

ARTICLES

DEVELOPMENT OF SECONDARY EDUCATION IN UTTAR PRADESH: A TIME-SERIES ANALYSIS OF SELECTED INDICATORS

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ABSTRACT

Secondary Education in India has gained momentum of late with the launch of Rashtriya Madhyamik Shiksha Abhiyan, a Centrally sponsored scheme that is currently operational across the country with a mandate to universalize education up to class X. Set in this context, the present paper charts the development of secondary education in Uttar Pradesh by examining the state policies that have historically defined the structure and provision for this sector. It also presents a time-series analysis of growth in number of secondary education institutions, teachers and enrolment in Uttar Pradesh in order to read trends and understand the magnitude of secondary education in the state. Several government orders have been reviewed to look out for reasons of growth patterns. An important finding emerging from this analysis is of girls' participation in secondary education which has registered a phenomenal rise – much more than the average annual growth rate of secondary education institutions and teachers.

Secondary Education: Context and Significance

Many of the countries in the world had universalized secondary education before the end of twentieth century (Briseid and Calloids, 2004). This happened due to many factors, such as the economic need for an educated labour and a belief that an extended formal education accrued both occupational and social benefits (Huberman, 1971; UNESCO, 1986; Lewin, 2007). Even today, it is found that levels of secondary enrolment

are associated with levels of national wealth, revealing that high-income countries have relatively higher enrolments at secondary level (UNESCO, 2006). In addition to universalizing access, in terms of providing educational opportunities to all (supply side), many countries also aimed for universal participation at the secondary stage. Achieving universal participation at secondary level was a more complex challenge as it remained conditional on improving access to and quality of elementary education on the one hand and building the capacity of labour market to take in secondary graduates on the other hand (ibid.). Despite the challenges, education systems have assessed the many benefits of secondary schooling in terms of providing manpower for primary school teaching, labour for industrial jobs as well as providing potential candidates for higher education. Access to secondary schooling is also found to have a direct impact on the participation rates of the elementary stage, especially for the upper primary as it raises the perceived benefits of the entire schooling process.

National Impetus on Secondary Education

In the Indian context too, trends towards higher rates of completion of elementary education created a substantial demand for secondary schooling, building a strong case for its universalisation (Mehta, 2003). Although secondary education was deliberated upon in the Secondary Education Commission Report (1952-53), followed by the Education Commission Report (1964-66) up till National Policy on Education (1986), yet historically, the focus of implementation was more on elementary and tertiary education and not so much on secondary education (Biswal, 2011). It was not until the Central Advisory Board of Education (CABE) committee that was set up on “universalisation of secondary education” that this segment assumed significance. The committee report (2005) saw many of its recommendations being included in the 11th Five Year Plan which stated that the minimum level of compulsory education in India must be raised to class X (Planning Commission, 2008). Subsequently, Government of India launched the Centrally sponsored scheme Rashtriya Madhyamik Shiksha Abhiyan (RMSA) in April 2009, drawn within the framework of the 11th Five Year Plan for secondary education segment. The scheme aimed at universalizing access and improving quality of secondary education in the country. The 12th Five Year Plan also intended to make secondary education accessible and affordable to all young people in the age group of 14-18 years, by fixing targets of gross enrolment ratios exceeding 90 per cent at secondary level and 65 per cent at senior secondary level by 2017, and reducing the dropout rates to less than 25 per cent by 2017 (Planning Commission, 2013).

Flash Indicators of Secondary Education in Uttar Pradesh

In India and across most of the states, there are two levels that are considered to constitute secondary education, one is secondary level (classes IX-X) and the other is senior secondary level (classes XI-XII). Although in educational literature, 'secondary education' includes both the levels to present a case for its larger socio-economic benefits, in this paper, it is used interchangeably with secondary level. In fact, to begin with, RMSA focused on universalisation of opportunities at secondary level for which the corresponding age group of children was considered as 14-15 years of age.

The State of Uttar Pradesh (UP) has still to go a long way before it makes secondary education universally accessible to all. If we look at the share of 14-15 years' age group of population in Uttar Pradesh to the total 14-15 years' age group of population in the country, we see that it stood at 19.85 per cent according to the Census 2011 figures. This percentage can be compared with the share of secondary institutions¹ in Uttar Pradesh to the total in the country in order to arrive at a crude indicator that can tell us about the magnitude of the relevant age group population and its access to corresponding level of school education. The share of secondary institutions in UP to that of secondary institutions in India was 9.09 per cent (GoI, 2014) as against its share of relevant age group population of 19.85 per cent to the total in the country. This clearly implies that the state needs to raise its share of secondary institutions in order to cater to the rising demand for this level of education.

