Obstacles to Inclusive Primary Education:
A Demand Side Perspective

Rakesh Raman
Professor, Department of Economics, Faculty of Social Sciences
Banaras Hindu University, Varanasi-221005, Uttar Pradesh
rraman88@gmail.com

Rosy Sulochana
Doctoral Fellow, NCERT, Department of Economics, Faculty of Social Sciences,
Banaras Hindu University, Varanasi-221005, Uttar Pradesh
rs05791@gmail.com

Abstract

The Indian economy that aspires to emerge as an economic superpower has made tardy progress on the front of universalisation of primary education. The explanation for this has normally been sought in terms of insufficient primary education infrastructure created, higher opportunity cost of education, lack of commitment on the part of the providers especially attitude of teachers, poor quality of education etc. The issue of explaining the problem from the side of demand has however not interested researchers and analysts much.A big chunk of population in India is deprived not purely because the society excludes them or the facilities are not available; the exclusion is on account of unwillingness of the deprived section to get educated as it sees no apparent benefit from the education it can dream of getting. This means that children may not be deprived of schooling by the educational system rather they themselves/their parent do not have will and positive attitude to be educated. It is imperative therefore to measure the demand for primary education by developing suitable index and come up with interventions that by making primary education productive and useful boost demand for it.

Introduction

The history of economic development of India so far has been one of remarkable successes and remorseful failures. While on the one hand the nation has made tremendous progress in absolute terms emerging as a force to reckon with, on the other, it has failed to grow in a uniform and balanced manner. The unevenness in attainment is more pronounced in the case of human development. It is pitiful that for a nation like us which on the one hand talks about creating world class infrastructure for higher education and having the largest reservoir of qualified doctors, engineers and other professionals, still the goal of universalisation of primary education remains elusive and looks onerous and gigantic.

A lot has been written on universalisation of primary education and making it inclusive. The explanation to India's tardy progress on this front has normally been sought in terms of insufficient primary education infrastructure created by the government, higher opportunity cost of education, lack of commitment on the part of the providers especially attitude of the teachers towards the weaker section of the population, poor quality of education etc. The issue of explaining the problem from the side of demand has however not interested researchers and analysts much. The commonsense that education is a 'merit good' and hence considered desirable by everybody has dominated the contemporary discussion. Everybody seems to have taken the demand for primary education almost for granted. Such perspective is not correct and is misleading. Mere supply of primary education facilities cannot be considered sufficient to ensure inclusive education. This is because still in India, there is a significant section of population which does not want education. It may be either because the quality of education which is available to this section is too inferior to be of any use to it or else because the level of education that the section think it could at the most achieve is not directly productive or cannot be translated into any concrete output due to socio-economic constraints and defective curriculum designing and missing vocational content.

In such a scenario, the issue of demand for education becomes important. For making balanced growth, establishment of a healthy society and reaping demographic dividend, children have to be made more interested and motivated towards education. This could only ensure the recipient's participation in real sense. Since, quality education is positively related to the willingness of children to receive education and fosters their regularity and continuance in schooling, the present paper focuses on the demand perspective of education. It is divided into three sections. Section I discusses the conceptual issues associated with inclusive primary education highlighting demand perspective. Section II makes aninter-district comparison of disparity in demand for primary education of UP, using the demand indicators of secondary DISE data for two time periods-2006-07 and 2009-10. Section III deals with the issue of interventions or policy implications required for ensuring inclusive primary education.

I.   Conceptualizing Inclusive Primary Education: The Demand Side Perspective

There is conceptual confusion surrounding the issue of inclusive education as there are different interpretations of inclusion across the globe. We make a modest attempt here to understand how the extant literature looks at inclusive education from demand side. The literature relating to inclusive education can be divided into two broad categories- The Western/Advanced Nation Perspective & the Indian/Developing Nation Perspective. We briefly discuss these here-

The **Western authors** for whom universalisation of primary education is not an issue as literacy rate is near 100% there, inclusive primary education is seen as an endeavour to bring differently abled children-spastic, blind or physically handicapped etc. under the umbrella. It means equity in education for special needs children. They see inclusion as challenge to exclusion in schools and communities and of being *"vigilant about whatever threats to equity arise"* (Dyson, 2004). The term is sometimes used in England to describe practices within special schools (Spurgeon, 2007). In some context in UK, inclusive education is not linked to disability or special needs, but rather to school attendance or behaviour (Ainscow*et. al.,* 2006). In wider terms, inclusive education in western nations is not merely about providing access into mainstream school for pupils who have previously been excluded or closing down an unacceptable system of segregated provision; rather, it demands a change on the part of existing school systems in terms of physical factors, curriculum aspects, teaching expectations and styles, leadership roles and many more things. The primary emphasis on conceptualising and in forcing inclusive education is obviously from the side of supply.

