

# Gender Viewpoints In Budgetary Process: Achieving The Gender Equality And Women Empowerment In India

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## Abstract

The paper seeks to examine the importance of gender responsive budgeting and its effectiveness on different gender development indicators in India (particularly on female drop-out rate in education, gender parity index, maternal mortality rate, GDI and HDI etc.). The study also assesses the trends of gender responsive budgeting in India from 2005-06 to 2019-20 within the fiscal perspective. The study has classified gender budgeting expenditure into two parts i.e., women-specific allocation (WSA) and pro-women allocation (PWA) as well. The study used a simple linear regression model to examine the effectiveness of gender budgeting on women development. To work out the link between fiscal policy and gender development the bivariate and multivariate regression models have been estimated. Gender budgeting found highly significant in improving girl's enrolment ratio and in reducing the drop-out rate among of girls students. The study indicates that only 20 per cent of share approximately covers women specific allocation however pro women allocation consist of 80 per cent of share, reflecting a significant share in gender budgeting. This paper concludes that the gender budgeting is highly correlated with the development of female HDI, GDI, female drop-out rate and gender parity index and maternal mortality rate also. The study also indicates that with a robust gender analysis and ensuring a well gender balance in policies the inequalities within gender can be reduced which is further socially and economically appropriate for the nation. The future study on the outcome and impact of gender budgeting

should focus on actual allocations, economic impacts, improvement and change in gender performance indicators and supportive among administration and citizens.

JEL Classification: A1, H 30, H 53.

Keywords: Budgeting, Equality, gender sensitive, social sector spending.

## I. Introduction

The gender inequalities are prevalent all over the world, but mainly prominent in the developing countries. Most of the developed nations have eradicated gender inequalities in social sector (particularly education and health care) still women's role are limited in economic and political sphere. In many developing nations, gender disparities education and health sector have reduced. Nonetheless, there has been requirement to escalating the women's importance in economic activities, in political involvement and in supervision and ownership of productive resources. Many studies present the evidence and suggested that reducing the gender disparities and encouraging girl's and women's prosperity are advantageous for the nation (Duflo, 2012; Singh D, 2013; J. Stotsky, 2016). The gender justice, the 5<sup>th</sup> among 17 sustainable development goals is one of the important objectives of the United Nation's 2030 agenda for sustainable development in different aspects of life. Although gender equity has a long way to go in India (Kundu, 2021). The belief of gender equality is also included in the Indian constitution. It provides gender equality and empowers the government to implement positive discrimination measures in favour of women. The national policy for the empowerment of women (2001) has a goal to bring about the advancement, development and empowerment of women. Specifically, the objectives of this policy includes, enjoyment of human rights and fundamental freedom by women on equal rights; elimination of discrimination and all forms of violence against women and the girls; creating an environment through positive economic and social policies for full development of women to enable them to realise their full potential; providing equal access to participation and

women empowerment and mainstreaming a gender oriented perspective in the development process.

Gender responsive budgeting is the translation of gender commitments into budgetary commitments through gender mainstreaming (Hooda & Kataria, 2022). It concentrates on gender-based and equality-focused assessment for redistribution of the economic resources. It is an important instrument with the policy makers to ensure that both male and female equally receive the benefits of development and growth. The aim of gender budgeting is to make in equality by accurately utilising the available resources, techniques and procedures of the budgetary expenditure. Gender budgeting or gender responsive budgeting discusses a variety of tools, techniques and schemes to encompass the gender viewpoint in budgetary processes and encouraging the effective mainstreaming of gender in policy-formulation. It is recognized as a vital approach that assists change in fiscal policies and budgetary practices of any country to address more uniform gender development. Not only the under-developed countries but the developed countries have also initiated this strategy to reduce gender inequality. However, this strategical framework is not a separate budget for women, it is about whether the spending is enough to meet the desire outcomes. "It breaks-down the government's budget according to its impact on different groups of women and men, with absolute cognizance to the society that underpins gender relations" (J. G. Stotsky, 2007). This assists in reducing the vulnerability and restore transformation in their eminence by uninterrupted mainstreaming. Several countries have done gender budgeting at national levels and sub-national levels, keeping in mind the powers of decentralization with heterogeneous nature in regions. These devolutions help in better understanding of problems at sub-national levels which makes it easier for the government to better spend on the targeted areas. Therefore, it has become ideally to adopt a fiscal approach for the gender development

Australia was the first country to initiate the exercise on women's share in the country's budgetary system. It was found that women-specific expenditure occupied only one percent of the total budget of Australia (Sharp & Broomhill, 1990). While considering this small percentage, 13 departments were called upon for the first time to measure

the impact of the budgetary expenditure on women. It was the first comprehensive audit that impacted women development hence called "Women Budgeting". Many international agencies also showed their interest in this strategic framework at macroeconomic levels throughout the world. UNIFEM played a most imperative role by establishing these international agendas through confirming their constructive role in any country's development. The growth of UNIFEM commitments directly associated with CEDAW and Beijing platform for actions to promote women's right and their capacity in the economy. It focused more on sustainable development and transparency in the country's budgetary process that is made for gender development. Hence, it is measured as the most crucial foundation behind adopting a gender-responsive budget by many countries of the world. It raises awareness of the gendered impacts of budget and to make government accountable for ensuring their budgets promote the achievement of gender equality and women's right, especially among the poor. Further, this exercise was undertaken by many countries like South Africa, Philippines, Korea, India and many others also. India also initiated gender budgeting into their budgets. A significant impact of education on female economic participation, enables better decisional involvement and promote positive externalities. It also being noticed that women in higher education can help in reducing high fertility rate which causes less spending on dependent variable i.e. Children and thus increases in savings and investment (Branisa et al., 2013). There are large gender gaps in India and women spent more time on unpaid care work than men (Budlender, 2008). It is stated that India's federal structure, the union government's attempts to engender budgets alone will not result in any tangible gain unless complemented by similar efforts at the state level. Haryana is among those states of India that accounts to a maximum higher per capita income. But, despite of high-income generating state it is evident enough with gender discrimination also at various basic stages. It has a high sex ratio, high maternal mortality rates and high gender gap in educational attainment among boys and girls (Hooda, 2021; Hooda & Kataria, 2022).