The same population figures have been used in the calculation of Gross Enrolment Ratio (GER) at secondary level. The GER for UP at the secondary level (classes IX-X) was 67.2 per cent as against the national average of 66.6 per cent and at senior secondary level (classes XI-XII) was 43.6 per cent against the national average of 45.9 per cent. The GER for girls was lower at both levels of secondary education as compared to GER for boys. If we look at gender disparities, these were wider at the secondary level with 12.2 percentage points' difference as compared to senior secondary with 7.5 percentage point (GoI, 2014). This shows that for girls, after passing the initial hurdle of completing secondary level, there was less selection bias in their participation at the senior secondary level, making a case for universalizing opportunities at secondary level more categorical.

The launch of RMSA as a national programme has provided a fresh lease to secondary education in Uttar Pradesh in terms of financial assistance in up-gradation of upper primary to secondary schools and opening of new secondary schools in government sector. Otherwise, secondary education segment in Uttar Pradesh was historically more favourable towards private unaided sector making it the only state in the country with the largest share of schools belonging to the self-financing category of institutions (GoI, 2014). Out of the total 8,691 secondary schools in Uttar Pradesh, the share of government institutions was a mere 4.7 per cent, followed by that of private aided schools at 6.7 per cent and a large private unaided schools with a share of 88.6 per cent (GoI, 2014). Likewise, the share of government schools at senior secondary level was only 5.2 per cent out of a total of 10,739 institutions at this level. Here also, the highest share (57.8 per cent) was of private unaided schools. Combining both the levels of secondary education, out of the total 19,430 institutions, the private unaided schools accounted for around 71.5 per cent (GoI, 2014) which depicts a very high incidence of private unaided category of schools in secondary education.

Other than the number of schools providing access to secondary education in the state, one can also look at the ratio of upper primary to secondary schools to know if adequate number of secondary schools exists for elementary graduates (Zaidi et al., 2012). The ratio of upper primary to secondary schools in Uttar Pradesh was 3.9:1 pointing to the existence of one secondary school for four upper primary schools, almost equal to the national average of the ratio of upper primary schools to secondary at 3.7:1 (GoI, 2014). One of the other important access-related indicators is the percentage of habitations served by schools within a distance norm. Although these data are not available at secondary education level, NSSO provides the percentage distribution of rural and urban households by distance from schools having secondary classes (64th round NSSO, 2007-08). It shows that in Uttar Pradesh, 35.1 per cent of rural households were served by secondary schooling facilities within a distance of 2 km, 43 per cent between 2-5 km and 21.8 per cent beyond 5 km, as against the all-India figures of 47.3 per cent, 35.5 per cent and 17.1 per cent for the respective distance brackets. Further, in the state, 1.1 per cent of urban households were served by secondary schooling facilities beyond 5 km as against the all-India figure of 1 per cent that had access to secondary schooling facility beyond 5 km.

Development of Secondary Education Sector in Uttar Pradesh

The flash indicators on secondary education in the state give a macro picture of access and participation that can be further segregated on the basis of location and for social groups. However, the main aim of the paper is to chart the development of secondary education in Uttar Pradesh over the years through an analysis of state level policies and growth in the number of secondary education institutions, teachers and enrolment. Looking at the current status of access to the secondary education segment in UP, it cannot be denied that one of the stark realities has been an abysmally low share of government sector in the state. This scenario stands against the arguments given by many scholars that the role of public sector in terms of both provisioning as well as funding is important for expansion of secondary education, particularly when the systems are looking for providing equitable opportunities (Briseid and Calloids, 2004; Tilak, 2007; World Bank, 2009). For this to happen, a robust public policy at the state level is required for aligning with the national mandate of universalizing secondary education. However, earlier researches have highlighted the absence of any clear mandates or goals by various state governments, making it difficult to find a coherent ‘policy’ that could characterise the educational sector of the state. This was largely a consequence of contingent and politically motivated policy decisions rather than preparing a blueprint guided by a developmental philosophy (Jha and Subramaniam, 2006).

Interactions with the state officials² during the course of research also revealed that historically, priority was accorded to opening of primary schools by political representatives who found geographical locations relevant for their electoral bases. On the contrary, opening of secondary schools never emerged as a priority by the political set up, resulting in a very low share of government sector at secondary level. Thus, growth in secondary education was largely a result of private initiatives that opened schools for profit or by people who participated in the education sector for philanthropic reasons. Over time, these private institutions bifurcated into two sectors, one the private aided and second, the private unaided.

In the absence of any specific written ‘policy’ document on education in general and secondary education in particular, it is widely held that the national policies provided the overarching framework to the development of secondary education in the state.³ In addition, there were three important legislations of 1921, 1971 and 1982 that were instrumental in giving shape to the growth of institutions in this sector. These along with significant state government orders (various years) have largely defined the scope and intent of the state policy on secondary education.