The Developing Nation Perspective:- For these nations universalisation of primary education is still a distant goal and as such they are putting more emphasis on bringing the able-bodied but still deprived children under the umbrella and the emphasis on differently-abled children is rather missing. There are a number of scholars in India who see inclusive education as the freedom to lead minimally decent lives to the deprived and weaker section of the society with access to basic education and health services. Inclusion is seen as the right of this section to go for i.e. willingly chose what it wants. It is more important that whether thosewho are illiterate have the freedom and autonomy to get access to education, given the institutional dominance of caste and religion in India. Sen(1981, 2000), Unni.J(2009); Acharya(1996),Louis (2007), Majumdar (1996) and Arjan de Haan (1999) etc. look at exclusion as the process and outcome of excluding, casting out, depriving and denying equal space to some of the citizens of a country or members of a society.Sen (2000) points out that *when societal process deliberately prohibits a person to have freedom of his/her own choice of education; this exclusion leads to capability deprivation.*In India, as in a number of other nations, the social system is such that it has deliberately kept out a certain section of population out of the educational system. The system has either discouraged the government from catering to the special needs of the deprived/marginalised section or created an atmosphere that has dissuaded this section to venture into the field. The established version thus emphasises on creating sufficient infrastructure for the deprived section and making education available at the minimal cost.

The general belief in India is that absence of inclusive education can be explained only by the failure of the government to provide the facilities at affordable cost to those who have been kept out. The present authors find *a serious mistake* in this approach. In fact in India a big chunk of population is deprived not purely because the society excludes them or the facilities are not available; *the exclusion is on account of unwillingness of the deprived section to get educated as it sees no apparent benefit from the education it can dream of getting.*This means that children may not be deprived of schooling by the educational system rather they themselves/their parent do not have will and positive attitude to be educated. This shows that change is needed not only in the societal system but in the mindsets of person as well.

There are, as a matter of fact, two kinds of exclusion- First is the deliberate exclusion due to the societal processes (something that has been extensively explained by scholars). This includes groups consisting of those children who generally belong to disadvantaged and marginalized section of population girls, SC/ST, OBC, Muslim children, working children, children with special needs, urban deprived children, children from minority groups, children below poverty line, migratory children and children in the hardest-to-reach groups (Govinda&Bandyopadhyay, 2008) etc. The second kind of exclusion is the exclusion owing to demand-side factors showing lack of willingness among children of the deprived section towards education. This group remains in danger of being deprived of education or in danger of dropping out from the school due to lack of essential appropriateenvironment and support.Children who fail to benefit from formal school education do not constitute a monolithic group. For some of these, school is genuinely outside their reach in physical terms, some others fail to join school, even if it is available in the neighbourhood, due to social and economic reasons. Yet, some others leave school without completing primary cycle of five years. There are some who are officially on the rolls of school but remain largely absent and are unable to benefit from the schooling process. There are also those who complete primary in physical terms but hardly benefit in terms of acquiring cognitive capabilities. It is obvious that one cannot place all these children in a single basket as failing to benefit from school. Rather, one may wonder, whether it is children who are failing to benefit or it is indeed the school system that is failing to reach education to the children. We call lack of willingness on the part of the children or the guardian to get

primary education as one of the main factor acting as obstacle to inclusive primary education. It is the lack of demand for primary education that keeps a certain section excluded.

The present paper, thus addresses the demandside issue of education that whether the children, especially belonging to disadvantaged groups, have real demand for education, *i.e.* whether they have necessary motivation, will, and attitude to be educated. If the beneficiaries do not have the freedom, need and urge to avail the facilities, all efforts of creating the facilities, making it affordable and motivating the providers would fail. Ensuring the demand for education of recipients means providing motivation among the masses to consider education as an economic good. It involves a number of issues:-

First issue is the *extent to which the deprived sections consider education as an 'economic good'* that at least has the potential of adding anything to their income generating capacity. A substantial number of illiterates are not those for whom the supply side deficiencies exist but those who do not consider education to be necessary and give preference to work at home or outside over going to school[Govinda&Bandyopadhyay(2008),Jha& Subramanian (2006), Kingdon and Theopald (2008), Agrawal (1972)].

