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A Study Of Household Education Expenditure On Gender Bases In India

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Abstract

This paper investigates the household spending on education by gender variable, using data sets from successive rounds of the National Sample Survey Office (NSSO), namely the 64th, 71st, 75th and 80th rounds, which were based on the social consumption survey of health and education. When compared to the results of previous studies, the results show a distinct analysis about the gender disparity in education spending from elementary to higher, technical or diploma levels. For elementary to higher education, the study reveals that the disparities were increased for female students. It is crucially quantify educational disparities from a policy and societal aspect. The disaggregated study at the state level becomes more important when addressing the issue locally. The results show that there was a significant gender gap in Gross Enrollment Ratio, Gender Parity Index and average household education expenditure in India.

Keywords: Education Expenditure, Gender Differences, Gross Enrollment Ratio, Gender Parity Index.

1. Introduction

Education is the process of transmitting knowledge and skill, as well as the growth of characteristics. There are three main types of education, namely: Formal, Informal and Non-formal. Formal education follows a curriculum and takes place in an organized institutional setting, like public school. Informal Education entails unstructured learning through everyday events. Non-formal education also uses a structured method but takes place outside of the official educational system. Education and skill are fundamental mediators of social mobility, enhancing individual's employment opportunities, increased income and elevated status in society. Education also helps to create equitable opportunities for both male and female. According to

Piraino and Haveman (2006), the idea of social mobility depends on making use of the skills that were developed by the educational system in every nation. The most important, fundamental and crucial component of a country's long term growth and prosperity depends on skill enhancement.

In emerging nations like India, Brazil, Russia, Indonesia and China etc., household investment in education was crucial to educational attainment (Buchmann and Hannum, 2001). In many Asian nations, it is clear that male children prefer high-quality schooling and higher education. Higher education is crucial to the development of a country; it holds a special place in its educational system. A country's future depends on its ability to generate skilled and efficient labour. Educational expenditure is divided into two categories: public and private expenditure. The government provides funding for public education, but families, parents and individuals prefer the private costs. Public spending is essential for education to be accessible and of high quality worldwide in private institution.

Adam Smith in his book "An Inquiry into the Nature and Causes of the Wealth of Nations- 1776", emphasized that the educated people play major role in boosting productivity by comparing them to expensive machinery. Alfred Marshall in his book "Principle of Economics- 1890", defined knowledge as the most valuable type of capital, when invested in people, further emphasizing its importance as the main force behind production. The idea of human capital, which was first proposed by economist Theodore Schultz in the 1960s, emphasizes the fundamental value of human potential and the significance of investing in it. Economic theories generally agree that investing in human capital especially via education is essential to economic expansion. Investments in education provide significant returns, boost output and are essential to the development of human capital. Education spending raises the human capital stock, which raises per capita income and social production. The substantial returns linked to education investment was confirmed by (Schultz: Capital Formation by Education; Schultz: Investment in Human Capital) and (Becker: Investment in Human Capital: A Theoretical Analysis).

In India, the Gross Enrollment Ratio (GER) for all higher education was 28.4% in FY 2021-22, 28.5% for female students and 28.3 % for male students. This indicates that male had a lower GER than female. The National Education Policy (NEP) 2020 is anticipated to effect significant transformations in higher education by tackling existing challenges and implementing innovative strategies. By 2035, the initiative aims to put higher education's Gross Enrollment Ratio (GER) at 50%. Equal access of high-quality education is the aim for all students in higher education. Education has a major impact on countries and people, promoting constructive change and advancement in the social, political and economic domain of society (Bandyopadhyay et al., 2021 and Tilak, Karlidog.-Dennis at.al.2021). In numerous low-resource environments, female children were disadvantaged and frequently neglected in terms of education, nutrition and health services relative to male children. Gender equality in primary education was improved

significantly over the past three decades, which was consistent with the worldwide commitment to universal education (UNICEF, 2019).

The specific objectives of the present study are:

1. To analyse gender based differences in average annual household education expenditure.
2. To study the trend in Gross Enrollment Ratio and Gender Parity Index.
3. To identify the factor influencing the household education expenditure and suggest measures to reduce the gender gap in household education expenditure.

11. Literature Review

Review of some education expenditure related studies:

A wide range of socio-economic and demographic factors affect education expenditure at the household level. It was commonly acknowledged that financial factors can be used to understand, household decisions on educational investment. Gender inequality in education is a serious problem, at the international level. Female's education lowers maternal mortality, infant and child mortality. It also had a positive correlation with vaccination acceptance and healthcare use. Female's autonomy will be strengthened by education and their ability to take decisions, helps the family's finance according to United Nations Children's Fund (UNICEF), 2019; Joshi, K. & Sharma, N. B. 2020; Vikram & Vanneman, 2020). According to the Right to Education Forum (RTE Forum, 2021), a number of factors including poverty, patriarchal societal norms, negative parental attitudes, gender biases, inadequate infrastructure, early marriage, a shortage of female teachers, safety concerns, distance from home, girl's sanitation needs and the influence of social and religious constructs, continue to limit female's access to education in India.

