as reported in Table 4 are multiplied by their respective unit costs under the prescribed norms/standards to obtain the total annual resource requirement for government regulated rural healthcare system for the two states under analysis for the year 2016-17. The costs so estimated have been then scaled up by cost mark-up of health due to elevation for respective states. These are summarised in Table 5.

Table 5.

Estimates of Total Resource Requirement for Rural Healthcare in Meghalaya and West Bengal (End-March 2017)

	Cost (in Rs. Crores)					
	Meghalaya	Meghalaya	Meghalaya	West Bengal	West Bengal	West Bengal
For Building New Facilities	731 SCs	66 PHCs	17 CHCs	9456 SCs	2390 PHCs	477 CHCs
Nonrecurring Cost	36.09	25.98	17.44	466.82	940.82	489.35
Recurring Cost	24.4	10.08	11.06	315.7	364.83	310.35
Total Cost for Building New Facilities	60.49	36.06	28.5	782.52	1305.65	799.7
Cost of Additional Buildings/Staff/Drugs Required in Existing Facilities (SCs+PHCs+CHCs)	9.81			305.33		
Total Resource Requirement	134.86			3193.19		
Cost Mark-up of Health Sector	0.56			0.14		
Total Resource Requirement Scaled up by Cost Mark-up	210.38			3640.24		
As Percentage of GSDP	0.74			0.40		
Total Nonrecurring Cost #	124.16			2207.56		
Total Recurring Cost #	86.22			1432.68		
Total Real Recurring Cost #	65.21			1104.11		
Total Per Capita Recurring Cost #	246.28			144.53		
Total Real Per Capita Recurring Cost #	186.27			111.39		

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Actual Government Expenditure on Rural Healthcare (SCs, PHCs & CHCs)	178.20	668.48
As Percentage of GSDP	0.63	0.07
Additional Resource Requirement for Rural Healthcare	32.18	2971.76
As Percentage of GSDP	0.11	0.32

Source: Author's estimation using information from Table 5.4 and NRHM Framework for Implementation.

Table 5 reveals that the total as well as additional resource requirements for rural healthcare are large for both states under analysis for the year 2016-17. As stated earlier, the estimation considers only the network of subcentres, primary health centres and community health centres, and excludes hospitals and dispensaries and other systems of medicine, such as AYUSH, because they lack standards and norms to be followed in estimation exercise. Thus, in this sense, the resource requirements estimated above for the two states may be an underestimation.

Following the approach of Rao and Choudhury (2013), the estimation of total resource requirement for rural healthcare with respect to each of the two states for 2017-18, 2018-19 and 2019-20 is done on the assumption that the required capital investment would be spread equally over the period of three years and the additional recurring expenditure would be incurred every year. Further, the requirement of resources for building up new health facilities for the additional rural population every year is added to each year's resource requirement in the period 2017-18 to 2019-20. The yearly increase in rural population of Meghalaya and West Bengal is projected using Census 2011 population figures and decadel growth rates. The estimated total government resource requirement for rural healthcare in Meghalaya and West Bengal under the IPHS/NRHM norms (after scaling up by cost mark-up) has been reported in Table 6.

Table 6.

Estimates of Total Resource Requirement for Rural Healthcare in Meghalaya and West Bengal for the period 2017 to 2020

Year	Total Resource Requirement (in Rs. Crores)	
	Meghalaya	West Bengal
End-March 2017	210.38 (0.74)	3640.24 (0.40)
2017-18	136.86 (0.45)	2196.22 (0.22)
2018-19	136.98 (0.42)	2196.29 (0.19)
2019-20	137.12 (0.40)	2196.29 (0.17)

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Note: Figures in parentheses indicate percentage to GSDP. estimates of total resource requirement for the period 2017 to 2020 and their relative shares in GSDP are based on projected population and projected GSDP figures.

Source: Same as for Table 5.5, and Handbook of Statistics on Indian States, Reserve Bank of India.

4. Options for Financing the Resource Requirements

The additional resource requirements for elementary education and health of Meghalaya and West Bengal are quite large (see Tables 2 and 5 respectively). These additional requirement of resources in health and education sectors may be met out through a well-thought combination of expenditure reprioritisation in favour of human development, additional resource mobilisation (from both own tax and non-tax revenue sources), external assistance and private resource mobilisation. Here it may be noted that no single option can work due to problems associated with each of these options. Further, borrowings cannot be thought as a feasible option for financing the social sector requirements, because most of the social sector expenditure is incurred on revenue account largely as payments for operations, maintenance and administration, and therefore, financing the same through borrowings would simply add to the liabilities of the states, while hardly any return would be accrued to them. Thus, borrowings are more suitable for investments which involve direct returns. This also applies for external assistance, which occurs mostly in the form of loans. The Twelfth Plan document advocated the restructuring of the role of Government; reducing its role in some areas, while increasing in others. The document explicitly mentioned that the provision of basic services, such as education, health, sanitation and clean drinking water should largely be the responsibility of the Government, while private sector should focus on other areas of development.