Second issue is that even *if the weaker section recognizes the importance of education, itvalues it only for the male child who is considered bread earner for the family and not for girls*, who are expected to look after the sick, perform household activities and take care of children. Many studies found not only expenditure on girls' schooling to be lower than on boys, but also that anincrease in the costs of schooling reduces the probability of girls going to school[Chandrasekhar and Mukhopadhyay(2006), Mumba(2002), Sharma &Sapra (1971), Shukla (1995), Banerjee (1997), Chakraborty (2006), Bhatty, (1998), Dreze and Kingdon (1999)].

Third issue is the reluctance of parents to send their children to schools due to *poor quality of the teaching-learning process* [Govinda and Varghese (1991; 1992; 1993)]. The guardians are aware that the kind of education they can afford for their children is not going to make any value addition in terms of productive ability and employability.

Fourth issue involves *lack of interest in studies, unsustainable acquired literacy skills, irregular attendance and repetition* owing to the discouraging environment of schools especially when children are first generation learners [Srivastava (1970), Chattopadhyay, Guha and Durdhawale (2005)].

Fifth issue is the *longer working hours of mothers*. This leads to her absence from home for the greater part of the day. In the absence of monitoring of performance children play truant from school or do not study (Banerji, 1997).

Sixth issue involves *the income, educational and occupational background of parents* which positively influencethe academic performance of their wards [Malik (1984), Jagannadhan (1986)]. In a number of cases the guardians do not understand the importance of punctuality and regularity in schools. Thus if the child has to take care of some responsibility frequently in one or two days of a week, they are not sent to school on those days resulting in gradual disinterest towards education in the child.

Therefore, ensuring educational motivationand equal opportunity among all class of children irrespective of their race, social class, ethnicity, religion, gender and ability is the real essence of inclusion. However, if advantage of such opportunities is confined only to some section of people, while keeping others away from it, it ultimately leads to denial of access and thus, results in capability deprivation which is definitely against the basic idea of equality.

II.   Inter-District Disparities in Demand for Inclusive Education- This section is divided into two sub-section, one stating the methodology and second, showing the tabulation and analysis part.

II.A.Methodology-The real concern of this paper is to understand the impact of demand side factors on inclusive education. For this, the paper intends to measure the inter-district variation in demand for inclusive education for the state of Uttar Pradesh, using DISE data for two time periods 2006-07 and 2009-10.DISE is a comprehensive database on elementary education in India. This is a novel and welcome step by NUEPA but the problem with it is that it is available only with limited set of indicators. Out of the information supplied by DISE only five can be used as indicators related to thedemand side of education showing willingness on the part of children towards education. Though by conducting a primary survey, more appropriate indicators could be developed, yet the present paper uses onlyfive indicators whereby the data has been drawn for 70 districts of UP. This is the major limitation of present study.

II.A.1 Choice of Indicators:-For estimating the demand of social groups towards primary education following indicators have been chosen-

1. *Enrolment of different social groups* has been taken as the first indicator of demand for primary education. Logically given the facilities that we have a lower percentage involvement of weaker section would entail a lower demand on their part. Taking into account the percentage enrolment of SC/ST/Muslims etc. will not be showing demand since a particular district with high portion of SC population is likely to have relatively high percentage of SC enrolment. In order to measure demand therefore we have computed '*participation factor'*. This is done by dividing the percentage of SC enrolment by percentage of SC population in the district. If percentage of SC enrolment exceeds percentage of SC population in the

district the value of participation factor will be more than one reflecting a positive attitude of the caste group towards education and vice versa. Similarly, another indicator i.e. the percentage SC girls to SC enrolment in primary have been weighed by sex ratio in particular district so as to make girl's enrolment free from gender bias. This would truly represent the demand for education for girls i.e., how much importance the SC community gives to female education. Ideally, we should have asked questions to the SC/ST population regarding their attitude towards female education and thereafter should have developed some scales to measure their demand for education. But since DISE data do not give such information, we are taking the percentage SC/ST girls to SC/ST enrolment in primary education by sex ratio as a proxy for demand for education. The similar procedure has been followed for other indicators related to ST and Muslim population.

The percentage of girls by sex-ratio has been taken as an important sub-indicator of adaptability. We have divided the percentage of girls enrolled by the sex ratio of the particular district to get idea about demand for education for girls.