A workshop was conducted at National Institute of Public Finance and Policy (NIPFP) New Delhi in July 2000 with the

collaboration of different departments of government of India and UNIFEM. The NIPFP was authorized to investigate gender-related economic policy issues and further analysed the union budget for 2001-02 from the gender perspective (Lahiri et al., 2003).

In the second interim report of the NIPFP selected states budget were taken into consideration by National Institute of Public Cooperation and Child Development (NIPCCD) to assess the expenditure on women directed by the union budget. Following the process over the years, the centre government in 2003 proposed to all the ministries and department to put their budgetary documents on gender issues in their annual report. In 2004, the planning commission and finance ministry advised the different ministries and departments to analyse separate incidence of gender budgeting from 2005. Since 2005 gender budgeting process have been included in budget circular. The government have adopted different tools and techniques in the budget formulation phase of the budget cycle to endorse gender budgeting. There are now more than 57 central ministries in India with the prime objective to check the flow of funds and to improve the programs and schemes in the gender-sensitive budget. However, the paper also emphasizes on the trends of four Ministries/departments, which claims to have more than 90 percent of the assistance for women progress while indexing gender-related budget out of the total expenditure of the country. These are ministry of women and child development (MWCD), department of education (DoE), department of rural development (DoRD) and department of health and family welfare (DHFV). These departments comprise of concentrated financial resource allocation featuring in refining women through gender budgeting. There are number of studies conducted to show the positive correlation between social sector expenditure and human development. The rest of the study is divided into six sections. The section II covers the related studies under the literature review. The section III briefly discuss the objectives of the study. Section IV highlights the research methodology and data base employed followed by gender responsive budgeting trends in section V. Section VI elaborates the effectiveness of gender responsive budgeting on different gender development indicators with the help of different models (particularly expenditure on

health, education, gender parity etc. In the end, section VII covers the conclusion includes the findings, limitations of the study and future research suggestions also.

## **2. Literature Review**

A large number of literature on gender responsive budgeting shows that the proper formulation and execution of budgetary policies keeping in view of gender perspective is utmost importance for the society and nation as well. The study advocated a positive role for gender budgeting in improving gender equality in education (Stotsky et al., 2016). Moreover, studies elaborated an inverse relationship between gender inequality in education and the economic growth which can be corrected by large social spending on the female in education as a marginal return of spending on a female child is higher than that of a male child in any economy (Branisa et al., 2013; Klasen, 1999; Klasen & Francesca, 2008; Madhusudan Ghosh, 2018; Seguino, 2000; Singh, 2014; Singh D, 2013).

Gender inequality is not good for any nation's sustainable development and economic growth (Razavi, 2012), hence it becomes necessary to bridge the gender inequality gap by the government's budgetary provisions. (Viswanath & Mullins, 2021) also highlighted that gender inequities are more triggered by covid pandemic and gender mainstreaming allocation has become imperative for achieving the sustainable development goals. With the proper execution of gender oriented policies, more output, better development of people capacities and more wellbeing can be achieved. In this way, gender inequality is inefficient and can be reduced by adopting the gender mainstreaming budgets (Galizzi et al., 2021) and encourage the gender equality and empowerment among women and girls at all levels (Khalifa & Scarparo, 2021). But the resources crisis is a big challenge and governments need to avoid the structural issues by simply dispensing budgetary resources on the basis of gender portions. Women priorities and needs should be identified which leads to a better contribution to gender budgeting and policy refinements (Sushant & Laha, 2021).

(Chakraborty, 2014) emphasized on benefit incidence analysis of gender of public expenditure in India. Moreover, the author (Chakraborty, 2021) also noted that higher budgetary allocation does not mean higher spending and

found a significant fiscal mismatch in actual and budgeted amount. The gender gap exists in India because of lack of equal opportunities for the female in the different sectors of the country and less representation in key positions of leadership. The author suggested that allocation should be diversified for the wider outreach and impact and leads to be more effectiveness (Mitra, 2019). Gender budgeting promotes the holistic integration of gender perspective during all the phase of budget cycles. Therefore, formulation and execution of policies should be gender sensitized and need to be gender perspective approach in to all the budget cycles (Curristine et al., 2021). Moreover, scholars viewed that outcome and result based gender budgeting should focus on actual allocation, performance in the gender development indicators, awareness among masses and politicians (Marx, 2019). Policy makers need to concentrate on implementation barriers. Scholars noted that keeping in view of gender perspective the better policy implementation not only economic desirable (Galizzi et al., 2021) but also leads to higher output, more development and better well-being (Nakray, 2009; Sharp & Elson, 2008).

### **3. The objectives of the study**

The key aim of this study is to assess the effectiveness of gender budgeting on different development indicators related to women development. As the trends and development of gender budgeting are need to understand for the impact of gender budgeting. Therefore, in the first section, the paper also tries to measures the tendency of gender budgeting in India from 2005-06 to 2019-20.

### **4. Research methodology**

In India, central government has over the period of time tried to incorporate gender perspective in its budgets through various programmes and schemes (Lahiri et al., 2003). This study analyses the trends of gender budget spending from 2005-06 to 2019-20 by taking into account different central government demand for grants and categorized government budget into two components:

1. Expenditure on Women Specific Allocations (WSA): It indicate 100 per cent spending targeted for women. The scheme has great importance in the country because it enable to communicate the whole benefit to the female

section alone, indicate 100 percent spending which focused on women development.

2. Pro-Women Allocations (PWA): Which is composite expenditure (for men and women) and claims to postulates at least 30 per cent benefit for women empowerment and the remaining 70 per cent is a composite spending that will benefit both the gender with various intensities.

However, the pro-women allocation is calculated by adopting the following formula:

$$PWA = (TE - WSP)$$

Where, PWA = Pro-Women Allocation; TE = Total expenditure on gender budgeting; WSP = Women-Specific Programmes

The study used a simple linear regression model to assess the effectiveness of gender responsive budgeting on different women development indicators (particularly, female drop-out rate and gender parity index and maternal mortality rate etc. The data related to women specific and pro-women allocations are collected from India's union budgets of various years RBI and UNDP. The data on literacy, drop-out rate, sex ratio etc, are collected from Census of India, Sample Registrar System(SRS) of Registrar General of India.