With regard to expenditure reprioritisation for human development, it should be noted that both Meghalaya and West Bengal generally underperformed relative to the average of their counterparts. The quality of public expenditures of these two states and their adequacy for social infrastructure has been generally poor as they spend meagre portions of their expenditures on capital account of education and health. Even in absolute terms, the per head allocation of expenditure for social sector has been quite low in Meghalaya and West Bengal as compared to their peer SC and GC states (Dixit, 2018). Although there is no objective criterion to assess the extent of expenditure reprioritisation, what is, however, desirable for the two states in question is to learn lessons from their respective peer states and adopt the best practices in managing their resources. Furthermore, there is always the scope of improving the efficiency and effectiveness of public expenditure, and the states under analysis should make a self-assessment at regular intervals in this direction. Although the efficiency of public expenditures of Meghalaya and West Bengal has not been analysed in this study, a recent study by Mohanty and Bhanumurthy (2018) finds that most of the NE states (except Tripura) are the poor performers in 2015 as these states are using high share of public spending to achieve the given outcome. With the current resources, while West Bengal is producing 17 per cent less output, this percentage for Meghalaya is 22. There is a massive potential (more for Meghalaya as compared to West Bengal) for simultaneous increase in current outputs and reduction in inputs.

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While exploring the possibility of additional resource mobilisation through own tax revenues (which account for major share in own revvenues), it should be borne in mind that the recently introduced regime of goods and services tax (GST) is yet to be stabilised and the issues in its design and/or implementation have to be settled with clarity. Only then the potential revenue from this source could be estimated. Furthermore, this new tax regime has replaced a plethora of Central and State level taxes, and therefore, only few taxes remain outside the GST framework at the state level. Here it is worth mentioning that own revenues account for low share in GSDP for both Meghalaya and West Bengal and the pace of own revenue mobilisation has been slow, more for West Bengal than for Meghalaya (Dixit, 2018). It is, therefore, imperative to assess the revenue potential of major taxes levied by Meghalaya and West Bengal for the year 2016-17 for which the actual figures are available till date. For this purpose, four taxes have been considered for assessment of potential revenue and the approach of Sen et al. (2009) is followed. Under this approach, first the maximum tax to GSDP ratios are found for each category in a given time series and then those maximum ratios are multiplied with GSDP of a particular year to get the potential revenues for each tax category for that year. In our case, we observed the tax to GSDP ratios with respect to four taxes, namely, stamps and registration fees, state sales tax, state excise and taxes on vehicles for the period 2000-01 to 2016-17. The potential revenues from these taxes, obtained from this procedure for the year 2016-17 are reported in Table 7.

Table 7.

Potential Revenues from Major Taxes of Meghalaya and West Bengal (in Rs. Crores) – 2016-17

Tax	Actual Revenue	Potential Revenue	Revenue Difference
Stamps and Registration Fees			
Meghalaya	17.19	23.09	5.9
West Bengal	4382.73	6703.47	2320.74
State Sales Tax			
Meghalaya	309.79	811.11	501.32
West Bengal	7231.34	28606.67	21375.33
State Excise			
Meghalaya	168.98	254.61	85.63
West Bengal	5226.16	5226.16	0
Taxes on Vehicles			
Meghalaya	48.22	48.20	-0.02
West Bengal	1869.86	2713.07	843.21
Total of the above			
Meghalaya	544.2	1137	592.9
West Bengal	18710.09	43249.37	24539.28

Source: Computed from the data on state finances of the Reserve Bank of India and Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.

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It may be noticed from Table 7 that if both Meghalaya and West Bengal try to use their potential revenues from major taxes, they can finance their additional resource requirements for education and health to a significant extent (this is true, especially in case of West Bengal, where large gaps are observed between actual and potential revenues for various taxes considered, except state excise). The maximum difference between actual and potential revenue is with respect to state sales tax for both Meghalaya and West Bengal, thus suggesting a greater scope to raise revenue from this tax by both states. The other taxes, which can be used to mobilise more revenues are state excise for Meghalaya and taxes on vehicles for West Bengal. Although stamps and registration fees has a very low scope of raising revenue in case of Meghalaya, it can mobilise Rs.2320.74 crores of revenue for West Bengal (not a small amount). So far as non-tax sources of resource mobilisation are concerned, states can explore areas such as increasing returns from general and economic services through appropriate price policy and levy of user charges for various kinds of social services rendered by different departments under state governments without affecting the provision of these services to common man. However, the important source of own non-tax revenue is states' share in Central taxes. States can utilise their shares in Central taxes for financing various developmental services including education and health. The ultimate priority has to be decided by the individual state government for spending its share of Central taxes. The states' role in this respect has become crucial after they have been given greater fiscal autonomy through enhanced tax devolution subsuming in it various types of tied grants.