2. *Examination result* is considered as the second sub-indicator of adaptability. For this, sex-wise percentage of students passed with 60 and above marks in grade V is calculated. This indicator has been taken as a proxy to learner's achievement. A number of studies have found that the deprived section children come to schools for receiving different benefits –cash or kind and not for getting education. The academic performance of this section is dismal not entirely because the lack of resources with them but primarily due to the fact that they do not genuinely demand education and wish to gain anything from it. The children are irregular, uninterested and disconnected from what is happening in schools.

3. The third sub-indicator is the *Gender Parity Index*. GPI measures the level of learning opportunities available for women in relation to those available to men. The GPI has been used in the present work as indicator of demand for education of girls. Parity index equal to one indicates that the girls' and the boys' enrolment rates are equal. An index below one indicates that the enrolment rate of females is lower than their counterparts.

4. Another important indicator of adaptability is the *Dropout rate*. The student flow analysis assumes that high dropout reflects unwillingness of children to continue education.

5. The fifth sub-indicator of adaptability is the *Promotion rate*. It is commonly accepted that the lack of interest of deprives section students also results in their low promotion rate. After deducting the number of repeaters and dropouts in a grade from the total children enrolled in that particular grade, the actual number of students who are promoted to next grade is computed.

II.A.2 Computation of Demand Index: -The present paper develops demand index for different districts of UP for two time periods so as to make a comparison about the relative position of districts with one-other. For this the same methodology is followed as is used in the estimation of Educational Development Index i.e., factor analysis. Each indicator has been first normalized by taking values between 0 and 1. For normalisation, first the best value and the worst value have been identified and then following formula was used for normalisation.

$$NV_{ij} = 1 - \left(\frac{\{Best\ X_i - Observed\ X_{ij}\}}{\{Best\ X_i - Worst\ X_i\}} \right)$$

The best and the worst values will depend upon the nature of a particular indicator. In case of a positive indicator, the highest value will be treated as the best value and the lowest, will be considered as the worst value. Similarly, if the indicator is negative in nature, then the lowest value will be considered as the best value and the highest, the worst value.

Second, using data of all variables of all districts factor analysis1 has been used to find out the weights fordifferent variables. Using the weights of variables, the jth factor Fj can be expressed as: $F_j = W_{j1}X_1 + W_{j2}X_2 + \ldots\ldots + W_{jp}X_p$ ………………

Where, Wj's are factor score co-efficient, P is the number of variables and X is the score of individual variable of indicator 1. The unit of analysis can be then arranged in a hierarchical order on the basis of the factor score.

Third, A combinedcomponent score have been computed from the first (S1I) and second (S2I) component score using the percent of variation explained as the weights. In other words, weights were allotted to each set of factor scoresin the proportion to the variance explained by it.That is the score for the unit is:

$CCS_i = W_1S_1I + W_2S_2I$…………………………………………….4

Where, $W_1 = V_1/ (V_1+V_2)$ = proportion of variance explained by the first Component with a variance valueV_1 and like wise

S_1I and S_2I = First and Second Factor Scores for the ith unit.

The CCSi (combined component Score) thus worked out is considered as composite index of development.

II.B. Tabulation &Analysis:- This section analyses the position of different districts and zones of the state of

UP in terms of demand of primary education. The evolved factor structure of the five indicators for demand for primary education that are interconnected based on the Kaiser criterion of Eigen value is presented in Table 7. The initial Eigen Values (Total) which are more than one have been identified from the data set. After this the same number of components has been extracted for each variable as shown in Rotational Component Matrix presented in Table-8. In the present data set, since three Eigen values (for indicators namely, participation index, performance index and gender parity index in both time periods) are above 1 (as depicted in Table 7), three components have been extracted. This shows that out of five indicators the above three indicators are significant in affecting the demand for primary education. Participation and involvement of children from weaker section, their performance in examination and an unbiased attitude towards girl's education determine whether primary education would be actually demanded by the targeted section or not.