Rashmi, R. and Malik, B.K. (2022) stated that the type of institution a child attends and the socio-economic position of the household was the primary causes of the rising gender gap. One major factor in ending the gender gap in higher education appears to be the household head's education. Sharma, D. M. and Daimary, P. (2024), finds that the percentage of women enrolled in higher education was increased. This can be due to the growing acceptance of women's empowerment and gender awareness in India. There was a gender gap in the number of students enrolled in various higher education streams. Kumar, M. and Naincy, N. (2020) conclude that the negative gender gap in private spending on higher education was caused by the labour market's structural change, which was creating more white-collar and service-sector jobs. Now women had more professional options and appealing incentives. In addition, the majority of service-related jobs require advanced abilities and women do better than men in these fields. Singh, U. (2019) conclude that public spending patterns, both the central and state governments had raised spending on primary education, an effort to guarantee everyone's right to an education, but the spending level had not yet achieved the necessary levels in terms of GDP/GSDP. The goal of free, mandatory, universal and high-quality education

should be reaffirmed by increasing funding for both higher education and schooling. Udayakumar, K. et.al. (2024) documented that India's public education budget reflects the government's goals and solutions to the country's socio-economic problems. Investing in human capital is essential for addressing unemployment and poverty, ensuring that everyone, especially the poor, has access to education as a fundamental right. Even while spending on education has grown over time, ongoing budget constraints shows that better resource allocation and financial reforms are required. Dash, T. and Prajapati, H.R. (2025), revealed that the gender disparity in literacy rates varies significantly between Indian states and Union Territories, with rates ranging from 3 percent to 27 percent. Rajasthan had the largest gender gap (27.1%), while Meghalaya had the smallest (3.1%). The presence of gender disparities in schooling had been clearly demonstrated by national and state census statistics. There were notable gender differences. In several states, the enrollment gap had grown at all educational levels during COVID-19.

There was essentially two main school of thought in the literature that examine the disparity between the male and female in family spending on education in India. In the first, parents discriminate against male and female children at the individual and household levels, based on sociological conceptions of Indian society. The second was labour market flaws, which differ for male and female labour. After reviewing the literature, it can be concluded that the majority of the discussion was related to the overall level of education in terms of the gender gap in private household spending.

111. Data Sources and Methodology

This study used secondary data gathered from a variety of sources, including various reports from the NSSO, AISHE, budget documents from the Union governments and economic surveys conducted over a period of time. In order to investigate the patterns of public spending on education, several indicators have been used, including public spending on education as a percentage of GDP, per-student spending on education and allocation to education in the union budget. Compound Annual Growth Rate had been used.

VI. Result and Discussion

4.1 Relationship between Education Expenditure as percentage of GDP and Union Budget

The nominal amount of India's education expenditure has been rising. The union education expenditure for 2025-26 allotted ₹ 1.28 trillion, a 6.5% increase over the previous year. The growth rate was the lowest in the last four years and total spending as a percentage of GDP (about 4.6% in FY 25) was still below the 6% target set by the National Education Policy (NEP 2020).

Table: 4.1 Trend in Education Budget, Union Budget and Education Expenditure as a Proportion of Total Union Budget and GDP

Sr.No.	Year	Expenditure on Education (in crores)	Total Union Budget Expenditure (in crores)	Education Expenditure as a Proportion of Total Union Budget Expenditure	Total % of GDP
1.	2013-14	79451	1665297	4.77	3.9
2.	2014-15	83771	1794892	4.67	4.1
3.	2015-16	69074	1777477	3.89	4.3
4.	2016-17	72394	1978060	3.66	4.3
5.	2017-18	79686	2146735	3.71	4.4
6.	2018-19	85010	2442213	3.48	3.9
7.	2019-20	94854	2786349	3.40	4
8.	2020-21	99312	3042230	3.26	4.6
9.	2021-22	93224	3483236	2.68	4.1
10.	2022-23	104278	3944909	2.64	-
11.	2023-24	112899	4503097	2.51	4.6
12.	2024-25	124638	4820512	2.58	4.6
13.	2025-26	128650	5065345	2.54	-

Source: Government of India budget document and https://data.worldbank.org

Note: "-" not available.