The option of private funding for the provision of various social services should be explored carefully, as private sector is already participating very actively in this area. In the absence of regulatory norms and well-defined procedures, the partnership of state governments with private units for the provision of basic social services may hurt the interest of people at large. Further, as Sen et al. (2009) noted, reinforcing the idea of corporate social responsibility (CSR) to provide for necessary social infrastructure at reasonable rates in the interest of all may be a good approach while ensuring that industrialisation does not add to the loss of income opportunities or assets of concerned citizens. Apart from various options discussed above, local communities, civil societies, missionaries, etc may be strengthened so they can work more effectively towards people's welfare. Not least in any respect is people's realisation of their responsibilities towards nation's development and their active participation can bring greater transparency in governance process which will improve the quality of services delivered to the people – an equally important issue as is the adequacy of public expenditure.

5. Concluding Observations

The management of public funds, especially when it comes to the provision of basic social services, such as education and health has been a challenging task for almost all governments around the world. This, however, assumes crucial significance for developing countries like India, as these countries are relatively more fiscally constrained in performing various functions. Although private sector has increasingly shared the responsibilities of the governments in financing as well as in providing various kinds of public utility services, yet the role of governments remains unquestioned in this respect guided by cost considerations and issues of regulations and standards in the private sector. This paper made an attempt to estimate the total and additional resource requirements with respect to elementary education and rural healthcare for Meghalaya and West Bengal for the year 2016-17 and forecast the same for the

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next three years, Viz., 2017-18, 2018-19 and 2019-20. The estimation exercises are conducted under certain limitations and assumptions, which might have yielded an underestimation/overestimation of resource requirements. The results of the estimation exercise seem to suggest that the total financial resources required for elementary education in case of Meghalaya during 2016-17 were of the order of Rs.3684.95 crores accounting for 12.95 per cent of GSDP, while the actual government expenditure of the state on elementary education for the same year stood at Rs.901.82 crores (3.17 per cent of GSDP). Thus, the state required additional resources to the tune of Rs.2783.13 crores, which is roughly 9.78 per cent of GSDP for the year 2016-17. For West Bengal, the additional resources required for elementary education during 2016-17 amounted to Rs.32754.87 crores constituting 3.57 per cent of its GSDP. The actual government expenditure of West Bengal under this head for the same year was Rs.8564.55 crores, that accounted for less than 1 per cent of its GSDP, whereas the total resource requirement for the state was worked out to be Rs.41319.42 crores (4.5 per cent of GSDP). All these findings indicate that both Meghalaya and West Bengal need to substantially increase their shares of GSDP on elementary education so as to meet the growing demand for education in near future.

With respect to government regulated three-tier system of rural healthcare services, it has been found that while both states under analysis need to build up large health facilities, West Bengal's resources are spread thin to cater to the growing demand for healthcare services in rural areas. The actual government expenditure of West Bengal on three-tier system of rural healthcare during 2016-17 was quite low accounting for just 0.07 per cent of GSDP, whereas the total resources required under this head accounted for about 0.4 per cent of GSDP, thus requiring the state to significantly enhance the share of GSDP on rural healthcare by at least 0.32 percentage points so as to meet the additional resource requirement. On the other hand, Meghalaya's actual expenditure on rural healthcare for the year 2016-17 accounted for 0.63 per cent and the share of its total resource requirement in GSDP under this head was 0.74 per cent. Therefore, Meghalaya need to increase its expenditure on rural healthcare relative to GSDP by 0.11 percentage points to meet the additional resource requirements for the rural health sector. Here it may also be noted that Meghalaya faces huge cost disabilities owing to various geographical and other factors that is reflected in the scaled up costs for elementary education and rural healthcare for the state. Furthermore, the burden of price changes and population growth seems to have fallen more on Meghalaya as compared to West Bengal.

In view of large financing requirements for human development by both states, it is recommended that both states should utilise the usual options for financing their requirements effectively so as to achieve the desired results. In this connection, it is suggested that states should not rely on borrowings for financing their social sector requirements, rather they should take lessons from their respective peer states to adopt best practices and manage public funds more effectively. The simple exercise to assess the revenue potential from major taxes of states seems to suggest that state sales tax and state excise are the potential sources of revenue for Meghalaya, while for West Bengal, stamps and registration fees and state sales tax may yield greater revenues. However, additional resource mobilisation through own tax revenue will largely depend on how quickly the system of GST (which subsumes in it, several kinds of taxes) stabilises and how quickly various issues in its design and implementation are settled with clarity. The largest source of own non-tax revenue is state's share in Central taxes, which now assumes greater relevance for states in view of greater fiscal autonomy given to states through enhanced tax devolution

and reduced tied grants to states. The two sample states of our study, Viz., Meghalaya and West Bengal are found to gain at large from their increased shares in Central taxes. Therefore, they should utilise their increased tax devolution more judiciously than earlier in view of the reduced tied grants. Finally, both states should think of utilising private funding more effectively and efficiently and think of opting for reinforcing the idea of corporate social responsibility to build up necessary social infrastructure. Also people's participation should be encouraged in the governance process so as to bring greater transparency and improve the quality of public services delivered.

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