The history of secondary education in Uttar Pradesh can be traced back to the Intermediate Education Act which came into force in 1921. The Act re-organized administrative control over school education by separating it from the University education system. It led to the establishment of a Secondary Education Board to take the place of Allahabad University in regulating and supervising the system of High School and Intermediate Education in United Provinces. 4 The Act contained detailed provisions on the Board as also on the management committees of the private secondary schools (GoUP, 2009-10), which were to have far-reaching implications for the development of secondary education in the state. Co-terminus with the Act of 1921 there began a political movement of secondary education teachers of the private schools and intermediate colleges in Uttar Pradesh. In 1921 two teachers' unions were formed, one for the primary schools and the other for secondary schools, known as the Adhayapak Mandal and the UP Secondary Education Association, respectively. In due course of time, the assistant teachers in secondary schools in the state formed a separate union under the banner of UP Sahayak Adhyapak Sangh, which later merged with the UP Secondary Education Association and the united body came to be known as the Uttar Pradesh Madhyamik Shikshak Sangh in 1956. Since then, it has been the strongest teachers' union in the state and continues to operate even today (Kingdon and Muzammil, 2003).

The Intermediate Education Act 1921 had certain provisions that defined the terms and conditions of the management of the privately managed schools (for a reading on the three Acts, see Shukla, 2005). For instance, the Act specified that the selection of teachers and Heads of Institutions in privately managed secondary schools and intermediate colleges of the state would be done by a Committee of Management (para 16-E). Although the recruitment procedures were amended from time to time, it was held by the teachers of these schools that the Act favoured the interests of the school management committees. The Madhyamik Shikshak Sangh lobbied hard for the interests of its member-teachers who belonged to private secondary schools and formed a substantial cadre of the teachers' union. They stood against the alleged malpractices of the private school managing committees of secondary schools/colleges in both appointments and disbursement of salaries to teachers.

The teachers' movement picked up in late 1960s and even led to the boycott of the public examination of 1965 conducted by the UP Board. The Sangh was able to press the government in conceding to their demands of 'equal pay for equal work'. This resulted in the passing of the Salary Disbursement Act 1971, through which the state government undertook

the responsibility of paying the salaries of all the private school teachers and took these schools under the aided scheme (Khanna, 1985). Before commencement of the Act of 1971, there was no distinction between private aided and private un-aided institutions at the secondary level in the state. There were only two categories of institutions – government and private. This Act brought into existence the private aided category of secondary schools, after which, the state government committed to give the salary component of teachers of privately managed secondary schools, leading to a substantial increase in public expenditure in secondary education in the state (Kingdon and Muzzammil, 2003). Later, as would be discussed in the paper, the state government could not bear the financial implications of the aided scheme for long, and discontinued it from 1986 onwards. This paved the way for proliferation of private sector in secondary education which at present has grown to a sizeable share of 71.5 per cent of total secondary and senior secondary institutions in the state (MHRD, 2014).

This Act was instrumental in centralizing the administration and management of schools. While on the one hand, its provisions increased the job security of teachers, on the other hand, the management of these schools (which was still private) lost control over the functioning of teachers and quality of education imparted by them. The teachers of the new ‘aided’ sector became permanent state-paid employees and were also saved from any disciplinary action by the management committees of the schools. This Act, though favourable for the teachers of the private aided secondary schools, brought about dual control in the form of the managing body as the hiring authority and the government as the pay-master. This resulted in less accountability of teachers and incessant disputes between the concerned stakeholders, negatively affecting the quality of schooling at secondary level (Khanna, 1985).

Although the Act of 1971 made the teachers permanent state employees, their appointments were still in the hands of the private management committees because of which the teachers of the newly ‘grant-in-aid’ private secondary schools continued to protest to bring changes in the provisions of the Intermediate Education Act 1921. This time the protests were against the alleged malpractices in appointment of teachers and principals by the management committees of secondary schools/colleges. In view of these demands, the state government went ahead with setting up of the Uttar Pradesh Secondary Education Services Commission in 1981, which subsequently converted into the U.P. Secondary Education Services Selection Board through the Act of 1982. This Act established the Secondary Education Board for selection of teachers in private secondary

institutions that were now known as the private aided institutions. With this, all appointments of teachers, headmasters and principals were governed by this Act. In addition, recommendations of the commission were made mandatory in dealing with all disciplinary proceedings against these state employees. Hence, in due course of time, the authority of the private managing bodies of aided secondary schools waned as teachers and heads of institutions became state-paid employees. In addition, these school management committees could no longer either recruit or take any punitive action against teachers and heads (Tripathi, 1986).

