

Effectiveness of Gender Budgeting for Women Empowerment: Evidence from India

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Abstract

In India, low level and inconsistent trends of expenditure on women specific and pro-women schemes confirm that Central Government has not integrated gender considerations into their budgeting process. The low share of spending in cluster like economic and awareness services etc. and low index value of gender empowerment measures reveals that women in India lag much behind in gaining access to resources and enjoyment of rights and freedoms, access to economic and political opportunities. Further, the study finds that budgetary (i.e., public expenditure on health, education and overall social sector) variables have more significant impact on improving the women empowerment indicators as compared to non-budgetary (i.e., per capita real income, literacy level etc.) variables. For instance, the levels of income have adverse impact on sex ratio. Therefore, there is need to increase in sector specific budgetary spending particularly on health and education services.

1. Introduction

IN THE CURRENT development discourse human development, gender equality and social justice have been recognized as a powerful element of sustainable economic growth and full social development of a country. Economic growth has been amply demonstrated to be uneven and unsustainable in the long- run if it is sought to be realized in a situation where there are significant gender inequalities.¹ Gender equality with social justice is, therefore, considered as an integral part of human development. Mahbub-ul Haq argued that, 'Development if not engendered is endangered' and no society can be called developed if one-half of humanity remains voiceless, invisible and undervalued.² Amartya Sen's capabilities approach, a new social welfare theorem, is also highly compatible with the human development framework since it enables us to deal with gender empowerment issues in a more holistic manner (Sen, 1999; Martha, 2000). Gender equality

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is one of the Millennium Development Goals (MDGs). It is an essential ingredient for achieving all the other targets. Attempting to meet the MDGs without promoting gender equality will be costly and minimize the likelihood of attaining the goals (World Bank, 2003).

The empirical studies highlighted that improvement in rural women's access to productive resources (including education and land etc.) could increase agriculture productivity as much as one-fifth in Africa (Saito and Spurling, 1992; World Bank, 2002). Increases in women's well-being yield productivity gains in the future (World Bank, 2001). A cross-country analysis suggest that countries with smaller gaps between women and men in areas such as education, employment, and property rights have lower child malnutrition and mortality; more transparent government; faster economic growth by 0.5 to 0.9 percentage points higher per year - which in turn helps to further narrow the gender gap (World Bank, 2002). The elimination of gender discrimination in the labour market across occupations and in salaries can benefit not only women's income but also national income (Tzannatos, 1991).

The probability of children being enrolled in school increases with their mother's educational level, and extra income going to mothers has a more positive impact on household investment in nutrition, health and education of children than extra income going to fathers (World Bank, 1995). The more control over household's resources by women increase household saving and thereby gain for the society as a whole (World Bank, 2005). India's Human Development Report, GOI (2001) highlighted that women's empowerment, in Manipur, has resulted in lowest infant mortality rate among other states in the country. In Himachal Pradesh, self-empowerment of women has resulted in school participation rates for girls as high as for boys; more comprehensive coverage of safe drinking water and electricity; responsive administration with comparatively low level of corruption; better organization of community, public health and medical services in the state. In recently years, therefore, most of the countries as well as international agencies have committed to promote gender equality across the world.

The problem of gender inequality, however, cannot be resolved by the 'trickle down effects' of macroeconomic policies and existing gender neutral budget. Women, along with men, should have a claim in government resources, policies and programs (Tzannatos, 1991; World Bank, 1995; Elson, 1999 & 2002a; Hewitt and Mukhopadhyay, 2002 and Lahiri, et al., 2003). An additional investment on women related schemes (such as female education, health, etc.) is usually likely to yield a higher social rate of return and Gross National Product than a corresponding outlay on men (Hill and King, 1995; Chakraborty, 2003) whereas any cutback in public expenditure worsens the status of women (Palmer, 1995). Gender budgeting is not a separate budget for women, or for men but, it translates gender commitments into budgetary commitments (Elson, 1999). It attempts to disaggregate, the government's mainstream budget according to its impact on different groups of women and men. It examines the gendered incidence of budgetary policies for

effective targeting of public spending and offsetting any undesirable gender-specific consequences of previous budgetary measures. An important aim of gender budgeting is to allocate funds to improve the position of women, hence contributing to gender equality (Sharp, 1999).

Gender budgeting has gained prominence in recent years, and was given additional impetus by the Fourth World Conference on Women, held in Beijing in 1995, which called for ensuring the integration of a gender perspective in budgetary policies and programs (Sarraf 2003).³ Elson (2002a) observes that government budgets are not “gender-neutral” and that the appearance of gender-neutrality is more accurately described as “gender blindness,” because fiscal measures may have a different effect on women and men. Gender budgeting seeks to mainstream gender analysis of issues within government policies; promote greater accountability for the commitment of governments to gender equality; and influence budgets and policies (Sharp and Broomhill, 2002). Gender budgeting is not intended to analyze only programs that are specifically targeted to females or to produce a separate “women’s” budget, but rather to examine the gender effects of all government programs and policies, their effects on resource allocation and outcomes, and how to improve them. It draws upon the literature on the measurement of inequality in that it tries to improve the allocation of resources within the government budget to reduce those inequalities with consequent benefits to economic and social well-being. The nature of gender responsive budget initiatives and its impact of women status, however, varied from one country to another. It can be identified by following reviewed studies.

II. Literature Review

Sharp and Broomhill (2002) examined the initiatives taken by Australian government. The main objectives of this study were: to raise awareness about gender budgeting within government; to make government accountability for their commitments to gender equality; to bring changes in budgets and policies to improve the socio-economic status of women. This study found that there was some success in achieving each of these goals, but because of political factors and changing macroeconomic climates, these successes were limited. Some other studies like, Adelstal (1998), Sida (1998), Reeves and Wach (1999), and Elson (2002a) conducted in South Africa and Australia have assessed the impact of budget spending on gender equality and showed the positive impact on gender equality. Beck (2000) found that budgets and government initiatives have positive impact on women. Esim (1999) reviewed how government spending negatively affects women in US. However, this study could not provide a model through which the impact of budgetary spending on women can be identified.

In case of India, Sen and Seeta, (2001); Banerjee (2002); Sinha (2002) and Lahiri, et al. (2003) analyzed the union budget for different years and found that there were little fund allocated in the budget for women. Lahiri, et al., (2002) constructed an econometric model and established the link between GDI and public spending on education and health. The study found the positive impact

of these spending on GDI. This study also found that the pro-women allocation constituted a relatively small portion in the total union budget. In education sector, they found that girls were disadvantaged relative to boys.