Table-2 shows the ranking of districts of Uttar Pradesh in terms of demand for education. There are some important observations to be made – First, the overall achievement of the state in terms of demand for primary education is not satisfactory. The average index score for UP is found as only 0.64. In an era in which the importance of education is supposedly appreciated by all and sundry and in which people have speaking very high of return to education, the figure is really dismal. It clearly indicates that the weaker section is still not convinced about the usefulness of primary education. Second, there exists inter-district variation in index scores. Though the standard deviation and coefficient of variations are found as 0.10 and 16.76% respectively which cannot be technically regarded too high, yet variations exists between the top rank districts and bottom rank ones. If we compute percentile scores using the yardstick of top performing district i.e. Sitapur, it is found that about 21 districts have a percentile score of 90%, 47 district above 80%, there also has 10 districts with percentile score of 70% or less. For example Etah has an index score of only0.163, followed by Budaun 0.361 and Mau 0.395.There are altogether 20 districts with an index score of less than 0.6. This indicates that the demand for primary education has not picked up in a number of pockets of the state. Third, If we closely analyse the districts which are placed at the bottom in terms of demand for primary education index, we notice that out of the bottom ten districts five (Etah, Budaun,Muzaffarnagar,Bulandsahar and Meerut) are from Western region, three(Mau, Balaramur and Basti) from eastern region, and one each from central (Unnao) and Bundelkhand(Mahoba) region. As a matter of fact the problem of demand for education is more acute in Western region of the state.

Table-6 gives descriptive statistics of main indicators. It is clear that the taken in absolute terms the value for participation and promotion indices are very low for the state. The participation index of 0.4709 reflect that even from the yardstick of better performing district of the state itself (forget about the national yardstick), the involvement of deprives section is very low. In an era in which the government has opened schools in the most remote area of the state and have not only made primary education totally free but has also come up with incentives, the low participation is indicative of low demand by the deprived section. Even the low performance score (0.3826) reflects that education is not taken seriously by the deprived section and they are in school not because they see education as a tool for career building but as a means to secure temporary freebees. Low gender parity index shows that for the people of the state in general and deprived section in particular education seems to be a merit good mainly for boys and not for girls. Girls in poor families either earn few bucks for the family by indulging into petty occupation or else look after the younger ones in the family so that the mother can earn for family. Education is seen as not adding anything to the productivity, employability and capability of girls so parents do not demand education for them resulting in low attainment i.e. low female literacy.

It is noteworthy to see how districts have moved in rank of demand index between the two time that we have chosen. Table-3 shows movement of ranks of districts between 2006-07 and 2009-10. Ideally we should have computed movement between two relatively longer time periods (e.g. between 1990-91 and 2009-10 but non availability of DISE data forced us to choose 2006-07. It is true that not much can be inferred for such a short interval still it can indicate how districts are doing in a limited way. The districts on left hand side with positive rank difference between two time periods show progress or improvement in demand for education whereas the districts with negative rank difference shows deterioration. The districts like, Bijnor, Kanpur Nagar and Shrawasthi reflects very high demand for education since their ranks increased by large extent while the districts like Basti and Bulandshahar show low demand for education on account of their severe decline in ranks.

Different regions of Uttar Pradesh differ significantly in major indicators of economic development (Kumari& Raman, 2011 & Raman &Kumari, 2012) and of course education is no exception. Table-4 presents the summary of demand for primary education for different regions of the state. It shows that – First, there is little or no change in index scores or relative position of different regions between the two time periods 2006-07 and 2009-10. Second, the Bundelkhand region which is economically most backward region of the state is ranked first in demand for education. The result might seem shocking but it is not. The region has been receiving lot of attention from the government agencies and huge amount of money has been pumped in here. Special drive for increasing enrolment has been launched and under pressure the block level officials and government school teachers have been encouraged/ forced to inflate the figures of enrolment/participation and performance and depress the figures of dropouts. A genuinely high demand for education in the region would have been

reflected in high literacy rate in the region which is obviously not happening. Third, The Western region I placed very low in terms of demand for education. This is on account of relatively high population of Muslims and SC in the region that tends to depress the participation index. Further, high inter-personal inequality of income in the region also results in low demand for education by the most deprived section. The government has also tended to neglect the region and has not gone for special enrolment drive as statistically it (region) is regarded the advanced region of the state.

It is important to see how participation has affected performance of students. Table-5 provides a summary relation between ranking of different districts on the basis of participation and performance indices. The relation is negative as is reflected by high concentration of districts in bottom left and top right rectangles.This shows that high participation index has not ensured good performance of enrolled as the motive behind enrolment has not been getting education rather enjoying the free-bees offered with education. The mid-day meal and other schemes like payment of scholarship or free bicycles etc. for deprived sections/gender has attracted this section to schools and pushed up their enrolment creating the impression that demand for education has increased. The fact of the matter is that a significant portion of the beneficiaries still do not consider education as an economic good or having positive utility and are therefore is not ready to meet even the opportunity cost (amount of money lost by withdrawing their wards from petty occupation).

III.   Policy Implications

To achieve the end of universalization of primary education, the demand for education needs to be generated. Fostering demand means convincing people that education is necessary for their all-round development. This could be done by following a two-pronged strategy.