As a result, large number of secondary schools came into the aided category, but by mid-1980s the state government realized that the private aided schools were financially unviable for the state exchequer. This resulted in amendment to the provisions of the Act of 1921 which stated that there would be self-financing recognition system after 1986; and only the secondary schools that were opened as recognized schools prior to this amendment were taken under government aided category. Hence, many secondary schools and senior secondary schools that were included in the grant-in-aid list in the year 1992-93, 1998-2000, and 2001-02 were opened as recognized institutions before 14th May, 1986. After this, two trends emerged, one, the state government gradually withdrew from its role as a provider for schools and two, the state discontinued the grant-in-aid scheme, leaving the field open for flourishing of private unaided secondary schools, sometimes even at the cost of relaxing norms for recognition of schools (Jha and Subramaniam, 2006).

These policies and decisions of the state government are also reflected in the growth trends of secondary education institutions in Uttar Pradesh. The next section looks at these trends over the past 21 years with the help of available data. The analysis of data is accompanied with a reading of several significant state government orders that have shaped the development trajectory of secondary education in the state.

Growth in Secondary Education Institutions, Teachers and Enrolment: A time-series analysis

The secondary data have been compiled from various issues of Selected Educational Statistics and Statistics for School Education (GoI) from 1990-91 to 2011-12. The number of institutions at secondary level as reported in Statistics for School Education (earlier referred to as the Selected Educational Statistics) was presented in two categories – Pre-Degree Junior Colleges/ Higher Secondary Schools and High/Post Basic Schools. Since it was found that in Uttar Pradesh Intermediate Colleges

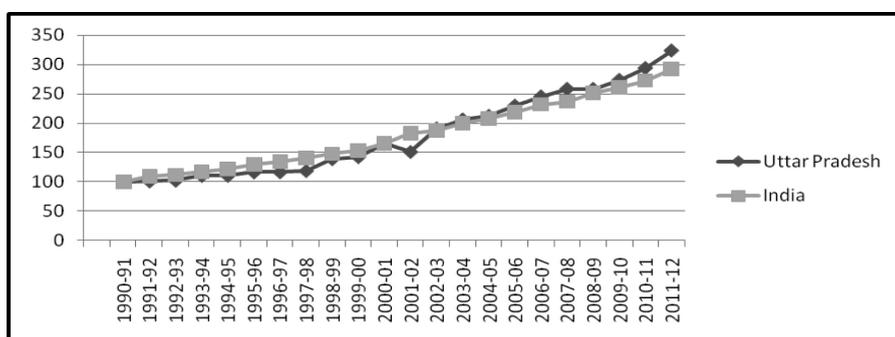
and Senior Secondary Schools also had classes IX-X, the number of schools in both these categories was added as Total institutions imparting secondary education in Classes IX and X. The data on number of teachers were also given under two separate heads – Higher Secondary Schools and High/Post Basic Schools. Since it was difficult to know the exact number of teachers who taught in classes IX and X from this database, the total number of teachers under both the heads was also added for the analysis. Hence, a comparison could not be done between growth in number of teachers and enrolment.

The time-series data analysis has been presented graphically using index numbers. Index number is a useful representation as it shows the variation in growth over the years keeping the value of the base year as 100 facilitating easy comparisons. Towards the end, the analysis presents the compound annual average growth rate for the number of secondary education institutions, teachers and enrolment over the past 21 years in three time brackets (1990-91 to 2000-01, 2001-02 to 2011-12 and 1990-91 to 2011-12).

Growth in Secondary Institutions

The total number of secondary education institutions in Uttar Pradesh grew by over three times between 1990-91 and 2011-12 (Annexure Table 1). The earliest available data (used for analysis) showed a total of only 5,999 secondary schools (1990-91) in the state (3,550 senior secondary schools and 2,449 secondary schools) which grew to 19,430 secondary schools in 2011-12. A graphical representation of growth of secondary institutions in India and Uttar Pradesh has been presented through index numbers (Figure 1).

Figure 1: Growth in Secondary Institutions imparting Education in Classes IX-X in India and Uttar Pradesh



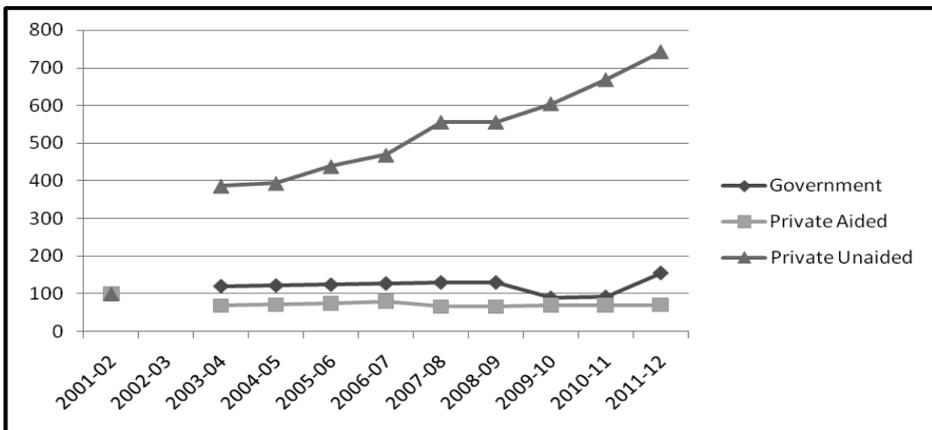
Source: *Selected Education Statistics and Statistics for School Education* (various years)