Banerjee and Krishanraj (2004) reviewed the public schemes, which are meant for women and found that there was low expenditure for poor and voiceless women. Mishra, and Jhamb, (2007) found that there was increment in the size of the gender budget in 2007-08. Nevertheless, the revised estimates were almost consistently lower than budget estimates for most of the schemes. The public spending on women specific, pro-women and general programmes were found to be inadequate in India and Nepal (Acharya, 2006). However, this study pointed out that it is more important to examine the effectiveness, adequacy and efficiency of the allocations to achieve women equality, rather than focusing on percent allocations per se.

Kotwal, (2007) analysed the Union Budget from 2004-05 to 2007-08 and categorized women specific scheme into four cluster. The study found that about 96 percent funds were spent on social services, followed by economic services (2.87%), welfare services (1.22%) and regulatory services (0.14%). Primarily three Ministries viz., Department of Health and Family Welfare, Department of Rural Development and Ministry of women and Child Development made the bulk of budgetary allocations. The study suggested that there is need to increase the resource allocation in education, economic empowerment, and sanitation & nutrition facilities for women.

Banerjee and Roy (2003) provided a comparative analysis of budgetary trends across the 15 major states of India along with a detailed analysis of West Bengal Budget and found that the state's expenditure as percentage to NSDP was one of the lowest among the major states (Andhra Pradesh, Gujarat, Rajasthan, Bihar, Orissa etc). The budgetary expenditure found to be very insignificant to promote gender equality. The budgetary expenditure on education was also low. Acharya, (2006) provided a review on the budgetary spending of 15 states and found that the social sector spending has been declining in majority of the states. Most of the spending on education, health and women oriented schemes went to staff salaries and wages, leaving not much room for readjustment or new initiatives. Patel, (2003) has gone through all the plan documents to see the allocation for women and the perspective behind it and found that the expenditure on women scheme has declined. However, for the year 2002-03 the plan allocation of Department of Women and Child Development increased by 33 percent.

Bhatt, et al., (2004) provided a comparative analysis of expenditure allocated for women specific schemes by selected departments of Karnataka and found that the expenditure towards social services as compared to economic services increased in both the pre and post-reform period. In the post-reform, under social services, the expenditure towards social security, public health and family welfare increased considerably. Under economic services, the allocation towards women specific schemes has shown

fluctuations in co-operatives, rural development, Panchayati Raj, agriculture and fisheries.

Mahadevia, and Vimal (2005) found that about 0.35 percent of the total expenditure made through budget was on women-specific schemes in 2001-02 as comparison to 0.79 percent in the previous year in Gujarat State. Secondly, the meager funds that allocated were not fully spent. The expenditure on pro-women schemes (including health and education sector) was 6.57 percent in 2001-02 of the total budget expenditures, whereas this figure was 12.10 percent in the previous year. The overall budget analysis of the Government of Gujarat showed that the approach to women's development and gender equity has been too fragmented.

The reviewed studies showed that there is low governments spending towards women component with irregular trends in most of countries including India and its' states and analyzed only one-two years budgets. Among them a very few studies have tried to find out the actual budgetary allocation on women and its impact on gender inequality. The present study examines the trends and pattern of central government gender budgeting initiatives from 1995-96 to 2009-10. This period also capture the impact of pre and post gender budgeting initiatives. Such an analysis help is to identify the gender budgeting initiatives, through different policies and programs, taken by central government of India, that affect women empowerment. Secondly, the study also tries to establish the link between public spending and various women empowerment indicators at central and sixteen major states level of India.

In India, the bulk of the government spending (more than 85 percent), where gender inequalities are of critical concern (like, social services, health and education), is routed through state governments with a wide variations in gender inequalities and in budgetary spending across these states. Therefore, an analysis of the effectiveness of gender budget allocation, which can capture the impact of such variations, in improving the women status at state level is important. Again, however, it may be noted that because of contemporaneous transformation of many socio-economic and policy variables that affect gendered development, the direct impact of gender budgeting allocation on women empowerment indicators is difficult. Therefore, this paper measures the impact of macro variables (like, per capita expenditure on social, health and education services) on women status. Such an analysis would enable us to realize whether the money spent by government, especially on human resources development, is transformed to the results of better gender indicators.

III. Objectives

The specific objectives of this study are: (i) to examine the levels and trends of Central Government gender budgeting from 1995-96 to 2009-10;s and (ii) to assess the impact of gender budgeting (macro variables) on improving the status of women across the 16 major states of India.

The paper is divided into four sections. The first section consists of introduction about gender budgeting, literature review, objectives and presents methodology and database used in this study. Section-II analyzes the levels, trends, changing pattern and composition of gender budgeting of central government. This section also includes the initiatives taken by some central government ministries and departments to empower the women. Section-III examines the effectiveness of gender budget (particularly expenditure on social sector, health and education) allocation on selected women empowerment indicators at state level in India and lastly, Section IV covers the important findings and conclusion of this study and then outlines some suggestions and recommendations for policy formulation.

IV. Methodology

In India, central government has over a period of time strived to incorporate gender perspective in its budget through various programs and schemes. This study analyzes the levels and trends of gender budget expenditure by taking into account different central government Demand for Grants and categorized government budget in to two components: That is,

- i. Expenditure on Women Specific Scheme (WSS): 100 percent targeted for women. The expenditure on women specific scheme is of great importance as it includes 100 percent allocation for women and has more impact on women empowerment. Therefore, this expenditure category is analyzed from 1995-96 to 2009-10 by including different Demand of Grants throughout the period.
- ii. Pro-Women Allocations (PWA): which is the composite expenditure (for men and women) schemes with a significant women's component (at least 30 percent targeted for women). This expenditure category is analyzed from 2005-06 to 2009-10.

The analysis of these two expenditure categories provides some indication of policy changes with respect to women. Further, the first category, has been grouped into four clusters,⁴ namely, (i) Protective and Welfare Services, (ii) Social Services, (iii) Economic Services, and (iv) Regulatory and Awareness Generation Services. The grouping of these clusters is based on the objective and purpose of the particular scheme and its' potential impact on women. The allocation of these four clusters, further, linked with different sub-indicators of Gender Development Index and Gender Empowerment Measure (GEM) (See table-III). The GEM captures the gender inequalities in the key areas of social, economic, political and decision-making participation. It differs from GDI in that it focuses on women's opportunities rather than on gender inequalities in basic capabilities.

V. Data Base

The GDI, GEM (gender empowerment measurement) figures are taken from Ministry of Women and Child Development (2009); Government of India; Human Development Report, UNDP, 2006 and National Human Development Report 2001, Planning Commission, Government of India. The data on literacy, dropout rate, sex ratio etc., are taken from Census of India, Sample Registration System (SRS) of Registrar General of India. The data

related to women specific and pro-women allocations are collected from original budget paper of Indian central government. The budgetary expenditures at state level are collected from Finance Account of various state governments and RBI Bulletin- A study of State Finances.

V.1 Measuring the Impact of Gender Budgeting on Women Status

The impact of government spending variables (along with some socio-economic control variables) is measured on different women status indicators (like, Gender Development Index, and its two sub-indicators education and health status of women) across the sixteen major states of India.