▪ First strategy obviously is a*dopting tailor-made educational system for targeted/excluded children.* Tailor-made approach means transformation of the educational system as per the requirement of targeted children instead of expecting them to adapt to the present educational system. By identifying the special education needs of those deprived children who do not have demand for education, government can address those factors responsible for hindering their demand and thus, in turn could take necessary steps towards that front. This could be done in the form of organizing evening classes for those children who are engaged in labour activities and who could not attend regular schools. This way by finding the demand side reasons for low attainment of normal as well as disadvantaged children, government can move a step ahead towards inclusive education.

▪ The second strategy is*making primary education economically productive for children.* As per the economic theory, something which is of use or which has utility in itself will be demanded. If education is of use, it will be demanded (especially when it is provided free, it should be heavily demanded). Unfortunately primary education in India does not directly enhance the productive ability of the taught. This adversely affects children's demand for education. The study by Becker (1993), Duraisamy (2002), (Harmon et al., 2003) and Agrawal (2011) reveals that children prefer to attend school only when the present value of the expected benefits from schooling exceeds that of the expected costs. It is found that the return to education is lower for the low income group of population and it increases with the level of education. The poor quality of primary education could be one possible reason for the low returns to primary education. There are few important things that need to be done- (i) Vocational education should be made an integral part of primary education. In addition to providing deprived section students the normal education, they should be provided with some skill development training. (ii) Proper human resource planning is required to take care of students who are able to complete only primary education. Some kind of professional training should be provided to primary class pass outs who cannot continue further education. Government should ensure that there is some minimal type of occupation available for this section. This would create the feeling that even primary education can be of help. (iii) Special efforts be made to provide secondary and higher education to the children belonging to the deprived section. This could remove the feeling that the maximum they can achieve is primary or upper primary education.

▪ One important way of creating demand for education is compensating the guardians suitably for the monetary loss they incur by taking small children away from income generating activities and sparing them to attend schools. Even if we make efforts to increase return on primary education, if the immediate needs of the family is not met, children will not be sent to school and even if they are sent they will be withdrawn. Studies show that poor children who study in government schools are very irregular since at the time of peak season, they are engaged in agriculture and allied activities. Having been an absentee for quite some time, when children join school, theyare not able to cope up with the running lessons, so they lose interest in studies and ultimately discontinue. If on an experimental basis in some selected schools the children belonging to weaker class are provided some productive work e.g. painting, binding, weaving, tool making etc. and in lieu of the work done are financially compensated it might discourage children from leaving schools and might create a demand for education. The suggestion of former chief minister of Bihar Mr. Lalu Prasad to open 'CharwahaVidyalaya'(School for Shepherds) or 'PahalwanVidyalaya'(School for Wrestlers) which most of us

rebuffed and rejected, do not look that impractical on a second thought.

▪ A very important intervention relates to developing greater support system for children of weaker section. A vast proportion of population residing in villages has its first generation in schools. Even those who have received some education are involved day in and day out in making their both ends meet. This section neither understands the importance of creating suitable environment at home where children could study nor can help or guide the children in their studies. It never meets the teachers to know about how their children are doing. It goes to school only to claim scholarships of different kind. There is no support system for children of this section. If for weaker section the schools develop some kind of support system whereby the students studying in secondary and higher schools are asked to work as tutors for the first generation learner in exchange for some monthly stipend and scholarship to the later, this would on the one hand make the primary school children.

Wecan conclude by saying that the problem of universalization of education does not have only supply side; it also has a demand side. It is high time that the government understands the importance of demand side and try and create demand for primary education by making education productive, useful and interesting. Efforts need to be made to make the deprived section understand the importance of education. Unless this is done the investment being made in opening schools, giving free bees and devising one programme after another are all going to meet with limited success.