With 100 secondary education institutions in the base year (1990-91), their number had increased to 324 in 2011-12 for Uttar Pradesh. For the same time period, assuming that the number of secondary education institutions in India was 100 in the base year, their number grew to 293 in 2011-12. The trend posited the growth of secondary education institutions in Uttar Pradesh as slightly more than the country as a whole, in the time period between 1990-91 and 2010-11.

Growth in Schools by Type of Management

Figure 2 shows the growth in number of secondary education institutions by type of management: government, private aided and private unaided. The data for this category of schools were available only after 2001-02, with a gap year of 2002-03 (Annexure Table 2).

Figure 2: Growth in Total Secondary Institutions by Types of Management in Uttar Pradesh



Source: Same as Figure 1

Although the growth in total number of secondary education institutions over the past 21 years in the state exceeded that of the country, the growth in government and private aided sector was either stagnant or marginally higher during the same time period. The government secondary education institutions grew from 100 in the base year 2001-02 to 130 in 2008-09, declined to 92 in 2010-11 and increased to 155 in the terminal year. The increase in government schools after 2010-11 can largely be attributed to RMSA. In 2009-10 and 2010-11, the initial years of RMSA, 572 upper primary schools were proposed to be upgraded to secondary

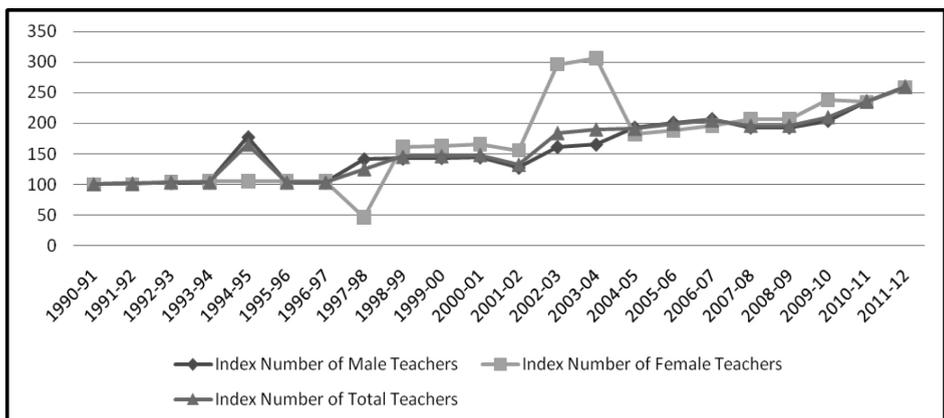
schools (though this statistic is not seen at the national level data) and as many as 449 new secondary schools were opened across the state in the year 2011-12, explaining a rise in the index number for the terminal year. Subsequently, in the year 2013-14, 225 upper primary schools were proposed to be upgraded to secondary schools and in 2015-16, 258 new secondary schools were to be opened across the state, giving a fresh lease to the government sector in Uttar Pradesh.⁶

The private aided secondary education institutions showed a decline in the entire period of analyses. For the concluding three years (from 2009-10 to 2011-12), the index number for private aided sector remained stagnant at 69. As discussed before, the state government had put an end to the practice of granting aided status to private secondary institutions, especially after 1986. However, a few schools also received aided status retrospectively as they had received recognition prior to 1986; hence any increase in the number of institutions in this category after 1986 was for those schools which received aided status in the following years. But their total numbers remained more or less stagnant till the terminal year. Contrary to the trend of government and private aided secondary schools, the private unaided secondary institutions grew from 100 in the base year to 743 in 2011-12. The private unaided sector at secondary level had thus registered an unparalleled rise in the period of analyses, growing by over seven times.

Growth in the Number of Teachers

The total number of teachers in secondary education institutions registered an increase over the years from 100 in 1990-91 to 260 in 2011-12 (Figure 3).