Among the different women status indicators, GDI, which is a proxy of gender disparity index (UNDP, 2007) and cover health and education sector inequalities, is used in the study. Low value of Gender Development Index (GDI) reflects gender disparity in basic capabilities because of lack of education and health standards.

Further, level of education has been recognized as the base of economic growth and development and social change in any country. It generates skilled manpower which helpful for the industrial, service and agriculture sectors. It has been rightly said that to educate a woman is to educate the whole family and whole nation in broader sense. This study uses different women education attainment indicators like, female literacy rate, dropout rate of different social caste and literacy gap ratio (LGR).

The health status of women is generally presented by infant mortality rate, maternal mortality rate, and sex ratio. Among these, sex ratio has become most commonly used indicator for women development. The 'missing women' approach, which is measured by sex ratio, given by Amartya Sen, (1999) shows that relative position of women in sex ratio is acute in India.

This approach does give some insight into the acuteness of the problem of gender inequality in matters of life and death. It also indicates the history of inequalities in morbidity and of unequal medical care. This study, therefore, uses sex-ratio as a measure of women health status. For measuring the impact different multivariate pooled regression model are estimated.

The pooled data consists of both cross-sectional and time-series data features. The pooled regressions have two advantages, (i) to increase the sample size which leads to increase in degree of freedom and estimated parameters converge to population parameters; and (ii) the pooled regression is used often to see how a key relationship has changed over time and it can also avoid the problem of multicollinearity if we have only time series data. In our example, the information on most of the women empowerment indicators available at census years, that is, 1981, 1991 and 2001 at three time point of time across the 16 major states. Running a regression based on only one time period, which include 16 observations, may not give reliable results because of low degree of freedom. In order to increase our sample size, we can form a pooled cross section by combining the three years (Wooldridge, 2006). The following pooled regression models are used in the study.

The Model: Impact on GDI

$$GDI_{it} = \alpha + \beta_1 \ln PCTSS_{it} + \beta_2 LID_{it} + \beta_3 MID_{it} + u_{it} \quad (1)$$

- Where, GDI Gender Development Index (GDI);
 PCTSS Per capita real expenditure (at 1993-94 prices) on total social services;
 LID low income state dummy variables, it take value 1 for Assam, Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh and 0 for other states;
 MID Middle income state dummy, it take value 1 of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, West Bengal and 0 for other states;
 i 16 major states of India and
 t two point of time, i.e., 1981 and 1991.

The categorization of the states into low income, middle income and high income is based on per capita real (at 1993-94 prices) Gross State Domestic Product (GSDP) for the year 2004-05 in all the regression equations.

The Model: Impact on Education Status

$$EDU_{it} = \alpha + \beta_1 \ln PCEDU_{it} + \beta_2 LID_{it} + \beta_3 MID_{it} + u_{it} \quad (2)$$

- Where, EDU women education status, which is measured by female literacy rate; dropout rate of class 0-X for different social Caste (i.e., Overall, SC and ST) and Gender and literacy gap ratio: LGR = (Female Literacy Rate/ Male Literacy Rate)*100;
 PCEDU Per capita real expenditure (at 1993-94 prices) on education services;
 LID/MID are similar as presented in equation (1)

The Model: Impact on Health Status

$$OSR_{it} = \alpha + \beta_1 \ln PCGSDP_{it} + \beta_2 \ln PCHFW_{it} + \beta_3 SR_{0-VI_{it}} + \beta_4 FLR_{it} + \beta_5 LID_{it} + \beta_6 HID_{it} + u_{it} \quad (3)$$

- Where, OSR Overall Sex ratio;
 lnPCGSDP log of per capita real GSDP at 1993-94 prices;
 lnPCHFW log of per capita real expenditure on health, family welfare and water supply at 1993-94 prices;
 SR_{0-VI} Sex ratio of aged 0-6;
 FLR Female literacy rate;
 LDI low income state dummy;
 HID High income state dummy, it take value 1 for Gujarat, Haryana, Himachal Pradesh, Maharashtra and Punjab and 0 for other states.
 α is intercept and
 β 's are regression coefficient;

The time period (t), in equation 2 and 3 takes three point of time: 1981, 1991, and 2001 (i.e., three census years) and i-represent the cross sectional unit, i.e., sixteen major states of India.

V. 2 Analysis of Women Specific and Pro-Women Allocation: Centre Government

In India, central government has over a period of time strived to incorporate gender perspective in its budget through various programs and schemes. For instance, there are some schemes, which try to tackle the literacy gap between girls and boys or focus on universalisation of education or target reproductive and child health as its goal. These programs and schemes generally fall under social sector, which also cover women specific and pro-women allocation. An analysis of the trends of social sector and gender budgeting allocation finds that the social sector spending shows increasing trends throughout the period both as percentage of total revenue expenditure of the central government and as percentage to GDP (See table 1). The share of social sector spending as a ratio of government revenue expenditure increased from 5.47 percent in 1995-96 to 11.39 percent in 2009-10 (Budget Estimate), almost double. As percentage to GDP, it increased from 0.71 percent to 1.86 percent during the same period. In per capita real (at 1993-94 prices) term expenditure on social sector increased more than five times from Rs. 69 in 1995-96 to Rs. 365 in 2009-10BE. The expenditure on women specific schemes as percentage to revenue expenditure of the government remains ranging from 0.96 percent to 1.86 percent throughout the study period (See table 1). Its share as percentage of GDP remains less half percent, ranging from 0.13 percent to 0.29 percent. Per female expenditure, in real term, on women specific schemes increased Rs. 25 in 1995-96 to Rs. 90 in 2009-10.

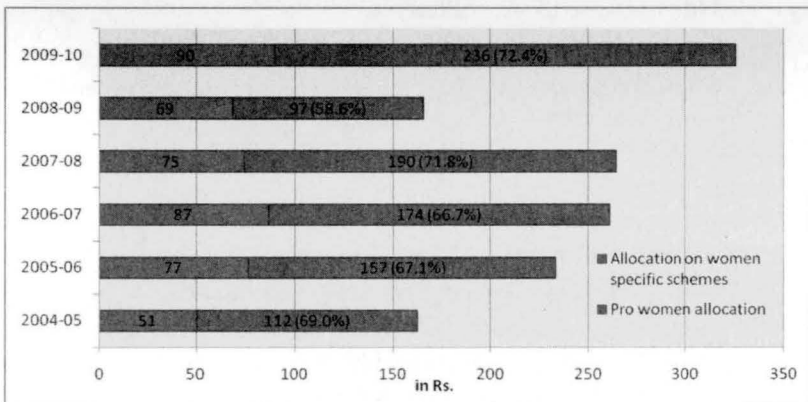


Figure 1

Per Women Allocation on Women Specific & Pro-Women Schemes: (in Rupees)

Note : The Figures in parenthesis show composition (in percent) value of these schemes.
Source: Central Government Original Budget Papers, Various Issues, Government of India

The pro-women allocation cover the period from 2004-05 to 2009-10. Its share remains about two-third as compare to women specific scheme (See Figure 1).