To find out the impact on dependent variables the different independent variables consist of: per capita social sector expenditure, log of per capita social sector expenditure, log of per capita social sector expenditure, per capita education expenditure, a log of education expenditure, per capita health expenditure, log per capita health expenditure, per capita expenditure of gender budgeting, log per capita expenditure of gender budgeting. The  $t$  in the equation refers to the time period, as based on the time series data over the last 14 years i.e., from 2005-06 to 2019-20 and  $\alpha$  and  $\beta$  are intercepts and regression coefficient,  $u$  represents random disturbance term and  $i$  stands for cross-sectional unit which include sixteen major states of India. The same independent variables have been used to find out the impact on dropout rate, gender parity, MMR and sex ratio.

### 5. Trends of gender responsive budgeting

Budgets are the reflection of the government precedence; hence it impacts the diverse segments of society via the distribution of resources. It is an approach which



concentrates on most imperative disputes surrounded by the country. Various studies suggested that, if the budgets promote gender equality then it leads to more economic gains, increased output and better development of people's capabilities (Singh D, 2013). Australia being the first country to initiate gender budgeting inspected their channels by which women signifies to be get benefitted out of the budget within all government ministries. The state government of Australia tracked the country's provision for women ventured and realised it very less (less than one percent). Considering these ailments Australia decided to start with women budgeting for the first time in the budgetary system. Hence, many other countries also analysed the same and found an insignificant proportion of women in their budgets worldwide. The following table 1 explain the extent of gender responsive budgeting in the nation during 2005-06 to 2019-20.

**Table 1: Extent of gender responsive budgeting in India (INR in Millions)**

| Year         | Expenditure on GB | WSP                | PWA                 | AGR    |
|--------------|-------------------|--------------------|---------------------|--------|
| 2005-06      | 2,40,320.00       | 79,050.80 (32.8)   | 1,61,269.20 (67.2)  | -      |
| 2006-07      | 2,87,365.30       | 95,758.20 (33.3)   | 1,91,607.10 (66.7)  | 19.58  |
| 2007-08      | 1,86,368.80       | 83,404.40 (44.8)   | 1,02,964.40 (55.2)  | -35.15 |
| 2008-09      | 2,76,616.70       | 1,14,596.10 (41.4) | 1,62,020.60 (58.6)  | 48.42  |
| 2009-10      | 5,68,576.10       | 1,57,156.80 (27.7) | 4,11,419.30 (72.3)  | 105.55 |
| 2010-11      | 6,77,498.00       | 1,92,660.50 (28.4) | 4,84,837.50 (71.6)  | 19.16  |
| 2011-12      | 7,82,510.20       | 2,05,483.50 (26.2) | 5,77,026.70 (73.8)  | 15.5   |
| 2012-13      | 8,81,428.00       | 2,29,689.30 (26.1) | 6,51,738.70 (73.9)  | 12.64  |
| 2013-14      | 9,71,337.00       | 2,42,481.90 (28.1) | 6,98,855.10 (71.9)  | 10.2   |
| 2014-15      | 9,80,298.40       | 2,18,876.10 (22.3) | 7,61,422.30 (77.7)  | -0.92  |
| 2015-16      | 7,92,578.70       | 1,66,571.10 (21.1) | 6,26,007.60 (78.9)  | -19.15 |
| 2016-17      | 9,06,247.60       | 1,74,120.10 (19.2) | 7,32,127.50 (80.8)  | 14.34  |
| 2017-18      | 11,33,112.00      | 3,13,716.20 (27.7) | 8,19,395.80 (72.3)  | 25.03  |
| 2018-19 (BE) | 12,44,288.30      | 2,94,361.50 (23.6) | 9,49,926.80 (76.4)  | 9.81   |
| 2018-19 (RE) | 12,55,315.80      | 2,74,044.40 (21.8) | 9,81,271.40 (78.2)  | 9.08   |
| 2019-20 (BE) | 13,69,341.00      | 2,74,200.30 (20.0) | 10,95,140.70 (80.0) | 4.29   |
| 2019-20 (RE) | 14,28,133.00      | 2,94,735.20 (20.6) | 11,33,397.80 (79.4) | 0.45   |
| <b>CAGR</b>  | <b>13.23</b>      | <b>9.29</b>        | <b>14.66</b>        |        |

Source: Various Issues of Union Budget, Government of India

Note: The value in parenthesis shows the percentage of expenditure on gender budgeting

The percentage values in parenthesis are showing proportional portion of women specific programmes and pro-women allocation in the expenditure on gender budgeting. The table 1 illustrates the structural formation of women-specific programmes (WSP) and pro-women allocation (PWA) for the calculation of total gender responsive budgeting spending. The CAGR for gender budgeting is 13.23 percent which is quite less for WSP (9.29 %) over PWA (14.66 %). The women specific spending solely earmarked for dealing with female related issues although trends on women-specific allocations indicates some different kind of picture. The funds earmarked by the centre government are meagre and inadequate for female development and reveals substantial inconsistency in the distribution pattern. Only the women specific allocation perceived 32.80 per cent in 2005-06, the share was the highest budgetary allocation in the entire gender budgeting which further sinks to just 19.20 percent in 2016-17. The reason found behind above-average share in 2005-06 is a new establishment of gender budgeting for the first time in the Indian accounting system. As highlighted in table itself that share increased till the period of 2007-08 up to 44.80 percent but later exhibit sudden decline and come down to just 20 percent in 2019-20. Contrary, during 2014-15 and 2015-16 AGR have been reduced by 0.92 percent and 19.15 percent respectively, which implies under-utilization of funds and false commitments made by government. This deterioration condition is not visible in absolute term instead it is highly noticeable in the relative term. As mentioned that total proposed investment in WSS has increased during 2016-17, it was Rs.174120.10 millions which increased from Rs.166571.10 millions than the previous year but if it is arranged in percentage configuration of total gender budgeting expenditure then it has reduced over a period. Hence, it can be said that these negligible rise in the absolute amounts are inadequate to deal with the female centric issues. Over the last During the period 2009-10 to 2019-20, women-specific allocations failed to reach 30 percent of gender budgeting which is quite indicative to show government unconsciousness and their failure in supporting women development.