Over the past ten years, education spending was varied from 3% to 4% of GDP and there were still ongoing problems with infrastructure, quality and resource allocation. It is essential for long-term development that education spending be raised to the 6% GDP target. Even though current spending was below this goal, government spending on education had significantly increased, over the last five years. In comparison to FY 19 to FY 26 allocation increased significantly by 51.33%, from Rs. 85,010 crore to Rs. 128650 crore. But in 2021-22, the Covid-19 pandemic caused the allotment to drop by 6.12%.

India's education spending increased from 4.1% to 4.6% of GDP, from 2014-15 to 2023-24. International standard established by the "Education 2030: Framework for Action", which advises nations to devote 4 to 6 percent of their GDP on education. India's education spending had been steady, in line with global standards and had been higher than that some of its neighbor's nation's in terms of both GDP percentage and government spending. Education expenditure and the percentage of the overall union budget are related, while the absolute amount of spending may rise, but the percentage allotted to education varies according to economic situations and government priorities. Although, in India's total budget allotment for education increased from 2019 to 2025. Its proportion to the overall budget fell during certain times as a result of pressing economic issues or other expenditure priorities. This shows a clear but changing relationship, where factors outside the education sector itself can affect how much of the overall budget goes towards education.

4.2 Trend in Gross Enrollment Ratio

The Gross Enrollment Ratio (GER) is a significant metric for assessing a population's degree of higher education participation. The Gross Enrollment Ratio increased steadily from 25.8 in 2017-18 to 28.4 percent in 2021-22. The Gender Parity Index also shows a slight shift in favour of women in recent years, but overall, the GER for men and women had been very equal. In 2021-22, the overall GER was 28.4%, meaning that round three out of ten people in the qualifying age group (18 to 23 year) were enrolled in higher education in India. There had been a noticeable improvement in female enrollment. In 2012-13, the GER for women was 20.1%, which was lower than the GER for men, which was 22.7%. In 2021-22, this disparity had somewhat decreased, with female enrollment standing at 28.5%, while male enrollment was at 28.3%. The rise in GER was greater in females than in males. The Gross Enrollment Ratio of India increased by an incredible 71 times from 1950-51 to 2021-22, indicating notable advancement in student enrollment over the decades.

Table 4.2 Trend in Gross Enrollment Ratio

Sr.No.	Year	Male	Female	All
1.	2012-13	22.7	20.1	21.5
2.	2013-14	23.9	22.0	23.0
3.	2014-15	25.3	23.2	24.3
4.	2015-16	25.4	23.5	24.5
5.	2016-17	26.0	24.5	25.2
6.	2017-18	26.3	25.4	25.8
7.	2018-19	26.3	26.4	26.3
8.	2019-20	26.9	27.3	27.1
9.	2020-21	26.7	27.9	27.3
10.	2021-22	28.3	28.5	28.4

Source: AISHE 2012-13 to AISHE 2021-22.

This increase was seen by the GER numbers, which were 0.4% in 1950-51 to 28.4% in 2021-22. The National Education Policy (NEP) 2020, which seeks to attain a GER of 50% by 2035, had been line with this outstanding advancement. The increase in GER, especially in female participation, demonstrates the effectiveness of continuous reforms and policies meant to improve gender parity and educational access in India. The report highlights the higher education system's increasing inclusion, indicating a positive trend towards better educational equity.

4.3 Gender Parity Index

The Gender Parity Index is a socio-economic metric used in education to evaluate male and female student educational access and enrollment. The GPI shows how equally women participate in the educational system.

Table : 4.3 Gender Parity Index

Sr.No.	Year	Gender Parity
1.	2013-14	0.92
2.	2014-15	0.92
3.	2015-16	0.92
4.	2016-17	0.94
5.	2017-18	0.97
6.	2018-19	1.00
7.	2019-20	1.01
8.	2020-21	1.05
9.	2021-22	1.01

Source: AISHE various reports.

Parity between the sexes is shown by a GPI of 1; a disparity favoring males is usually indicated by a GPI that ranges between 0 and 1; and a gap favoring females is indicated by a GPI greater than 1. The GPI is 1.01 for all India in higher education (2021-22). The Gender Parity Index (GPI) had increased for every category. It rose from 0.92 in 2013-14 to 1.01 in 2021-22. In higher education, the Gender Parity Index (GPI) increased significantly from 2017 to 2022, gender parity was almost achieved. There was a consistent rise from 2018 to 2020. In 2019-20, the GPI reached 1.01. This indicated that women were more likely to be enrolled than men. A steady trend of increased female participation was maintained in 2020-21 when the GPI increase to 1.05. The GPI balanced the male and female enrolment rates once more by 2021-22, when it was back to 1.01