Its share in total revenue expenditure and in GDP increased 2.82 percent and 0.39 percent in 2004-05 to 4.59 percent and 0.75 percent in 2009-10 respectively, except the year 2008-09, which record a low share. In real per capita term, pro-women allocation increased from Rs. 112.2 to Rs. 235.7 during this period (See Table I).

Table I
Trends in Social Sector, Women-Specific and Pro-Women Allocation

Year	as % to total revenue expenditure of central government			as % to GDP (at current prices 1993-94 base)			Per capita Per female real real Exp. expenditure		
	SSE	WSS	PWA	SSE	WSS	PWA	SSE	WSS	PWA
1995-96	5.47	0.96	NA	0.71	0.13	NA	69	25.1	NA
1996-97	6.09	0.98	NA	0.78	0.13	NA	80	26.6	NA
1997-98	6.57	1.12	NA	0.85	0.15	NA	90	31.9	NA
1998-99	6.77	1.28	NA	0.92	0.17	NA	101	39.7	NA
1999-00	6.91	1.06	NA	0.98	0.15	NA	112	35.9	NA
2000-01	6.36	1.04	NA	0.93	0.15	NA	110	37.7	NA
2001-02	5.02	1.08	NA	0.73	0.16	NA	89	39.9	NA
2002-03	6.50	1.00	NA	0.99	0.15	NA	123	39.4	NA
2003-04	6.59	1.51	NA	0.95	0.22	NA	127	60.2	NA
2004-05	7.78	1.27	2.82	1.06	0.17	0.39	149	50.5	112.2
2005-06	8.71	1.80	3.67	1.18	0.24	0.50	179	77.0	157.0
2006-07	8.50	1.86	3.72	1.17	0.26	0.51	192	87.0	174.1
2007-08	10.37	1.48	3.77	1.43	0.20	0.52	252	74.7	190.0
2008-09	10.75	1.43	2.02	1.74	0.23	0.33	323	68.6	97.0
2009-10	11.39	1.75	4.59	1.86	0.29	0.75	365	90.0	235.7

Notes : 1 SSE social sector expenditure;
WSS women specific scheme;
PWA pro women allocation.

2 While estimating the real per capita or real per female expenditure the expenditure series is deflated on the bases of 1993-94 prices.

Source : Original Budget Papers, Various Issues, Government of India.

5.3 Departments and Ministry Wise Analysis of Women Specific Allocation

The department wise allocation shows that the department of health and family welfare, and women and child development constituted a higher allocation and shows increasing trends as percentage of total social sector spending.

Despite low female literacy rate and higher gap in literacy attainment, the central government spending on education is very low throughout the study period both as percentage of social sector spending and in per capita term (See Table 2 and Figure 2).

There is need to spend on women specific schemes targeted to education to improve the female literacy level and reduce the literacy gap among girls and boys.

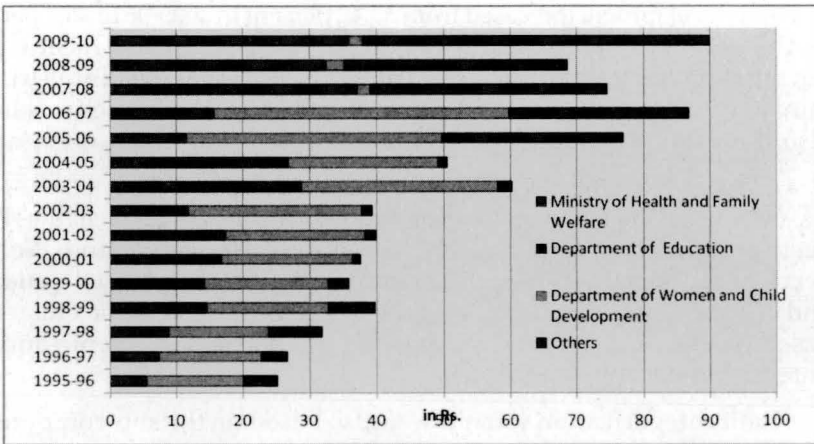


Figure 2

Per Women allocation on Departments wise Women-Specific Schemes (Rupees)

Source : Central Government Original Budget Papers, Various Issues, Government of India

Table II
Departments wise Trends and Composition of Women-Specific Schemes

Year	as % of Total Social Sector Exp.				Composition (in percent)				
	Min. of Health & Family Welfare	Dept. of Edu.	Dept. of Women & child Dev.	Min. of Rural Dev.	Total	Min. of Health & Family Welfare	Dept. of Edu.	Dept. of Women	Min. of Rural Dev.
1995-96	3.93	0.09	10.09	3.47	17.58	22.36	0.51	57.39	19.73
1996-97	4.48	0.05	9.22	2.38	16.13	27.76	0.32	57.15	14.76
1997-98	4.73	0.05	7.97	4.31	17.06	27.72	0.30	46.74	25.25
1998-99	6.18	0.77	8.60	3.31	18.84	32.77	4.07	45.62	17.54
1999-00	5.03	1.03	7.93	1.29	15.28	32.89	6.74	51.90	8.46
2000-01	6.39	0.99	8.52	0.49	16.39	38.96	6.04	51.98	3.02
2001-02	9.33	0.17	11.22	0.82	21.55	43.30	0.78	52.10	3.83
2002-03	4.34	0.29	10.21	0.58	15.43	28.14	1.90	66.20	3.76
2003-04	10.79	0.23	11.09	0.78	22.90	47.13	1.00	48.44	3.43
2004-05	8.16	0.54	7.22	0.41	16.32	50.01	3.28	44.21	2.50
2005-06	2.41	0.68	10.25	7.32	20.66	11.65	3.31	49.62	35.42
2006-07	3.60	0.38	11.08	6.82	21.88	16.46	1.72	50.64	31.18
2007-08	7.06	0.06	0.37	6.78	14.27	49.48	0.40	2.59	47.53
2008-09	6.24	0.04	0.54	6.45	13.27	47.00	0.33	4.07	48.60
2009-10	6.01	0.14	0.38	8.86	15.38	39.06	0.88	2.45	57.61

Source: Central Government Original Budget Papers, Various Issues, Government of India

The compositional picture of women specific schemes shows that the department of Women and Child Development and Ministry of Health and Family welfare constitute a significant proportion about 50 to 65 percent of the total women allocation. However, in the recent year the share of Ministry

of Rural development increased from 35.42 percent in 2005-06 to 48.0 percent in the recent fiscal year 2009-10. It shows that in the recent year government has given priorities to rural development (See Table II). The ministry wise per women real expenditure on women specific scheme also shows similar trends (See figure-2).