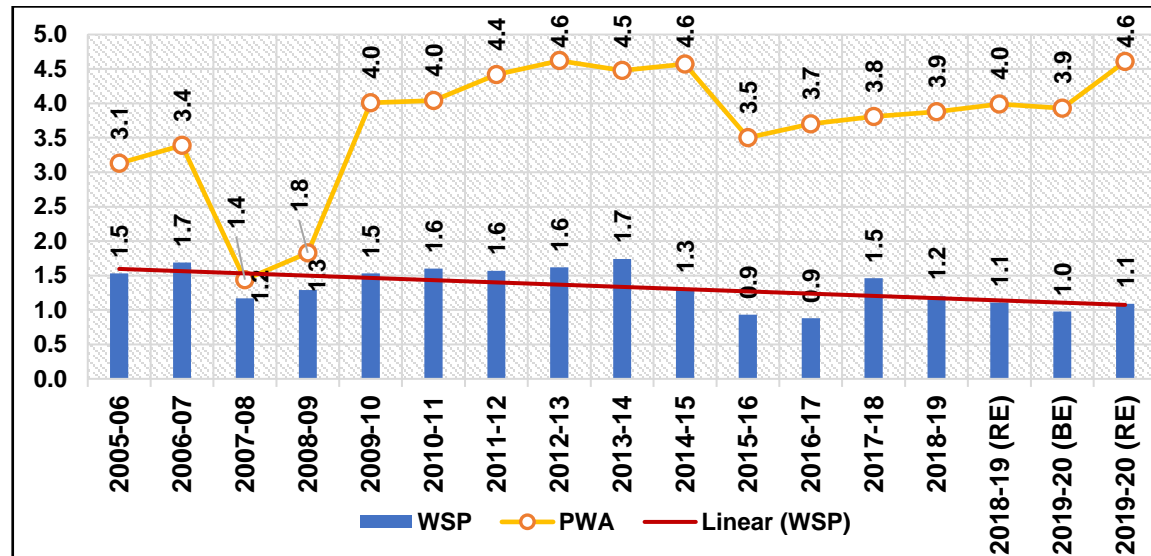


Figure 1: Share of gender budgeting in total expenditure of India (In percentage)

Source: Various Issues of Union Budget, Government of India.

The above figure 1 describes that overall gender budgeting expenditure is less than six percentage of total expenditure during the study period. The spending configuration on WSP found almost steady that revolves around the radius of one percent approximately. It also characterizes a sharp decline from 2013-14 onwards with only 0.90 percent markup in 2017-18. In 2005-06 the percentage share was 1.53 to the total expenditure which increased by 0.21 percent and reach to 1.74 percent in 2013-14. Despite plethora towards women-specific allocation, the annual growth rate is declining on an average with some exceptions after 2006-07. It is important to note that the amount allocated in 2019-20 in WSP is even less than the amount allocated in 2005-06, means even after fifteen years of implementation also there is no sign of improvement visible. In the PWA also the percentage share ranges between 1.44 percent (minimum) to 4.62 percent (maximum) of the total expenditure. Though the proportional share of PWA noticed better than that of WSP, but not free from oscillations. During 2005-06 the percentage share of PWA was 3.13 percent which further reduced to just 1.44 percent in 2007-08. From 2009-10 onwards little increment in allocation pattern was noticed above the 4 percent till the year 2014-15 which further in 2014-15 that again declined and come down to 3.50

percentage in 2015-16. With this composition of gender budgeting in budgetary allocation of the union, budget pitches up a modest positive impact on women development. India which is considered as among one of the most gender-unequal countries of the world compensating its gender outcomes with only 2 to 6 percent of expenditure in total budgetary allocation.

### 5.1 Gender budgeting in ministries/ departments

The resources allocation for the advancement of women is routed through various departments/ministries. These departments include various schemes and programmes related to women empowerment. More than 90 percent of total gender budgeting spending limited to these four departments. These amounts of expenditure are indicates that a nation takes its responsibility for providing a quality of life to the disadvantaged groups. It consist of advantages which are postulated with the social principle in the form of cash, kind or both. Under the system of gender budgeting, ministry of finance issued instructions for all those central ministries and departments that are more liable for women development.