Figure 3: Growth in the Number of Male and Female Teachers in Secondary Institutions in Uttar Pradesh



Source: Same as Figure 1

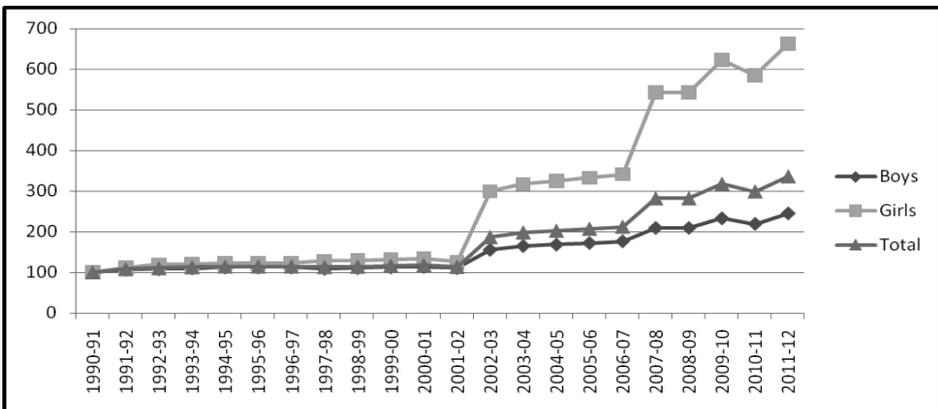
The growth in the index number of male teachers was from 100 in the base year to 260 in 2011-12 and for female teachers it was from 100 in the base year to 259 in the terminal year.

In the year 2002-03, there was a sharp increase in the number of female teachers, as the index number showed a rise of 52 points from the previous year. This could be because there was a corresponding rise in the number of secondary education institutions for the same year with around 2,400 schools being added up from the previous year. However, the share of female teachers to that of the total teachers in the state has remained very low in comparison to the share of male teachers to the total and stood at 16.9 per cent in 2011-12 (Annexure Table 3).

Enrolment: Total and by Gender

Assuming that the total enrolment was 100 in the base year 1990-91, the total enrolment for class IX-X grew to 335 in the year 2011-12. For the same time period, the growth in enrolment for girls was relatively quite higher, from 100 in the base year to 663 in the year 2011-12 (Figure 4).

Figure 4: Growth in Total Enrolment and Enrolment by Boys and Girls in Classes IX-X in Uttar Pradesh



Source: Same as Figure 1

The enrolment of girls increased sharply in 2002-03, the same year for which sharp increases were noticed in the growth of secondary education institutions and in the growth of female teachers (Annexure Table 1 and 3). Though total enrolment grew at a rapid rate after 2002-03, rise in girls' enrolment in secondary classes was exceptional (Annexure Table 4).

A study based on the district Bijnor of Uttar Pradesh found that expansion in government secondary schooling was specifically targeted for girls since 1990s. The rise in participation of girls was mainly due to an increase in the number of both government and private aided secondary schools that catered specifically to girls; however, there was no significant rise in girls' enrolment in the unaided secondary schools (Jeffery et al., 2005). In addition to only girls' secondary schools that were found in the government and private aided sector, there were two schemes started by the Government of Uttar Pradesh in 1990s which sought to open new secondary schools for only girls through private participation. The first scheme was introduced in 1994 with the aim of encouraging secondary education among girls and increasing their participation at this stage. Under this scheme, a one-time grant of Rs. 10 lakh was to be given for opening a new private single-sex (girls) school in an uncovered block headquarters.⁷ For this, about 423 un-served blocks that did not have only girls' secondary school/intermediate college, either government or private, were intended to be covered. Subsequently, another scheme was implemented in 1998 which provided Rs.20 lakh to any new only girls' secondary school to be opened in a Nyaya Panchayat of those blocks that were uncovered or had only one girl's secondary school.⁸

These two schemes focused on promoting unaided, fee-charging, single-sex schools but over time these schools did not receive any further grants from the state government and as a result did not pick up in rural areas (Jha and Subrahmaniam, 2006). Since the enrolment in schools was found to be low, at some places these schools also allowed enrolment of boys. Initially, boys could be admitted to schools meant for only girls, but the government order was revised after two years. Under the revised order, only schools that were located in rural areas were allowed for a co-educational system (ibid.). Even then, the growth in participation of girls at secondary level cannot be explained only on the basis of opening of only girls' government and private aided secondary schools. There must have been an increase in girls' participation in private unaided secondary schools resulting in an increase of over six times in girls' enrolment especially after 2002-03 (see Figure 4).

The state government had decided to convert all single-sex recognized secondary and senior secondary schools to co-educational schools in 2011, whether in rural or urban areas.⁹ However, in schools which were only for girls, the preference for admission was still to be retained for girls while admission for boys was to be done only if there were vacant seats remaining at the secondary and senior secondary level. Despite this

decision of making the secondary schools co-educational across rural and urban areas, the provision was yet to be made fully operational.