V. 4 Clusters-Wise Analysis of Women Specific Schemes

For the advancement of women various women specific schemes have been grouped into four clusters, namely, (i) Protective and Welfare Services, (ii) Social Services, (iii) Economic Services, and (iv) Regulatory and Awareness Generation Services. The grouping of these clusters is based on the objective and purpose of the particular scheme and its' potential impact on women.

Their categorization somehow is also based on the sub-components of Gender Empowerment Measure (GEM) that includes political and decision making participation, economic participation and decision-making power, over economic resources etc. the GEM differs from GDI in that it focuses on women's opportunities rather than on gender inequalities in basic capabilities. The closer the value of GEM is to zero, indicate lack of women empowerment. The value of GEM near to one indicates high levels of empowerment of women. The India's GEM value is 0.24, reveals that women in India lag much behind in gaining access to economic and political opportunities compare to other countries (See Appendix I).

The Protective and Welfare Services: includes the allocations on women's home and caregivers, rehabilitation schemes for victims of atrocities, pensions for widows and destitute women etc. The aim of these schemes is to provide the direct benefit to women to avoid the adverse consequences for women.

The Social Services includes the schemes on education and health of women, support services like crèche and hostels, water supply, sanitation, schemes on fuel and fodder, which contributed significantly to women's empowerment, either directly by building their capacities and ensuring their material well being or indirectly through reducing domestic drudgery. The Economic Services includes schemes for women to provide self-employment, training and skill development, and provision for credit, infrastructure, marketing and other economic empowerment programs etc., which are critical to women's economic independence and autonomy. The Regulatory and Awareness Generation Services includes institutional mechanism for women's empowerment, such as National Commissions for women, women's cells in police stations, Anti-dowry Act, family counseling centre, awareness generation programs etc., which provide institutional spaces and opportunities for women's empowerment.

Under these clusters, the social services (in compositional term) comprise a higher amount and its share in total allocation is increasing over the period from 44.29 percent in 1995-96 to 96.11 percent in 2006-07.

Table III
Trends and Composition of Cluster Wise expenditure on Women Specific Schemes (in percent)

Year	as percentage of total social sector expenditure				Composition (in percent)				
	PWS	SS	ES	RAGS	Total	PWS	SS	ES	RAGS
1995-96	8.37	7.79	0.73	0.70	17.58	47.59	44.29	4.14	3.98
1996-97	7.71	6.90	0.73	0.79	16.13	47.82	42.75	4.54	4.89
1997-98	6.84	6.56	0.66	3.01	17.06	40.08	38.44	3.85	17.63
1998-99	7.09	8.93	0.57	2.25	18.84	37.62	47.40	3.02	11.95
1999-00	6.98	6.87	0.68	0.76	15.28	45.64	44.95	4.43	4.98
2000-01	6.80	8.51	0.60	0.48	16.39	41.50	51.90	3.66	2.94
2001-02	10.14	9.84	0.75	0.81	21.55	47.05	45.67	3.50	3.78
2002-03	8.53	5.76	0.57	0.57	15.43	55.28	37.33	3.68	3.71
2003-04	9.35	12.28	0.49	0.77	22.90	40.84	53.63	2.14	3.38
2004-05	6.97	8.78	0.17	0.40	16.32	42.71	53.80	1.03	2.45
2005-06	8.94	11.24	0.46	0.02	20.66	43.26	54.42	2.24	0.07
2006-07	9.50	11.80	0.50	0.08	21.88	43.40	53.92	2.29	0.38
2007-08	0.08	13.77	0.20	0.21	14.27	0.59	96.48	1.43	1.50
2008-09	0.07	12.78	0.17	0.25	13.27	0.50	96.33	1.29	1.88

Note : PWS- protective and Welfare Services; SS- Social Services; ES- Economic Services; RAGS- Regulatory, Awareness Generation and other Services.

Source: Original Budget Paper, Various issues, Government of India.

The share of regulatory and awareness generation services shows declining trends. The share of economic services is very low about 3 to 4 percent and its share declined from 4.14 percent 1995-96 to 1.29 in 2009-10. The share of protective & welfare services has decreased from 47.59 percent in 1995-96 to 43.4 percent in 2006-07 and its share in the recent fiscal remains negligible (See table III). Only social services as a ratio of social sector spending shows increasing trend and other cluster shows decreasing trend throughout the study period. Similar, type of trends can be depicted from per women expenditure on these clusters (Figure 3). The Table II also shows that there exist wide variations across these clusters, which shows that expenditure is not entitled on priority basis.

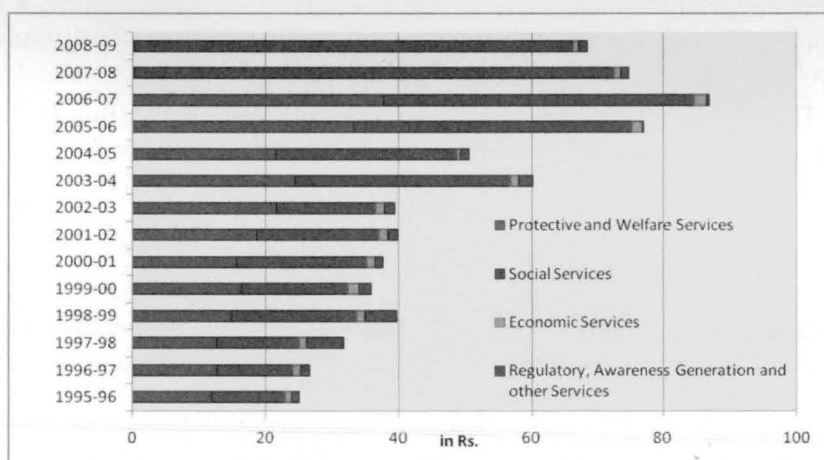


Figure 3

Per Women allocation on Cluster wise Women-Specific Schemes (Rupees)

Source : Original Budget Papers, Various Issues, Government of India.

Further, it has rightly mentioned that the implication of these clusters depends on the variations across the cluster (Lahiri, et al., 2003; and Kotwal, 2007). As, the allocation to different clusters reflect the sensitivity, awareness and strategic approach of the government towards planning of women empowerment programs. It is clear from the above analysis that the central government has made an attempt to propose allocation for schemes and services in 'social services cluster'. The allocation to this cluster directly has a bearing on the well-being of women and provides support services for their development. In theory at least, these schemes have the potential to contribute to empowerment of women and enable them to actively participate in their own development.

Central government, however, somehow has not been able to plan and initiate adequate number of schemes as well as its share related to economic services, aimed at building skills for income generating activities, marketing, credit availability, self-employment etc. It has been pointed that the index value of Women Economic Empowerment, which is sub-component of Gender Empowerment Measure,⁵ is low about 0.45 in 2006 (See Appendix IV). Therefore, to improve the women empowerment, economic independence and autonomy is most important.