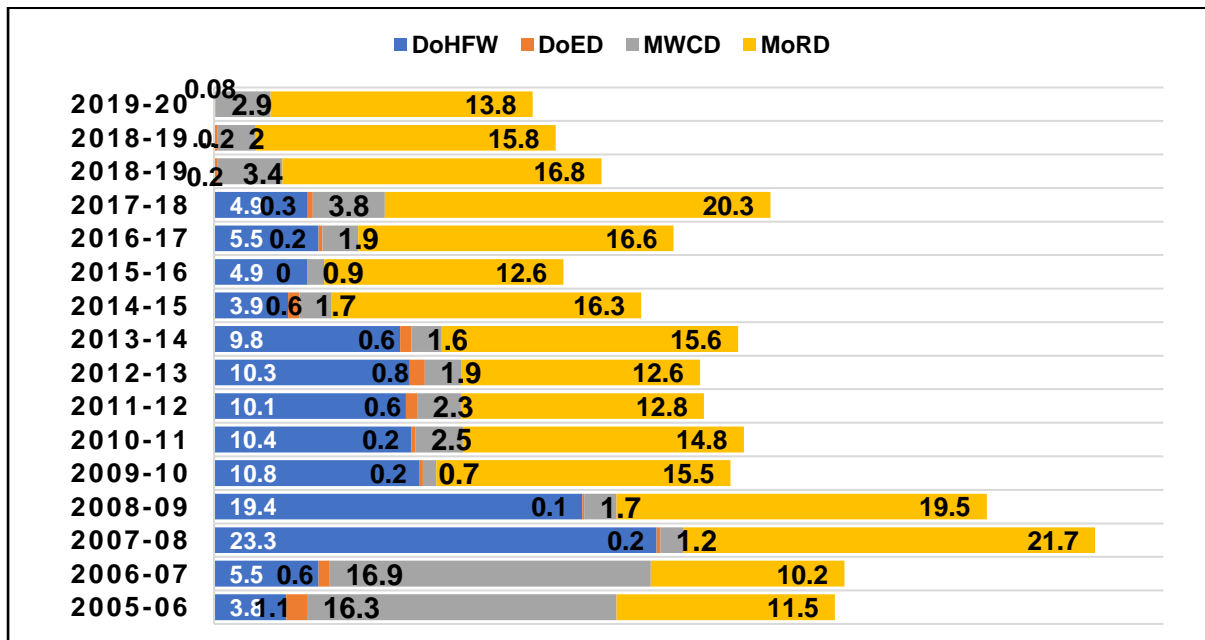


Figure 2: Women specific allocation to the total expenditure of gender budgeting

Source: Author’s own calculation

Ministry of Women and Child Development (MWCD) assert to provide highest benefits to women development but realized insignificant in corresponding the same. In 2005-06 the MWCD encompasses the highest share accounts to 16.3 percent of the total expenditure of gender budgeting but it drastically declines and comes down to only 1.2 percent in 2007-08. This condition persisted long and even in 2020 also it constitutes only 2 to 3 percent of the entire proportion of gender budgeting. The reason seems to be intense fall off is due to shifting priorities headed for other departments i.e. Ministry of Rural Development (MoRD) and Department of Health and Family Welfare (DoHFW). These two departments entail of 23.3 percent (DoHFW) and 21.7 percent (MoRD) share in 2007-08, raise from just 3.8 and 11.5 percent in 2005-06. It means that the government is spending more on ensuring equal opportunities for women in health and family aspects, particularly in rural females. Under the head of Pradhanmatri Awas Yojana (PMAY) government ensuring female-headed household with only a sole motive of enhancing their respect in the family. During 2017-18 this same department alone occupies 20.3 percent share of gender budgeting which later come down to 13.8 percent in 2019-20. Therefore, these two departments i.e. DoHFW and MoRD consistently injecting massive sum to retrieve women from their vulnerabilities but DoHFW suddenly stop receiving fund from 2018-19 onwards. On the other side, the Department of Education (DoED) witness least share during the entire study period which is almost valueless to consider. It has 1.1 percent expenditure during 2005-06 which declines to just 0.20 percent in 2018-19, however, it little crawl in absolute terms as compared to the previous years but still negligible to consider. During 2015-16 this education department was ignored entirely with no allocation at all, which is quite surprising while talking about female empowerment. Whereas on the other hand it is believed that spending on education is entirely adequate to meet the other women-specific but the trends in this department showing completely different between the two testimonies.

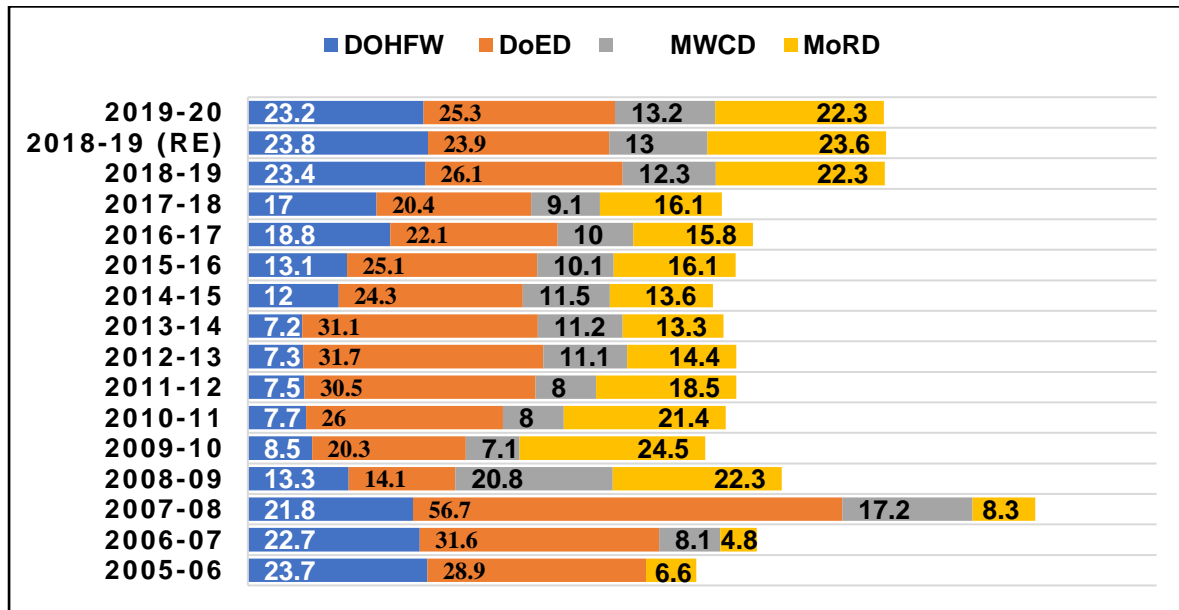


Figure 3: PWA in departments to the total expenditure of gender budgeting

Source: Author's own calculation

After analysing drifts in WSP, the above figure 3 focuses on trends under PWA for the same ministries and department as analysed before. It is crystal clear that under the head of PWA maximum proportion of resources has been invested in the DoED. The purpose of spending a large sum in this department is to get the uniform benefit for both the genders. Even the government is quite substantial while investing in the same during every consequent year in contrast to WSP, which is adequate enough to highlight strategic neutrality of government budgetary expenditure. In 2005-06 the education department consists of 28.9 percent which increased to 56.7 percent in 2007-08. The reason behind the increasing share is large fund investment in UGC, opening up of special Navodaya Vidhyalya and excessive venture for universal access to quality of education. But gradually the share declines to 31.1 percent in 2013-14 which furthermore weakens to just 20.4 percent in 2019-20. More resources have shifted to MoRD for strengthening more rural development programmes from 2008-09 onwards. It accounts for 6.6 percent in 2005-06 which start escalating from 2009-10 onwards and witnessed 24.5 percent of share respectively. Whereas, the MWCD marked the least allocation which accounts to Rs. 2339.50 crores in 2006-07 to 14528.0 crores in 2019-20.