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Appendix-I (Tables)

Table-1

Demand Side Indicators in DISE Data

1.	Enrolment By Social Group i. % SC Enrolment In Primary By % SC Population ii. % SC Girls To SC Enrolment In Primary By Sex Ratio iii. % ST Enrolment In Primary By ST Population iv. % ST Girls To ST Enrolment In Primary By Sex Ratio v. % Muslim Enrolment By % Muslim Population vi. % Muslim Girls To Muslim Enrolment By Sex Ratio vii. % Girls Enrolment By Sex Ratio		2.	Examination Results (previous academic year) i. % Boys Passed Grade V With >60% ii. % Girls Passed Grade V With >60%	
3	Gender Parity Index[1]	4	Dropout Rate[1]	5	Promotion Rate[1]

Table-2

District wise Composite Index of Demand for Primary Education in UP (DISE 2009-10)

District	Index	Rank	District	Index	Rank	District	Index	Rank
Sitapur	0.779	1	Kanpur Dehat	0.693	25	Gonda	0.620	49
Bijnor	0.768	2	Mirzapur	0.693	26	Bahraich	0.617	50
Kanpur Nagar	0.768	3	Kheri	0.693	27	Gautam Buddha Nagar	0.613	51
Sonbhadra	0.764	4	Saharanpur	0.688	28	Auraiya	0.596	52
Chitrakoot	0.760	5	Maharajganj	0.684	29	Mathura	0.593	53
Sultanpur	0.758	6	Rae Bareli	0.679	30	Moradabad	0.590	54
Hamirpur (U.P.)	0.754	7	Firozabad	0.675	31	Bareilly	0.588	55
Varanasi	0.754	8	Ambedkar Nagar	0.669	32	Hardoi	0.587	56
Deoria	0.752	9	Pratapgarh	0.669	33	Shahjahanpur	0.584	57
Jhansi	0.744	10	Farrukhabad	0.669	34	Jaunpur	0.572	58
Pilibhit	0.743	11	Barabanki	0.668	35	Fatehpur	0.567	59
JyotibaPhule Nagar	0.739	12	Agra	0.668	36	Siddharthnagar	0.565	60
Hathras	0.738	13	Mainpuri	0.666	37	Meerut	0.547	61
Lucknow	0.735	14	Kaushambi	0.664	38	Mahoba	0.527	62
Banda	0.735	15	Gorakhpur	0.662	39	Basti	0.521	63
SantKabir Nagar	0.734	16	Bhadoi	0.661	40	Bulandshahr	0.520	64
Rampur	0.724	17	Allahabad	0.655	41	Unnao	0.515	65
Ballia	0.721	18	Baghpat	0.645	42	Balrampur	0.449	66
Etawah	0.721	19	Azamgarh	0.640	43	Muzaffarnagar	0.439	67
Aligarh	0.721	20	Kushinagar	0.638	44	Mau	0.395	68
Chandauli	0.716	21	Kannauj	0.632	45	Budaun	0.361	69
Lalitpur	0.702	22	Ghazipur	0.627	46	Etah	0.163	70
Faizabad	0.701	23	Shrawasti	0.625	47			
Jalaun	0.698	24	Ghaziabad	0.622	48			

Source: Authors Calculation from DISE data

Table-3

Movement of Districts In Rank Between 2006-07 and 2009-10

Positive	Districts	Negative	Districts
0-10	Balrampur, Chitrakoot, Firozabad, Gautam Buddha Nagar, Hardoi, Kushinagar, Lucknow, Maharajganj, Mirzapur, Siddharthnagar, Sonbhadra, Varanasi	0-10	Bahraich, JyotibaPhule Nagar, Muzaffarnagar, Saharanpur, Shahjahanpur
11-20	Aligarh, Barabanki, Bareilly, Deoria, Faizabad, Ghaziabad, Gonda, Hamirpur, Kanpur Dehat, Kaushambi, Sitapur	11-20	Azamgarh, Ballia, Etah, Gorakhpur, Hathras, Jalaun, Mathura, Rae bareli, Unnao, Mainpuri
21-30	Ambedkar Nagar, Banda, Chandauli, Kheri, Lalitpur, Moradabad, Pratapgarh, Rampur, Sultanpur	21-30	Auraiya, Ghazipur, Santkabirnagar
31-40	Agra, Farrukhabad, Pilibhit	31-40	Allahabad, Baghpat, Bhadoi, Fatehpur, Kannauj
41-50	Etawah, Jhansi	41-50	Budaun, Jaunpur, Mahoba, Mau, Meerut
51-60	Bijnor, Kanpur Nagar, Shrawasti	51-60	Bulandshahar
61-70	-	61-70	Basti

Source: Authors Calculation from DISE data

Table-4
Zone wise Composite Index of Demand for Primary Education in UP
(DISE 2006-07 & 2009-10)