It is therefore, important to reorient the policies related to women targeted schemes and have a holistic perspective of women's development in the planning process. Similarly, planning related to Regulatory and Awareness Services require attention. Unless institutional mechanisms are created to guard against violations of the right of women and generate awareness the inequality in genders cannot be bridged.

From above discussion, we can conclude that the year of 2001, however, has been declared as 'women empowerment year' by the government of India with an aim to advocate and sensitize all concerned about issues related to women.

The national policy for empowerment of women was also adopted around the same time that urged for mobilization of adequate resources for development of women. The above directive, it seems, could not be translated in to action by the government. The consistent trend of lower allocations throughout the study period further confirms that the government has not integrated gender considerations into their budgeting process.

VI. Empirical Analysis

Over the past two decades, policy makers have suggested that most of the gender equity indicators are highly interlinked government budgetary policies of a country. However, there are less empirical evidence exists across the world. This section tries to bridge such gap and take into account 16 major Indian states a case study. The analysis of the effectiveness of different policy variables on gender helps to illuminate and make visible the differential effects of policies on men and women.

Table IV
Comparative picture of social sector spending as percentage of total state budget across the sixteen major states in India

Expenditure range	1981-82	2004-05
≥ 30 percent: defined by 'Women Component Plan'	Kerala, West Bengal, Himachal Pradesh, Bihar, Rajasthan, Tamil Nadu, Andhra Pradesh, Assam, Gujarat, Punjab, Orissa, Uttar Pradesh, Madhya Pradesh, Karnataka, Maharashtra	Madhya Pradesh, Assam, Karnataka, Tamil Nadu, Rajasthan, Himachal Pradesh
≥ 26 & <30 percent	Haryana	Uttar Pradesh, Gujarat, West Bengal, Orissa, Maharashtra, Andhra Pradesh
< 26 percent		Karnataka , Haryana, Bihar, Punjab

Source : RBI Bulletin- A Study of State Budget, Various Issues.

The impact of different socio-economic variables like female literacy, levels of per capita real income and government spending on health & education on gender development indicators is analyzed. Table IV provides brief profile of social sector spending across the sixteen major states in India for the years 1981-82 and 2004-05. The break-up of social sector spending in this table is categorized e" 30 percent and otherwise. As, in 2001 government of India have declared its women component plan that every state government should spend at least 30 percent of their expenditure on social sector. Therefore, from this table one can easily depict the priority (and commitment as per Women Component Plan) of state government in improving the social and economic condition of the population and how these trends are helpful in improving the women status.

Table V
Summary Statistics

Variables	Obs.	Mean	Std. Dev.	Min	Max
GDI	32	0.67	0.12	0.45	0.87
FLR	48	43.96	17.31	14.00	87.86
LGR	48	63.00	14.66	31.27	93.27
DPR_all	48	66.35	15.43	30.00	88.50
DPR_SC	48	73.48	17.72	19.20	94.80
DPR_ST	48	69.30	16.17	24.70	90.80
OSR	48	938.83	44.05	861.00	1058.00
PCGSDP	48	8782.23	3570.15	3879.00	17254.00
PCSS	48	59.31	58.14	7.02	295.49
PCEDU	48	31.09	30.18	3.51	148.63
PCHFW	48	14.60	16.48	1.56	100.60
share_tss	48	32.25	5.34	19.19	46.63
share_edu	48	16.88	3.48	8.76	27.99
share_health	48	8.46	4.53	4.13	34.83

Source : Own Estimation

As has been discussed in methodological section that women status generally measured by Gender Development Index (GDI) and its two sub-components health and education attainment of women. This section,

therefore, measures the impact of public expenditure on these variables. Table-5 shows the data summary for different variables, which have been used in the different pooled regression model. This table shows that there exist wide variations in both explained and explanatory variables. For instance, the value of GDI varied from minimum 0.45 to 0.87. The highest variation exists in all the public spending variables (e.g., about 112 percent variation in total social sector expenditure). The explained variables, i.e., literacy rate also show high variation and varied from 14 to 87.86 (see Table V).

VII. Results and Discussion

The government social sector (which comprise more than 85 percent expenditure on education, health, family welfare, water supply and sanitation) spending significantly improve the Gender Development Index across the states. Its coefficient value shows that a percent increase in total social sector spending improves the GDI value about 0.06 basis points.

The coefficient is turn out to be statistically significant at one percent level of significant and the explanatory power (i.e., Adj. R-squared) of the model is high about 55 percent. This indicates about 55 percent variation in GDI explained by independent variables. Interestingly, on an average lower per capita income states produce significantly low GDI value (about -0.13 points) compare to higher per capita income states. The middle per capita income states, however, produce high GDI value compare to higher per capita income states (Table-6: Part-A).

The women's status in terms of education attainment, as rightly emphasize in methodology section, can be measured by various indicators like overall female literacy rate, literacy gap ratio and female enrolment ratio at different level of education by different social caste (i.e., overall, SC and ST). The result indicates that level of per capita expenditure on education is turns out to be highly significant in improving the female literacy rate. One percent increase in per capita education spending improves the female literacy rate about 11.11 percent. The explanatory power of the model shows that about 68 percent variation is explained by the independent variables. The lower per capita income states produce low literacy rate and middle income states produce high literacy rate, on an average, comparative to higher income states (See Table VI: Part-B).

Similarly, the impact of per capita budgetary education spending on literacy gap ratio turns out to be highly significant in improving the literacy gap ratio. One percent increase in per capita education spending improves the literacy gap ratio about 8.73 percent. The model shows that about 67 percent variations explained by the independent variables. The lower per capita income states produce low literacy rap ratio and middle income states produce high literacy gap ratio, on an average, comparative to higher income states at one percent and 10 percent level of significance respectively (Table VI: Part-C).