However, if we look at the percentage composition then it has just increased by only one percentage since 2006-07 to 2017-18 to the total expenditure of gender budgeting. In 2008-09 it witnesses highest share than any other year with 20.8 percent which further declines to just eight percent in 2010-11 and 2011-12 respectively. So overall this paper also concludes that there is no single department under gender budgeting which is working smoothly, every department mark sharps up and downs in the way they receive funding from central government which is a big drawback of our strategic investment in India.

## 6. Results and Discussion

### Model - I

$$GDI = \alpha + \beta_1 \log(SSE) + \beta_2 \log(\text{Education}) + \beta_3 \log(\text{Health}) + \beta_4 \log(\text{GB}) + u_{it} \dots (1)$$

**Table 2: Effectiveness on female drop-out rate**

| Dependent Variable: female drop-out rate |          |             |            |              |         |       |    |
|--|----------|-------------|------------|--------------|---------|-------|----|
| Independent Variables                    | Constant | Coefficient | Std. Error | t-statistics | p-value | R2    | DF |
| PCSSE                                    | 74.09515 | -0.0079991  | .001454    | -5.50        | 0.000   | .7517 | 11 |
| Log PCSSE                                | 321.7555 | -34.22288   | 5.496377   | -6.23        | 0.000   | .7950 | 11 |
| PCEE                                     | 72.73413 | -0.115366   | .0286752   | -4.02        | 0.002   | .6181 | 11 |
| Log PCEE                                 | 178.1475 | -25.09639   | 7.413786   | -3.39        | 0.007   | .5340 | 11 |
| PCGBE                                    | 77.55943 | -0.0367325  | .0069882   | -5.26        | 0.000   | .7342 | 11 |
| Log PCGBE                                | 234.5842 | -28.63858   | 6.636833   | -4.32        | 0.002   | .6157 | 11 |

Source: Author's own calculation

To attain a crucial human right, education plays a key part in human, social, and economic development. Despite its necessity and need in the development progress, millions of children are still deprived of their right to education, particularly the girl child. The surest way of transmission of poverty from generation to generation is by the lack of access to education. Hence, to ascertain better resource utilization for the family and to reduce domestic abuse, it is highly recommended to invest in female education. Learning and reading help the women in identifying their rights and privileges and by demonstrating so long term achievements can be accomplished. So, to remove the long-standing gender inequalities below mentioned table

provides us with a brief overview of the impact of women-specific expenditure of gender budgeting, social spending and education expenditure in impacting their educational attainment levels. As it can be seen in table 2 that expenditure in education, social spending and gender budgeting, all have a significant impact in reducing women dropout rate from education. All the factors measured at five percent level of significance. The R2 value of social expenditure is measured considerably high while defining the dependent variable. The study found that a unit increase in log per capita social sector expenditure can reduce the female dropout by 34.22 units whereas one per cent increase in log per capita education expenditure results in preventing dropout by 25.09 units. Log Per capita gender budgeting also obtain significant in reducing the drop-out rate by 28 units by one-unit increase in the same independent variable.

#### Model - II

$$GPI = \alpha + \beta_1 \log(SSE) + \beta_2 \log(Education) + \beta_3 \log(GB) + u_{it} \dots \dots (2)$$

**Table 3: Effectiveness on gender parity index**

| Dependent Variable: Gender Parity Index |           |             |            |              |         |       |    |
|---|-----------|-------------|------------|--------------|---------|-------|----|
| Independent Variables                   | Constant  | Coefficient | Std. Error | t-statistics | p-value | R2    | DF |
| PCSSE                                   | .8260107  | .0000227    | 2.91e-06   | 7.83         | 0.000   | .8362 | 13 |
| Log PCSSE                               | -0.027953 | .1159269    | .0079963   | 14.50        | 0.000   | .9460 | 13 |
| PCEE                                    | .818273   | .0004103    | .0001105   | 3.71         | 0.003   | .5348 | 13 |
| Log PCEE                                | .4035192  | .096384     | .0254993   | 3.78         | 0.003   | .5435 | 13 |
| PCGBE                                   | .7942942  | .000128     | .0000167   | 7.66         | 0.000   | .8301 | 13 |
| Log PCGBE                               | .1555839  | .113701     | .0156682   | 7.26         | 0.000   | .8144 | 13 |

Source: Author's own calculation

Girls continue to be less educated than the boys in India. A disproportionate share of females in education leads to many other problems like high mortalities, poor health and reduce workforce participation. Attaining gender parity in education could have a significant impact on both men and women wellbeing. Equal access to education is key in promoting other socio-economic factors in the country and responsible for providing a foundation for the lifetime learning process. Gender parity is a ratio of female over the



male in gross enrolment rate. Hence all the independent variable originated significant in impacting the dependent variable.

**Model-III**

$$MMR = \alpha + \beta_1 \log(SSE) + \beta_2 \log(Health) + \beta_3 \log(GB) + u_{it} \dots \dots \dots (3)$$

**Table 4: Effectiveness on maternal mortality rate**

| Dependent Variable: Maternal Mortality Rate |          |             |            |              |         |       |    |
|---|----------|-------------|------------|--------------|---------|-------|----|
| Independent Variables                       | Constant | Coefficient | Std. Error | t-statistics | p-value | R2    | DF |
| PCSSE                                       | 183.228  | -0.0050317  | .0004497   | -11.9        | 0.000   | .9125 | 13 |
| Log PCSSE                                   | 369.9971 | -25.35846   | .817966    | -31          | 0.000   | .9877 | 13 |
| PCHE  | 198.1411 | -0.1747981  | .0203066   | -8.61        | 0.000   | .8606 | 13 |
| Log PCHE                                    | 381.0041 | -41.45333   | 3.683975   | -11.25       | 0.000   | .9134 | 13 |
| PCGBE                                       | 188.9124 | -0.0274429  | .0028886   | -9.50        | 0.000   | .8827 | 13 |
| Log PCGBE                                   | 321.6227 | -23.76605   | 3.181232   | -7.47        | 0.000   | .8230 | 13 |

Source: Author’s own calculation

To measure the impact of women-specific expenditure on maternal mortality rate, time-series data has been used over the past 14 years (2005-2019). All the independent factors such as per capita expenditure in social sector, health and gender budgeting are found significant in reducing maternal mortality rate in the country. The table 4 also reveals a higher level of significance in explaining the dependent variable. As it is observed that by increasing one unit of health expenditure MMR can be reduced by 0.17 units. Gender budgeting also found influential in combating MMR. Thereby by increasing one unit of gender budgeting, the state can reduce the mortality rate by 0.027 unit. Hence, it can be said that raised spending on education and health can significantly contribute to the reduce the maternal mortality rate, improve health gender outcomes. Table shows that if the government utilise the health services in a gender-specific manner, then it could meet everyone need.