Various state governments had also used scholarships as an effective demand-side financing strategy for improving the participation of girls in secondary education in the state, such as the Savitri Bai Phule Balika Shiksha Madad Yojana from the year 2008-09.¹⁰ This scheme aimed to encourage participation of girls belonging to families living below poverty line at the secondary level. In 2012 the Kanya Vidya Dhan Yojana (earlier in operation till around 2008) was reinstated for girls who appeared for class XII examinations and graduated in the year 2012 and beyond. An amount of Rs.30, 000 was to be paid for class XII girl graduates belonging to economically weaker families whose annual income was less than Rs.35, 000. This scheme was started as a strategy for improving girls' participation in higher education after they completed their intermediate school level.¹¹ Hence, a number of supply and demand-side factors were behind the growth in enrolment of girls at secondary level in Uttar Pradesh.

Annual Average Growth Rate: Secondary Education Institutions, Teachers and Enrolment

The annual average growth rates for the growth in secondary education institutions, teachers and total enrolment for classes IX-X were computed for three time periods (Table 1).

Table 1: Annual Average Growth Rate of Secondary Institutions, Enrolment in Classes IX-X and Total Number of Teachers in Uttar Pradesh

Years	Annual Average Growth Rate						
	Number of Institutions imparting Secondary Education Classes IX-X	Total Enrolment in Classes IX-X			Total Number of Teachers in Senior Secondary Schools and Secondary Schools		
		Boys	Girls	Total	Male	Female	Total
1990-91 to 2000-01	5.15	1.29	2.92	1.66	3.71	5.17	3.97
2001-02 to 2011-12	7.91	8.31	18.07	11.43	7.45	5.23	7.04
1990-91 to 2011-12	5.76	4.36	9.42	5.93	4.66	4.64	4.65

Source: Same as Figure 1

The period between 2001-02 and 2011-12 showed the highest annual average growth rate for the secondary education institutions at 7.91 per cent and a corresponding increase in the total number of teachers at 7.04 per cent. The total enrolment for class IX-X at the annual average growth rate of 11.43 per cent could be compared with the growth rate of only 7.91 per cent in secondary education institutions during 2001-02 and 2011-12. This meant that total enrolment grew at a faster rate in comparison to secondary education institutions, falling short of providing adequate access to secondary schooling places.

The enrolment of girls between 2001-02 and 2011-12 increased at the rate of 18.07 per cent. Taking into account the entire period of analysis (1990-91 to 2010-11), the annual average growth rate for secondary education institutions was 5.54 per cent and for teachers it was 4.38 per cent. But, the highest annual average growth rate for the entire period was in girls' enrolment at secondary level (9.23 per cent). The participation of girls in secondary education was exceptional, both during the second decade of analysis and for the entire time period of analysis. This could be attributed to the schools meant exclusively for girls in the government and government aided sector as well as due to an increase in their enrolment in the private unaided sector. This trend however cannot be solely attributed to expansion of schooling facilities by the government or the private sector, including a consistent focus on implementing demand-side financing strategies; rather on a multi-pronged inter-sectoral approach for improving girls' participation in education at national and state level. There has also been a clear shift in cultural importance added to girls' education over the years, as was found in a study on low-fee private unaided schools in Uttar Pradesh. The study revealed that parents had started sending their girls to private schools even if it meant paying for their education as opposed to the earlier scenario where parents preferred to send boys of the household to private schools and girls to government schools (Srivastava, 2006).

Concluding Remarks

The demand for secondary education in India has emerged primarily from an increased output of elementary education. Keeping this in view, expanding opportunities for secondary education is critical to broaden its base so that graduates of elementary education are able to fully participate at secondary level. In addition, there seems to be a realisation that universalisation of education up to class X is not only important for determining life chances of the young but also for the larger social and economic benefits of the country. Right from the beginning, the analysis

on secondary education sector in Uttar Pradesh posited a gap between demand and supply for this level of education. Although the analysis did not cover the participation of social groups in secondary education, the demand generated from girls can be seen as an indicator of the need for improving access at this level of education. Thus, in order to universalize access at secondary level, the state government will have to employ its resources and devise strategies to provide opportunities in its own sector as also to regulate the operation of private unaided sector so that no social and economic groups are left behind.