4.4 Gender Differences in Household Yearly Education Expenditure on basic course

In India, there were persistent genders differences in the amount spend on children's education, according to the Comprehensive Modular Survey on Education (NSS 80th Round). According to the survey, families in both rural and urban areas spend less on girls than on boys at every education level, from pre-primary to upper secondary. Household in rural India spend approximately ₹ 1,373 (18%) more on boys, whereas in urban India, girls typically receive ₹2791 less. India had made consistent progress in recent years to increase the number of girls attending school. The Gross Enrollment Ratio for women in higher education was marginally greater than for men. The National Sample Survey earlier reveals a more severe gender disparity that still exists in education. Families still spend different amount of money on their son's educations compared to their daughter. Families spend more on boy's education, across all stages of schooling. The average cost of schooling in rural areas was Rs. 7660 for girls and Rs. 9,033 for boys, according to NSS 80th round report. The average spending for boys in urban areas was Rs. 24788, while that of girls was Rs.

21997. Household in rural India spend approximately ₹ 1,373 (18%) more on boys, whereas in urban India, girls typically receive ₹2791 less. India had made consistent progress in recent years to increase the number of girls attending school.

Table: 4.4 Average Education expenditure over different academic year

Rs.

Sr. No.	Year	Rural			Urban			Rural + Urban		
		Male	Female	Person	Male	Female	Person	Male	Female	Person
1	NSS 64th Round (2007-08)	1684	1382	1551	5351	4863	5128	2595	2293	2461
2.	NSS 71st Round (2013-14)	4854	4042	4487	13426	12323	12904	7131	6382	6788
3.	NSS 75th Round (2017-18)	5579	4812	5240	17123	15282	16308	8797	7742	8331
4.	NSS 80th Round (2024-25)	9033	7660	8382	24788	21997	23470	13,470	11,666	12,616
5.	CAGR	10.39	10.6	10.43	9.44	9.28	9.36	10.17	10.04	10.09

Note: Basic Course include: Primary, Upper Primary, Secondary, Higher Secondary, Graduate, Post Graduate & above.
Source: NSS various round reports.

The average for both boys and girls in rural and urban areas was Rs. 13470 and Rs.11666, respectively. In rural areas average education expenditure for male increased from 1684 to 9033 and for females it increased from 1382 to 7660 from 2007-08 to 2024-25. In urban areas average education expenditure for male increased from 5351 to 2478 and for females increased from 4863 to 21997. Average education expenditure for both rural and urban areas for men increased from 2595 to 13470 and for females increased from 2293 to 11666.

V. Conclusion

Education is crucial for rising financial status of both male and female. It is also believed that the most successful ways of achieving women's empowerment and gender equality is education. Government initiatives in education had greatly decreased the gender gap in enrolment. The education of females had been the focus of numerous government initiatives, including the Beti Bachao, Beti Padhao (BBBP, 2015), Sukanya Samriddhi Yojana (SSY, 2015), Kasturba Gandhi Balika Vidyalaya (KGBV,2004) and the National Programme for Education of Females at Elementary Level (NPEGEL, 2003). India's education expenditure was steady, in line with global standards and higher than some of its neighbor nations in terms of both GDP percentage and government expenditure. Education expenditure and the percentage of the overall union budget are related, while the absolute amount of spending was increased, but the percentage of budget allotted to education varies according to economic situations and government priorities. Factors outside the education sector also affect how much of the overall budget goes towards education. The rise in GER was greater in females than in males. The Gross Enrollment Ratio of India increased by an incredible 71 times from 1950-51 to 2021-22, indicating notable advancement in student enrollment over the decades. The increase in GER, especially in female participation, demonstrates the effectiveness of continuous reforms and policies meant to improve gender parity and educational access in India. The report highlights the higher education system's increasing inclusion, indicating a positive trend towards better educational equity. NSS 80th report revealed that families in both rural and urban areas spend less on girls than on boys at every education level, from pre-primary to upper secondary. In India, women were comparatively better access to higher education, but their educational outcomes were less favorable. Prior studies confirmed that there was a gender gap in the decisions made by households regarding the allocation of resources for the education of their male and female children in both rural and urban areas. Government should need to create gender-responsive budgeting and targeted financial incentives, such as scholarship and subsidies for females, to reduce the gender gap in education spending. It is also important to remove cultural barriers through community participation and teacher training. Establish and improve integrated programs, such as "Samagra Shikshs, 2018", that tackle several elements of girl's education, such as supplying textbooks, uniforms and stipends. Educate educators on gender-sensitive pedagogy to eradicate prejudices and provide a secure and encouraging learning environment for every student. Additionally, focus on improving women's financial literacy and education in order to decrease the gender gap in financial inclusion.

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