**Model -IV**

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon_i \dots \dots \dots (4)$$

Where,

$Y_i$  = Human Development Index (HDI)

$X_1$  = Total fertility rate

$X_2$  = Female life expectancy at birth

$X_3$  = Adult female mortality rate

$X_4$  = Female Population ages 15-64

$X_5$  = Female School enrolment, secondary

$X_6$  = Female Unemployment (percentage of female labour force)

$\epsilon_i$  = Error term

**Table 5: Effectiveness of female development indicators on HDI**

| <b>Dependent Variable: Human Development Index (HDI)</b> |                 |                  |                     |               |                  |                 |
|--|-----------------|------------------|---------------------|---------------|------------------|-----------------|
| <b>Independent variable</b>                              | <b>Coef.</b>    | <b>Std. Err.</b> | <b>t-statistics</b> | <b>P&gt;t</b> | <b>95% Conf.</b> | <b>Interval</b> |
| Fertility rate, total (births per woman)                 | 1.237853        | 0.1791214        | 6.91                | 0.001         | 0.7774066        | 1.698299        |
| Life expectancy at birth, female (years)                 | 0.2603659       | 0.0434216        | 6                   | 0.002         | 0.1487471        | 0.3719848       |
| Mortality rate, adult, female (per 1,000 female adults)  | 0.0103011       | 0.0030485        | 3.38                | 0.02          | 0.0181376        | 0.0024647       |
| Population ages 15-64, female (% of female population)   | 0.0343543       | 0.0119897        | 2.87                | 0.035         | 0.0035337        | 0.0651749       |
| School enrolment, secondary, female (%gross)             | 0.0008691       | 0.0001159        | 7.5                 | 0.001         | 0.000571         | 0.0011671       |
| Unemployment, female (% of the female labour force)      | 0.0100462       | 0.001856         | 5.41                | 0.003         | 0.0052751        | 0.0148173       |
| <b>_cons</b>   | <b>122.2267</b> | <b>21.93233</b>  | <b>5.57</b>         | <b>0.003</b>  | <b>65.8478</b>   | <b>178.6055</b> |
| <b>Model Summary</b>                                     |                 |                  |                     |               |                  |                 |
| <b>Number of observation</b>                             | 16              |                  |                     |               |                  |                 |
| <b>F( 10, 5)</b>   | 18976.64        |                  |                     |               |                  |                 |
| <b>Prob &gt; F</b>                                       | 0.0000          |                  |                     |               |                  |                 |
| <b>R-squared</b>   | 0.9733          |                  |                     |               |                  |                 |
| <b>Adjusted R-squared</b>                                | 0.9945          |                  |                     |               |                  |                 |

Source: Author's own calculation

The table 5 exhibits that 97 percent of the dependent variable; Human Development Index (HDI) is explained by the six independent factors; selected women-oriented variables. The study found that all the variables are significant at 5 percent level of significance. About specific effects, it has been found that total fertility rate, which measures the incidence of live birth per woman thereby

indicating advance in health scenario in essence for women in their reproductive phase; whose outcome is higher live births per woman, is positively related to larger human development. Hence, a unit increase in the total fertility rate influence the HDI by 1.24 units. As for life expectancy at birth for females, it is revealed that with respect to human development which is positive and 0.26 units rise by one unit increase in female life expectancy at birth. It is evident that when a female's expectancy at birth increases it essentially reflects a better status quo for females in general and has a direct bearing on women at large. Concerning adult female mortality rate (per 1000 female adults), a higher occurrence of adult female death means deterioration of living and health conditions of women in general and plunge in a development state of affairs which is pointed out by the negative relation it has with human development index whereby a unit increase in adult female mortality leads to 0.010 unit fall in HDI.

Women lead a major role in all activities of a nation. They contributes significantly in all three major sectors of the economy i.e. agriculture, industry and services or as human resources.

The study found that an increase in the female population in the age group of 15-64 years as a share of the total female population positively contributes to human development and reveals that a unit rise in the same leads to 0.034 unit increase in HDI. Educated females are the significant assets to any nation, therefore, initiatives were taken to improve the same for higher absorption of female students beyond primary and secondary schooling which was a significant step. The study indicate that a unit increase in secondary school enrolment of female as a proportion of gross enrolment increases human development by 0.0008 unit. And lastly, it can be said that unutilized human resources is a setback in development and also the core symptom of jobless growth, if any. Hence, in this case, unemployed female as a share of the total female labour force is a setback to development as well as an impediment to women empowerment, thereby, supported by evidence provided which indicates that a unit increase in female unemployment pulls down human development by 0.0100 unit.