Table VI
Measuring the Effectiveness of Public Expenditure on Women Status

Part-A		Dependent variable: Gender Development Index (GDI)				
Independent var.	Coef.	Std. Err.	T	P>t		
lnPCTSS	0.06	0.02	2.88	0.01	Number of obs	= 32
LID	-0.13	0.04	-3.51	0.00	F(3, 28)	= 13.47
MID	0.03	0.04	0.83	0.41	Prob > F	= 0.00
_cons	0.52	0.08	6.84	0.00	Adj R-squared	= 0.55
Part-B		Dependent Variable: Female Literacy Rate				
lnPCEDU	11.11	1.44	7.70	0.00	Number of obs	= 48
LID	-10.30	3.55	-2.90	0.01	F(3, 44)	= 33.63
MID	6.39	3.62	1.77	0.08	Prob > F	= 0.00
_cons	12.85	5.36	2.40	0.02	Adj R-squared	= 0.68
Part-C		Dependent Variable: Literacy gap ratio				
lnPCEDU	8.73	1.23	7.10	0.00	Number of obs	= 48
LID	-10.54	3.02	-3.48	0.00	F(3, 44)	= 33.18
MID	5.36	3.08	1.74	0.09	Prob > F	= 0.00
_cons	39.38	4.56	8.63	0.00	Adj R-squared	= 0.67
Part-D		Dependent variable: Dropout rate of class I-X for all Caste				
lnPCEDU	-7.49	1.84	-4.07	0.00	Number of obs	= 48
LID	9.67	4.53	2.14	0.04	F(3, 44)	= 8.99
MID	5.65	4.61	1.23	0.23	Prob > F	= 0.00
_cons	83.19	6.83	12.17	0.00	Adj R-squared	= 0.34
Part-E		Dependent variable: Dropout rate of class I-X for SC				
lnPCEDU	-8.78	2.09	-4.19	0.00	Number of obs	= 48
LID	9.88	5.15	1.92	0.06	F(3, 44)	= 9.40
MID	0.65	5.25	0.12	0.90	Prob > F	= 0.00
_cons	95.62	7.78	12.29	0.00	Adj R-squared	= 0.35
Part-F		Dependent variable: Dropout rate of class I-X for ST				
lnPCEDU	-8.03	1.92	-4.19	0.00	Number of obs	= 48
LID	9.50	4.72	2.01	0.05	F(3, 44)	= 9.19
MID	3.50	4.81	0.73	0.47	Prob > F	= 0.00
_cons	88.47	7.13	12.41	0.00	Adj R-squared	= 0.34
Part-G		Dependent variable: Overall Sex Ratio				
lnPCGSDP	-13.73	22.75	-0.60	0.55		
lnPCHFW	1.36	6.40	0.21	0.83	Number of obs	= 48
SR_0-VI	0.72	0.13	5.71	0.00	F(6, 41)	= 24.29
FLR	1.55	0.32	4.84	0.00	Prob > F	= 0.00
LID	-6.36	12.47	-0.51	0.61	Adj R-squared	= 0.75

Source : Own Estimation

The dropout rate represents the girls' status in the society. A higher value of dropout rate of girls indicates that society have given low priorities to educate the girls. The expenditure on education, which also includes special incentives and financial support to girl students to continue their study, is highly significant in reducing the dropout rate among girl students for all caste, SC and ST separately. A one percent increase in education spending leads to decrease in dropout rate for all social caste, SC and ST about -7.49, -8.78 and -8.03 percent respectively at one percent level of significance. The high value of the coefficient for SC and ST compare to all caste indicates that there are some initiatives and financial support for SC & ST girls are running in these states. The dropout rate among SC & ST, however, is higher compared all caste that needs more governments' attention (See table-5). The dropout rate, on an

average, among low-income state is significantly higher than the higher income states. The explanatory power of these models, however, is low about 34, 35 and 34 percent respectively but the overall significance value (i.e., F-statistics) is highly significant (see table-6: Part-D, E & F).

The Part-G of Table-6 presents the impact of various socio-economic factors like per capita income, sex ratio of age group of 0-6, female literacy rate and government spending on health and health related activities. The overall significance (i.e., F-statistics) of this model is very high about 24.29. The explanatory power (Adj. R²) of the model is also very high, about 75 of the variations explained by the independent variables. The per capita income as well as expenditure on health (which is the proxy of existing health facilities in a particular state) has no significant impact in improving the sex ratio. Their coefficients are turns out with expected sign. More importantly, the level of income of the states has negative impact on improving the sex ratio. This indicates that the level of development in term of level of income of a particular state has no further improvement in sex ratio. As it has been argued that a higher family income can use better health facilities and they do more female foeticide. Punjab and Haryana states can be described as an example. It is also justified by introducing high-income state dummy variable in the model. The social factors like sex ratio at the age of 0-6 and female literacy, however, turns out to be highly significant in improving the overall sex ratio. A one-unit improvement in female literacy rate and sex ratio of age 0-6 leads to improve the overall sex ratio about 1.55 and 0.72 units respectively.

VIII. Conclusions and Suggestions

Overall analysis confirms that budgetary expenditure is highly significant in improving the different women empowerment indicators. The level of income and other socio-economic variable also turns out to be significant. The improvement in these indicators, however, can also be ensured by low level of per capita income (like, Kerala) with appropriate government policies. Therefore, there is need to increase the budgetary spending on social services particularly on health and education services. However, these variables also depends other different social, cultural and religious factor that needs to be taken in to account.

Secondly, the social problems and social changes, however, cannot be brought about merely through government allocation and actions alone. A necessary and essential condition is the existence of a suitable environment in terms of community awareness and willingness to identify such problems.

Lastly, the gender budget initiative is a significant first step towards a larger strategy of integrating gender perspective into economic policies and mainstreaming for achieving gender equality. A gender responsive budget would create a virtuous circle in which the policy itself contributes to the reduction of gender inequality, and hence reduce the gender constraints in successful macroeconomic outcomes. The result is the simultaneous improvement of economic growth and human development performance in ways that also empower women.

IX. Acknowledgement

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Notes

- 1 There exist amply gender inequality across the world (UNDP, 2006)
- 2 Increase in female literacy and other empowerment indicators
- 3 Gender budgeting initiatives have been supported by a number of multinational institutions, foremost among these the Commonwealth Secretariat, the European Community, the World Bank, and institutions of civil society, including many women's organizations. The Commonwealth Secretariat has taken a principal role in advancing gender budgeting. Its publications serve as a reference to many of the main issues and experiences. The Commonwealth Secretariat also sponsored some of the earliest pilot projects in gender budgeting in a number of Commonwealth countries including Barbados, Fiji, St. Kitts and Nevis, South Africa, and Sri Lanka.
- 4 See Lahiri, et al., (2003) and Kotwal, (2007) for cluster wise expenditure.
- 5 The Gender Empowerment Measure (GEM) captures the gender inequalities in the key areas of economic, political and decision-making participation.