ANNEXURES

Table 1: Growth of Total Secondary Institutions imparting Education in Classes IX-X in India and Uttar Pradesh

Years	Uttar Pradesh	India
1990-91	5999	72959
1991-92	6060	80098
1992-93	6142	81864
1993-94	6637	85422
1994-95	6637	89190
1995-96	6988	94653
1996-97	7003	98172
1997-98	7135	102721
1998-99	8339	108135
1999-00	8549	112285
2000-01	9915	121416
2001-02	9073	133492
2002-03	11477	137207
2003-04	12387	145962
2004-05	12766	152049
2005-06	13809	159667
2006-07	14745	169568
2007-08	15518	172990
2008-09	15518	183648
2009-10	16436	190643
2010-11	17644	199140
2011-12	19430	213710

Source: Same as Figure 1

Table 2: Growth of Total Secondary Institutions by Types of Management in Uttar Pradesh

Years	Government	Private Aided	Private Unaided
2001-02	625	6578	1870
2002-03	N.A.	N.A.	N.A.
2003-04	749	4413	7225
2004-05	760	4644	7362
2005-06	773	4839	8197
2006-07	792	5186	8767
2007-08	810	4312	10396
2008-09	810	4312	10396
2009-10	558	4560	11318
2010-11	573	4560	12511
2011-12	966	4565	13899

Source: Same as Figure 1

Table 3: Number of Teachers at Secondary and Senior Secondary Level in Uttar Pradesh

Years	Number of Male Teachers	Index Number of Male Teachers	Number of Female Teachers	Index Number of Female Teachers	Total Teachers	Index Number of Total Teachers	Percentage of Female Teachers
1990-91	80256	100	16439	100	96695	100	17
1991-92	81201	101	16469	100	97670	101	16.9
1992-93	82234	102	17172	104	99406	103	17.3
1993-94	82333	103	17273	105	99606	103	17.3
1994-95	142439	177	17318	105	159757	165	10.8
1995-96	82439	103	17318	105	99757	103	17.4
1996-97	82439	103	17318	105	99757	103	17.4
1997-98	112809	141	7625	46	120434	125	6.3
1998-99	113888	142	26485	161	140373	145	18.9
1999-00	114495	143	26838	163	141333	146	19
2000-01	115532	144	27207	166	142739	148	19.1
2001-02	101716	127	25581	156	127297	132	20.1

(contd.)

2002-03	128895	161	48846	297	177741	184	27.5
2003-04	132817	165	50432	307	183249	190	27.5
2004-05	154858	193	29852	182	184710	191	16.2
2005-06	161100	201	30953	188	192053	199	16.1
2006-07	166377	207	32186	196	198563	205	16.2
2007-08	155233	193	34007	207	189240	196	18
2008-09	155233	193	34007	207	189240	196	18
2009-10	163511	204	39181	238	202692	210	19.3
2010-11	189422	236	38567	235	227989	236	16.9
2011-12	208726	260	42577	259	251303	260	16.9

Source: Same as Figure 1

Table 4: Enrolment of boys and girls in classes IX-X in Uttar Pradesh

Years	Boys	Girls	Total
1990-91	1595461	440647	2036108
1991-92	1705866	492070	2197936
1992-93	1721159	527673	2248832
1993-94	1754060	532422	2286482
1994-95	1791413	538491	2329904
1995-96	1791413	538491	2329904
1996-97	1791413	538491	2329904
1997-98	1738474	564892	2303366
1998-99	1759403	568780	2328183
1999-00	1792185	577819	2370004
2000-01	1812985	587820	2400805
2001-02	1759482	554879	2314361
2002-03	2482061	1318991	3801052
2003-04	2631705	1398509	4030214
2004-05	2683797	1430012	4113809
2005-06	2748057	1466287	4214344
2006-07	2815525	1503380	4318905
2007-08	3339349	2387823	5727172
2008-09	3339349	2387823	5727172
2009-10	3715957	2740599	6456556
2010-11	3499996	2576553	6076549
2011-12	3910299	2920703	6831002

Source: Same as Figure 1

Notes

1. Secondary institutions are a total of secondary and senior secondary institutions for both the state and India. The reasons for clubbing both the categories have been detailed later in the paper.
2. Interviews in the Directorate of Secondary Education, Uttar Pradesh
3. Interviews in the Directorate of Secondary Education, Uttar Pradesh
4. The erstwhile nomenclature of Uttar Pradesh which also included other than the present day contiguous territories
5. Interviews in the Directorate of Secondary Education, Lucknow Camp Office
6. http://uprmsa.in/Dynamic/frm_imp-gos.aspx accessed on 23 May 2017
7. Opening of Girls High Schools/Intermediate Colleges in partnership with private providers in unserved Blocks of the state, G.O. dated 21 September 1994
8. Opening of Girls High Schools in partnership with private providers in unserved blocks and blocks having one girls high school, G.O. dated 28 September 1998
9. All recognized secondary schools, in both rural and urban areas, to be made co-educational, G.O. dated 23 December 2011
10. Savitri Bai Phule Balika Shiksha Madad Yojana, G.O. dated 20 January 2009
11. Kanya Vidya Dhan, G.O. dated 22 August 2012

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