#### **Model -V**

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_i; \dots\dots\dots(5)$$

Where,

- $Y_i$  = Gender Development Index (GDI)
- $X_1$  = Current health expenditure
- $X_2$  = Female Population
- $X_3$  = Female school enrolment, secondary
- $X_4$  = Female Survival to age 65
- $\epsilon_i$  = Error term

**Table 6: Effectiveness of female development indicators on GDI**

| Dependent variable: Gender Development Index (GDI)   |          |           |              |       |              |          |
|--|----------|-----------|--------------|-------|--------------|----------|
| Independent variable                                 | Coef.    | Std. Err. | t-statistics | P>t   | 95% of Conf. | Interval |
| Current health expenditure (% of GDP)                | 0.026494 | 0.003047  | 8.69         | 0     | 0.019037     | 0.03395  |
| Population, female (% of the total population)       | 1.378597 | 0.327796  | 4.21         | 0.006 | 0.576509     | 2.180685 |
| School enrolment, at the secondary, female (% gross) | 0.001576 | 0.000294  | 5.36         | 0.002 | 0.000857     | 0.002295 |
| Survival to age 65, female (% of cohort)             | 0.286719 | 0.059968  | 4.78         | 0.003 | 0.139982     | 0.433457 |
| _cons  | -86.987  | 19.85633  | - 4.38       | 0.005 | -135.574     | -38.4003 |
| Model Summary  |          |           |              |       |              |          |
| Number of obs.                                       |          | 16        |              |       |              |          |
| F( 10, 5)  |          | 2369.80   |              |       |              |          |
| Prob > F   |          | 0.0000    |              |       |              |          |
| R-squared  |          | 0.9637    |              |       |              |          |
| Adj R-squared  |          | 0.9542    |              |       |              |          |

Source: Author's own calculation

The table 6 crystal clear that 96 percent of the dependent variable i.e. Gender Development Index (GDI) is explained by the selected independent factors. It has been observed that all the variables are significant at 5 percent level of significance. Current health expenditure as a proportion of gross domestic product is observed and estimated to positively impact the Gender Development Index (GDI). It shows that a unit increase in health expenditure leads to 0.026 times rise in GDI. An increasing proportion of female in total population provides an implicit reflection of the improving dynamics of the society as well. The study found

that a unit increase in the share of females in population has a positive effect on GDI by 1.37 units, reflecting high significance. Increase in secondary school enrolment for females in a proportion of all enrolments is a positive step towards mitigation of gender gap, in terms of provision of reach to attain secondary education while also imply successful completion of primary schooling for the same batch of females enrolled for secondary schooling. A unit increase in secondary enrolment therefore, having a positive impact on GDI. Higher incidence of survival to age 65 for females represent better terms of living over the years thereby indicates a shift towards equitable distribution of care, resources and primacy.

### **7. Conclusion**

The preceding section of this paper clearly indicate that overall expenditure to gender budgeting has increased significantly with CAGR of 13.23 percent since 2005-06 to 2019-20. The number of demands for grants has also increased over a period of time with extended number of ministries/departments. The expenditure to WSP found stumpy and tumbling over the period. Only 20 percent of share approximately covers WSP whereas PWA consist of 80 per cent of share, reflecting a significant share in gender budgeting. It conveys that government is functioning more towards those programmes and schemes that have combine gender influence instead of producing women-specific effect out of the budget. Overall women-specific expenditure has increased substantially in absolute term from INR 79,050.80 millions in 2005-06 to INR 2,74,200.30 millions in 2019-20 but it is declining in relative terms. The proportion has shrunk by more than 12 percent from 32.80 percent to just 20.02 percent for the study period. Department of education (DoED) comprises of least women-specific expenditure as compared to the other three departments considered. It accounts for almost negligible share to contemplate and mark negative CAGR of 5.81 percent. Whereas, on the other side female enrolment considered as a positive step in mitigation of gender gap. The paper estimated that ministry of women and child development suffers from a lack of resources with lots of oscillation in between which makes it difficult to track the exact accomplishment. Despite of being women centric ministry its expenditure lies between 2 to 17 percent

expenditure of gender budgeting overall. It is concluded that the Gender budgeting is highly correlated with the development of female HDI and GDI index of the country. Thereby, a unit increase in log of per capita gender budgeting would impact female HDI by 0.061 unit increases, whereas, a unit increase in log of per capita expenditure in gender budgeting can reduce gender inequality by 0.051 unit. Gender budgeting also found significant in improving girl's enrolment ratio and in reducing girls drop-out among them. Educated females are found an essential assets in India, important steps were adopted by the government to improve the same concerning higher absorption of female students. Therefore, a unit increase in per capita gender budgeting as a proportion of gross enrolment increases gender parity by .000128 units.

Overall analysis confirms that budgetary expenditure is highly significant in improving the different women empowerment performance indicators. The level of income and other socio-economic variables also turns out to be significant. Hence, there is need to increase the budgetary spending on social services particularly in health and education sector. The social changes, however, cannot be brought about through government allocation and actions alone. The necessary and essential condition is the existence of a suitable environment in terms of community awareness and willingness to recognize such problems.

To address the issues related to gender budgeting and its impact on gender development indicators, the initial policy response needs to be taken into consideration. Gender budgeting is a macro-economic approach but it entirely focused on fiscal approach. Whereas the purpose of macroeconomic policy is to focus on the income and expenditure and produced output in the economy which is influenced by both fiscal and monetary policy. Hence, the role of fiscal policy is to highlight the income and expenditure in the country, it means no explanation about the benefit received by men and women differently because of its budget neutrality. Therefore, it is needed to track the benefit received by gender differently rather than just the converging on revenues and expenditure side of the budget. Education and health arrangements must be on top priorities in the hierarchy to better recognize those areas that needs more concentration for female upliftment. Investing in such areas can promote decision-making

abilities with higher endurance to work outside in economic activities. The study examines the gender-responsive budgeting only from the expenditure perspective of the central government but the analysis of the revenue side of gender-responsive budgeting has not been covered. The paper does not scrutinize the Benefit Incidence Analysis (BIA) of gender-based schemes. It is the measurement of the unit cost of providing a particular service and the number of units utilised by gender. Hence measuring the incidence of education and health on an individual is difficult to assess. The make use of benefit incidence analysis has a good importance to evaluate the incidence of services and government spending on female development. Most of the research focuses on ex-ante level of gender budgeting leaving research on concurrent and ex-post underdeveloped. In order to fill the gaps, the studies in future should emphasis on analyzing the impact and outcome of executing gender budgeting. Although such type of work requires more survey-based research that scholars and governments can use to measure all real outcomes and the effects of implementing gender budgeting. Thus, future research on the outcome and impact of gender budgeting should concentrate on actual allocations, economic impacts, progress and change in gender performance indicators and understanding among administration and citizens. In conclude, for conduct quantitative research the scholars and researchers necessitate far more data from the governments, indicating that government initially need to quantify and make available gender disaggregated data.

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