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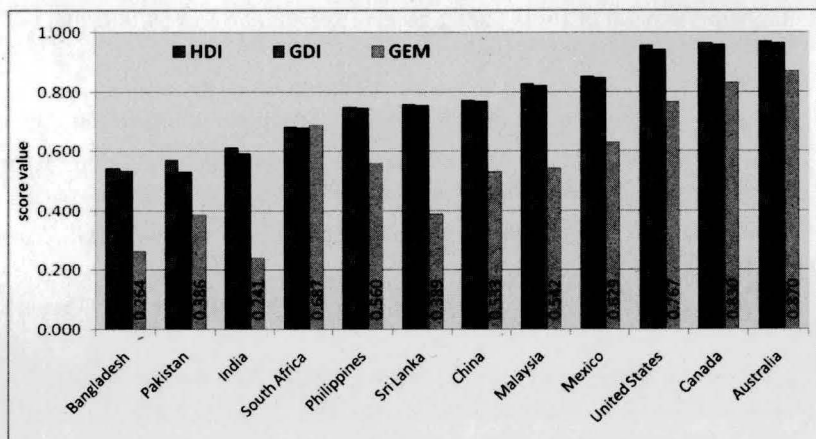
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Appendices



Appendix I

Comparative Picture of HDI, GDI and GEM Scores: Selected Countries - 2007

Note : India's value of GEM is for the year 2001

Source : UNDP (2009), Human Development Report

Appendix II

Dimension-wise HDI Scores 2006 and 1996 for Major States of India

State	HDI 2006			HDI 1996				
	HI	EdI	YI	HDI	HI	EdI	YI	HDI
Andhra Pradesh	0.715	0.434	0.733	0.627	0.673	0.363	0.668	0.568
Assam	0.647	0.607	0.682	0.645	0.612	0.529	0.656	0.599
Bihar	0.678	0.403	0.575	0.552	0.641	0.317	0.494	0.484
Gujarat	0.719	0.545	0.757	0.674	0.682	0.481	0.697	0.620
Haryana	0.733	0.533	0.792	0.686	0.685	0.455	0.724	0.621
Himachal Pradesh	0.747	0.598	0.771	0.705	0.709	0.516	0.689	0.638
Karnataka	0.741	0.504	0.730	0.658	0.714	0.417	0.662	0.598
Kerala	0.870	0.697	0.758	0.775	0.867	0.679	0.695	0.747
Madhya Pradesh	0.628	0.470	0.656	0.585	0.559	0.371	0.589	0.506
Maharashtra	0.778	0.596	0.773	0.716	0.739	0.531	0.725	0.665
Orissa	0.639	0.463	0.674	0.592	0.573	0.403	0.623	0.533
Punjab	0.765	0.561	0.777	0.701	0.752	0.486	0.739	0.659
Rajasthan	0.678	0.415	0.681	0.591	0.618	0.342	0.647	0.536
Tamil Nadu	0.766	0.566	0.750	0.694	0.710	0.482	0.695	0.629
Uttar Pradesh	0.651	0.459	0.636	0.582	0.598	0.363	0.606	0.522
West Bengal	0.754	0.533	0.726	0.671	0.703	0.478	0.662	0.614
All India	0.706	0.506	0.730	0.648	0.653	0.429	0.671	0.584

Notes : HI- Index of 'A long and healthy life' based on Infant Mortality Rate and Life Expectancy at age 1; EdI is the Index of 'Knowledge' based on 7+ Literacy rate and Mean Years of Education; and YI is the Index of 'A decent standard of living' based on Earned Income and HDI is 'Human Development Index'.

Source : Ministry of Women and Child Development (2009), Government of India.

Appendix III

Dimension-wise GDI Scores 2006 and 1996 for Major States of India

State	GDI 2006				GDI 1996			
	HI	EdI	YI	GDI	HI	EdI	YI	GDI
Andhra Pradesh	0.712	0.422	0.716	0.617	0.672	0.346	0.656	0.558
Assam	0.651	0.608	0.650	0.636	0.611	0.523	0.606	0.580
Bihar	0.674	0.377	0.524	0.525	0.637	0.274	0.449	0.454
Gujarat	0.720	0.529	0.742	0.664	0.680	0.454	0.682	0.605
Haryana	0.731	0.521	0.773	0.675	0.685	0.434	0.700	0.607
Himachal Pradesh	0.746	0.594	0.767	0.702	0.708	0.506	0.689	0.634
Karnataka	0.740	0.494	0.707	0.647	0.712	0.403	0.642	0.586
Kerala	0.868	0.697	0.705	0.757	0.867	0.678	0.649	0.731
Madhya Pradesh	0.627	0.451	0.641	0.573	0.559	0.335	0.576	0.490
Maharashtra	0.777	0.587	0.748	0.704	0.736	0.516	0.704	0.652
Orissa	0.638	0.450	0.651	0.579	0.572	0.380	0.600	0.517
Punjab	0.781	0.558	0.749	0.696	0.752	0.479	0.701	0.644
Rajasthan	0.678	0.381	0.672	0.577	0.615	0.284	0.637	0.512
Tamil Nadu	0.767	0.559	0.722	0.683	0.710	0.469	0.671	0.617
Uttar Pradesh	0.649	0.437	0.604	0.563	0.596	0.321	0.563	0.494
West Bengal	0.753	0.526	0.675	0.651	0.703	0.468	0.614	0.595
All India	0.704	0.494	0.702	0.633	0.653	0.409	0.643	0.568

Source : Ministry of Women and Child Development (2009), Government of India.

Appendix IV
Dimension-wise GEM Scores 2006 and 1996 for Major States of India

State	GEM 2006			GEM			1996	
	PI	EI	PoERI	GEM	PI	EI	PoERI	GEM
Andhra Pradesh	0.628	0.481	0.418	0.509	0.431	0.498	0.344	0.424
Assam	0.588	0.382	0.187	0.386	0.586	0.354	0.057	0.333
Bihar	0.628	0.269	0.258	0.385	0.550	0.303	0.133	0.329
Gujarat	0.585	0.497	0.317	0.466	0.544	0.426	0.256	0.409
Haryana	0.682	0.489	0.328	0.500	0.604	0.558	0.204	0.455
Himachal Pradesh	0.696	0.404	0.318	0.473	0.491	0.482	0.206	0.393
Karnataka	0.581	0.473	0.385	0.480	0.549	0.417	0.301	0.422
Kerala	0.610	0.451	0.426	0.496	0.561	0.497	0.393	0.484
Madhya Pradesh	0.632	0.481	0.225	0.446	0.622	0.430	0.167	0.406
Maharashtra	0.605	0.482	0.376	0.488	0.556	0.461	0.298	0.438
Orissa	0.635	0.325	0.169	0.376	0.611	0.293	0.084	0.329
Punjab	0.707	0.537	0.191	0.478	0.634	0.613	0.106	0.451
Rajasthan	0.627	0.327	0.208	0.387	0.640	0.438	0.130	0.403
Tamil Nadu	0.611	0.431	0.404	0.482	0.499	0.526	0.352	0.459
Uttar Pradesh	0.625	0.401	0.213	0.413	0.565	0.303	0.134	0.334
West Bengal	0.678	0.349	0.202	0.410	0.643	0.308	0.098	0.350
All India	0.581	0.452	0.319	0.451	0.566	0.442	0.231	0.413

Note : PI = Index of 'Participation in Political Arenas & Decision Making', EI = Index of 'Economic Participation and Decision-making Power' (based on three indicators for 2006 and two indicators for 1996), PERI = Index of 'Power over Economic Resources', GEM = Gender Empowerment Measure.

Source : Ministry of Women and Child Development (2009), Government of India.