Economic Region	District	2006-07		2009-10	
		Index	Rank	Index	Rank
Bundelkhand Region	Jhansi, Jalaun, Lalitpur, Hamirpur, Mahoba, Banda, Chitrakoot	0.673	1	0.674	1
Central Region	Lucknow, Sitapur, Unnao, Khiri, Rae Bareli, Hardoi, Kanpur, Barabanki, Fatehpur	0.609	4	0.648	2
Eastern Region	Pratapgarh, Kaushambi, Allahabad, Gonda, Behraich, Shravasti, Balrampur, Faizabad, Ambedkarnagar, Sultanpur, Basti, Siddharthnagar, SantKabirnagar, Gorakhpur, Mahrajganj, Kusinagar, Deoria, Mau, Azamgarh, Balia, Varanasi, Bhadoi, Jaunpur, Chandauli, Gazipur, Sonebhadra, Mirzapur	0.632	2	0.629	3
Western Region	Bijnor, Moradabad, Rampur, J P Nagar, Meerut, Gaziabad, Bagpat, Bulandshahar, GautamBudhanagar, Saharanpur, Muzaffarnagar, Agra, Mathura, Firozabad, Mainpuri, Etah, Aligarh, Hathras, Bareli, Pilibhit, Shahjahanpur, Badayun, Kannoj, Farukhabad, Etawah, Auraiya.	0.611	3	0.606	4

Source: Authors Calculation from DISE data

Table-5
Classification Of Districts On The Basis Of Performance & Participation Indices

		Participation Index						
		0-10	11-20	21-30	31-40	41-50	51-60	61-70
Performance Index	0-10	Balrampur	Jhansi	-	-	**Hardoi, Lalitpur, Mainpuri, Kheri**	**Bulandshahr**	**Farrukhabad, Shahjahanpur**
	11-20	Siddharthnagar, Azamgarh	Maharajganj, Moradabad	Mirzapur		**Sitapur, Banda**	**Kanpur Dehat**	**Kanpur Nagar, Kannauj**
	21-30	SantKabir Nagar	Shrawasti, Gonda	-	Kaushambi, Bahraich, Kaushambi	**Barabanki**	**Allahabad, Budaun**	**Mathura**
	31-40	**Pratapgarh, Sultanpur, Jaunpur**	**Bhadoi, Basti, Barelli**	**Kushinagar, Deoria**	Agra, Unnao	-	-	Hathras, Rampur
	41-50	**-**	**-**	**Mahoba, Pilibhit**	Bijnor	Varanasi, Etawah	Gautam Buddha Nagar	Jalaun
	51-60	**Mau**	**-**	**Faizabad, Meerut, Gorakhpur, Ballia**	Hamirpur	Aligarh	Etawah, Sonbhadra	Lucknow
	61-70	**Rae Bareli**	**Chandauli, Gazipur**	**Ghaziabad**	Saharanpur, Fatehpur	-	Muzaffarnagar, Baghpat	-

Source: Authors Calculation from DISE data

Table-6
Descriptive Statistics

	Mean	Std. Deviation	Analysis
Participation Index	0.4709	0.10868	70
Performance Index	0.3826	0.1542	70
Gender Parity Index	0.4192	0.21225	70
Dropout Rate	0.7755	0.16783	70
Promotion Rate	0.7713	0.16617	70

Source: Authors Calculation from DISE data

Table-7
Total Variance Explained

Compo-nent	Initial Eigen Values			Extraction Sums Of Squared Loadings			Rotation Sums Of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.007**	40.141	40.141	2.008	40.158	40.158	2.004	40.086	40.086
2	**1.181**	23.625	63.766	1.254	25.073	65.231	1.257	25.145	65.231
3	**1.007**	20.146	83.912	1.007	20.146	83.912	1.026	20.52	83.912
4	0.8	16.004	99.916						
5	0.004	0.084	100						

Extraction Method: Principal Component Analysis.

Table-8
Component & Rotated Component Matrices

Indicators	Component Matrix			Rotated Component Matrix		
	Principal Component			Principal Component		
	Factor-I	Factor-II	Factor-III	Factor-I	Factor-II	Factor-III
Participation Index	0.1277	-0.7669	-0.0381	0.0626	-0.7252	-0.2758
Performance Index	0.0581	0.3224	0.8941	0.0285	0.0184	0.9516
Gender Parity Index	-0.0760	0.6928	-0.4506	0.0136	0.8030	-0.2093
Dropout Rate	0.9960	0.0523	-0.0433	0.9975	-0.0395	0.0086
Promotion Rate	0.9948	0.0802	-0.0383	0.9984	-0.0147	0.0222

Extraction Method: Principal Component Analysis (2 components extracted).
Rotation Method: Varimax with Kaiser Normalization (Rotation converged in 3 iterations)

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